A Comparative Study of Moral Judgment Development of Pregnant Teens

Dalia Ovdat May
Loyola University Chicago

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ACKNOWLEDGMENTS

The author would like to thank the committee members who faithfully directed and supported this study. Dr. Ronald Morgan, Dr. Jack Kavanagh, and Dr. Carol Harding contributed in their insightful and unique expertise to the development and enhancement of this dissertation research project. The committee members were knowledgeable and versed in the fields of adolescent moral development and risk taking behaviors. The author was fortunate to be able to benefit from their years of experience and diverse fund of information.

I would like to thank Dr. Kohlenberg who allowed the study to take place at the Boston City Hospital Adolescent Center. Her support and contribution to the data collection phase of this work was enormously appreciated. I would also like to thank the staff at the Adolescent Center who was patient and contributed ideas and intuition to the study at its inception. Catherine Giles, is another person who contributed and assisted in collecting the data. She was patient and motivated to help make this project successful.
Finally and most importantly I would like to thank my husband, Don May, and my two wonderful daughters, Sycamore and Gabrielle, for their unrelentless support and love. Without their spirit, laughter, and patience this work could not have been accomplished.

This work is dedicated to the children born to adolescent mothers who in their strength and resiliency are able to conquer their obstacles and pursue fulfilling lives.
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CHAPTER I

INTRODUCTION

Teenage pregnancy, among other social concerns, is viewed as a significant social occurrence that may require the attention of policy makers. Although the problem of teen pregnancy is not a new event, it seems that it has grown to almost epidemic proportions (Eggebeen & Uhlenberg, 1989). However, describing adolescent pregnancy as an epidemic may be misleading. Epidemics are defined as occurrences that affect large portions of the population as a result of some spontaneous affliction. They are expected to disappear either as abruptly as they arise or as a result of the acquired appropriate professional knowledge of how to effectively control them. Early conception and childbearing are not sudden or passing phenomena (Zabin, & Hayward, 1993). Teenage pregnancy did not seem to surface as a significant social problem until recent decades. Historically, adolescents’ physical maturation occurred at a later stage of development and marriage took place at an earlier stage of life. Therefore, pregnancy among teenagers was not perceived as a significant issue that affected the life of most adolescents. Patterns of employment, expectations, and social acceptance of earlier child bearing were parallel to the earlier stages of family formation. However, in recent decades the patterns have gradually changed. While the age of physical maturation shifted to earlier ages, the normative age of marriage, shifted to a much later age range (Zabin & Hayward, 1993; Smith, 1978; Hayes, 1987).
Pregnancy during the adolescent stages of development is widely recognized in our society as a complex and serious problem. It is considered to be a normal progression for adolescents who reach physical maturation to desire experiencing sexual contact and to some extent consider childbearing. Even though the behaviors themselves may not be perceived as problematic, the timing and possible outcomes are typically viewed as disagreeable by the larger society. Different ethnic groups which have unique cultural backgrounds perceive the issue of early parenthood in different fashions. Marriages within the African American population decreased dramatically with the decline of the economic conditions that marked the 1970s. An increase in the number of single parenthoods and female headed households became prevalent across all age groups of the African American population during the 1970s and 1980s (Hayes, 1987; Rubin, 1976; Zabin & Hayward, 1993). In contrast, teenage marriage became more likely among the Hispanic population. This population's rate of marriage is markedly higher than either the African American or the white population (Zabin & Hayward, 1993). Another substantial difference as related to different racial and ethnic groups is the tendency to use effective methods of contraception. Although adolescents as a group tend to be inconsistent users of contraception methods, African American teenagers are more likely to report that they had never used birth control compared to other ethnic groups (Bachrach and Mosher, 1984). It is the normal maturation process that appears to separate initiation of sexual relationships from other high risk behaviors such as using illicit drugs, alcohol abuse, and delinquency. These behaviors are perceived as damaging by the society at large regardless of the age of the individual who engages in them. Pregnancy and childbearing on the other hand are considered to be
normative assuming that the individual maintained the life progression accepted by most people in the society prior to forming a family. However, high risk behaviors tend to cluster within certain individuals as well as within particular settings. Therefore in forming programs to address the specific high risk population, it would be beneficial to establish alternative patterns of behavior rather than respond to each dangerous activity as a separate problem (Zabin, & Hayward, 1993). Another factor that seems to have a great influence on the rate of early childbearing is socioeconomic status. Adolescents from families of lower socioeconomic status tend to initiate sexual activity at earlier ages. Therefore, teenagers from lower socioeconomic backgrounds are more often at risk of early pregnancy than teenagers from higher socioeconomic backgrounds (Hayes, 1987).

Recent decades are marked with significant historical changes which profoundly altered the societal context within which adolescent sexual behavior occurs. Regardless of political philosophy or moral perspective the facts attached to the adolescent childbearing phenomenon are alarming. More than one million teenagers become pregnant in the United States every year. While approximately over 400,000 of these teenage girls obtain abortions, nearly 470,000 adolescents give birth. Those births are primarily to unmarried teenagers nearly half of whom have not yet reached their eighteenth birthday (Hayes, 1987).

Unintended pregnancies and consequent untimely births incur substantial personal and public costs. On the one hand, there are apparent increased risks that adolescent parents may experience such as discontinued education, reduced employment opportunities, low income, and unstable marriages, when marriages occur. On the other hand, children of adolescent
parents suffer heightened health and developmental risks, long-term poverty conditions, frustration, and hopelessness (Hayes, 1987). This condition may require social policy makers to attend to the problem, and find some solutions that will enable teenagers to lead more meaningful and age appropriate lifestyles. Successful interventions may help develop adolescent attitudes and behaviors which are most likely based on academic achievement and age appropriate social interactions. Rather than having the desire to become parents at this early age, or being forced to make the choice at a developing pregnancy stage, teenagers may need support in earlier childhood stages to be able to develop age appropriate moral reasoning skills. Such programs may allow children to grow up with sufficient knowledge and understanding of the consequences of early initiation of sexual intimacy. These kinds of interventions may help in delaying initiation of sexual intercourse and therefore allowing a natural course of development to take place. Programs should also enhance self-esteem and self-reliance as well as academic success to allow for a hopeful look into the future (DeRidder, 1993; Hayes, 1987; Hudson, 1993; Schorr, 1991).

The vast majority of the teenage population that gets involved in risk taking behaviors, display typical characteristics of economic poverty, poor educational attainment, and poor health. Becoming young parents at this early stage in their lives increases the probability of them not being able to establish themselves financially, educationally, and/or emotionally for a substantial period of time. During this time, they tend to become dependent on the public assistance system and in some cases on their family of origin. Unfortunately, this turn of events seems to exacerbate the cycle of poverty among the less fortunate in our society (Hayes, 1987). Research reflects that
American girls under the age of 15 are at least five times more likely to give birth than young adolescents in any other developed country for which data are available. Since teenagers who choose to become parents at this age are currently more likely to stay unmarried, their children disproportionately grow up fatherless and in poor financial and health conditions (Hayes, 1987).

Adolescence is a time in each individual’s developmental course in which independence is tested. Studies related to adolescent development and sexual activity offer conflicting findings. Some studies suggest that the process of gradually growing away from one’s parents and establishing the self, results in many cases, in a decline in the closeness of a mother-daughter relationship. In most cases this development between the adolescent and her mother follows the initiation of sexual activity rather than preceding or causing it (Hofferth, 1981). The risk of initiation of sexual activity may not increase if the adolescents perceive that they have poor communication with their parents. However, some researchers have found that such perceptions may contribute to the teenager’s increased sexual experience relative to their peer group (Simon et al., 1972; Jessor and Jessor, 1975). Parent-child relationships and communications, although important, seem to have an ambiguous association with initiation of sexual activity (Hofferth, 1981). Although the research findings related to the effects of parent-adolescent communications on a teenagers’ behavior are often contradictory, in one carefully designed study it was reported that close parent-child relationships are associated with less sexual activity among younger teenagers (Inazu & Fox, 1980).

Sexuality like moral development and intellectual capacity are natural events that all people share and develop throughout their lives. While in the
past, sexual intimacy was often viewed primarily from a moral perspective, current outlooks related to the issue of sexuality have introduced social and developmental considerations (McCreary Juhasz & Sonnenshein-Schneider, 1987). On some occasions, the moral issues connected with sexuality were very strongly related to religious aspects of how people view moral behavior. However, when responsibility in personal relationships was introduced as the central issue in human intimacy, morality was separated to some degree from religion (Bull, 1969). At different stages in the life course, sexuality assumes different forms. Although sexuality itself is not necessarily considered to be a moral issue, people can display moral or immoral sexual behavior (Calderone, 1967). Borowitz (1969) introduced the notion that people should be encouraged to choose sex ethics for themselves. Ethics in this context are viewed as a discipline of thinking about and making value judgments about right and wrong. Even though our most basic desires and ethical perceptions are to be respected, maturity and responsible behavior can be learned and reinforced by external means (McCreary Juhasz & Sonnenshein-Schneider, 1987). Morality is a flexible and fluid concept that is based on individual perceptions and other elements that influence an individual’s overt behaviors and moral understanding. When considering a certain behavior or response to items on morally driven tests, cultural background, individual perceptions, family influences, and an individual’s intellectual level should be viewed as integral elements of the outcome behavior (McCreary Juhasz & Sonnenshein-Schneider, 1987). Developmental theory of value formation as presented by Konopka (1973), views the adolescence stage of development as the most significant period for forming a set of values even though inquiry continues to be an integral part of their experience. Kohlberg (1966) and Piaget (1928)
stressed the adolescence stage of human development. Both perceived the adolescents' cognitive development as being critically important with respect to developing the ability to make decisions.

Summary

In efforts to learn more about the phenomenon of teenage pregnancy, traditional interventions have generally focused on the reactive approach, while contemporary approaches seem to be more proactive in nature. However, teen pregnancy rates continue to increase (Furstenberg, Brooks-Gunn, and Morgan, 1990; Jones et al., 1985; Westoff, Calot, & Foster, 1983). Significant gender differences in decision-making regarding sexual intimacy have been documented. Males seem to be motivated to experiment with sex for impulse gratification; whereas females tend to give more importance to the quality of the relationship rather than impulsive gratification and sexual intimacy (McCreary Juhasz & Sonnenshein-Schneider, 1987). On the other hand, in the context of relationships, women tend to display more permissiveness, assuming that the relationship will strengthen and lead to marriage and establishing a family (Hobart, 1974). Males tend to be more promiscuous (Reiss, 1967). Other elements such as level of intellectual capacity, level of religiosity, the individual's locus of control personality characteristics, and level of maturity are all elements that may influence the adolescent's sexual decision making. (McCreary Juhasz & Sonnenshein-Schneider, 1987). The dilemma of teenage pregnancy as perceived by our society needs to include both young men and young women. That is to say that teenage boys should also be enlisted as part of the solution and become active members in pursuing avenues to correct the problem (Hayes, 1987).
Statement of Research Problem

The issues associated with adolescent pregnancy are varied. Researchers who have conducted research in this area have introduced a wide variety of options. The enormous scope that is covered by this subject reveals a range of possibilities that cannot be covered by any one study. Different venues to approach the issue of teenage parenthood include the factors that influence the adolescents themselves, their children, their impact on society, and other wide range factors such as service providers and different programs established for this purpose. Due to the enormity of the subject and the lack of general organized direction in approaching it, the research conducted in this area is scattered and not always sufficient (Furstenberg, Brooks-Gunn, & Morgan, 1987). In some research projects, issues related to adolescent parenting from the point of view of young parents are examined. In these studies, special focus is often given to possible etiological questions regarding reasons that may influence initiation of sexual activity such as level of self-esteem, community or cultural acceptance, and peer group pressure. Other researchers have focused their attention on the different programs available to teenagers, court involvement, and the schools’ efforts to alleviate the magnitude of the problem. Still other projects have been focused on documenting the influence of early parenthood on adolescents’ children. This is a vast area of research today. Unfortunately, it seems that there is no consistent approach to addressing the problem and funds are directed by methodology not the critical problems at hand. Many of the studies cannot be replicated and most are not designed to be long-term studies. However, some of the research projects that were set up as long-term inquiries directed at the
issue of teenage pregnancy did provide us with a list of issues to be revisited. One of the suggested issues considered to be worthy of further study was the level of education and development of moral reasoning within this particular population. The study to be described in what follows was designed to address moral judgment development, sexual, emotional, and physical abuse, and intentions to drop out of school among pregnant teens.

Moral judgment development and reasoning skills unlike the issue of adolescent pregnancy, are areas of extensive research and exploration that have resulted in a well established body of knowledge. Theoreticians who have contributed to the development of the field have included Piaget, Kohlberg, Erikson, and Vygotsky (Zabin and Hayward, 1993; Rest, 1986; Vygotsky, 1978). Each of these prominent scholars added a unique and significant factor to the field of human development, and in particular to the area of moral development and reasoning skills. A more recent contributor to the field of moral development is James R. Rest who developed the Defining Issues Test (DIT). Based on the theoretical work of Kohlberg the DIT was designed to measure how general concepts of justice influence the process of moral judgment (Rest, 1986). Rest claimed that a person's thoughts about moral issues directly influence their behavioral outcomes. The DIT is based on an objective measurement scale and it is standardized in such a way to ensure that the examiner's biases are minimized. It should be noted that the DIT is not considered to be a scale that is bias free when it is used with lower socioeconomic population. Education has been found to be correlated with income. In addition, education has been reported to be the strongest predictor of an individual's moral judgment and development (Rest, 1986). Level of education is also a good predictor of the individual's reading level. When
responding to the DIT the individual's reading level is a factor that influences the respondent's overall level of performance. Individuals who experience difficulty reading may appear as functioning low on the moral development scale. This may not, however, reflect their actual level of moral functioning.

Through the use of the DIT in many different environments it became clear that years of formal education was one of the strongest and most consistent correlates of development of moral judgment (Rest, 1986). Although there is some relationship between moral and religious issues, in general, moral issues are perhaps best viewed as separate from religious issues. Moral behavior can be affected by personal experiences, attitudes, and to some degree by incentives and reinforcers. Although the individual's behavior may vary, the underlying assumptions and convictions may be different and constant. Therefore if there are issues that the individual may not feel committed to, the behavior may vary but the rationale and reasoning may be more stable. It is also possible that on some issues that are not clearly defined an individual may find a way of rationalizing the behavior. The same behavior may be conceived as morally appropriate by some while for others it may not be perceived as moral.

This study was designed to examine whether there is an association between early pregnancy and level of development of moral reasoning. Comparisons were made across the following groups: pregnant teenagers; teenagers who are first time mothers; teenagers who had an abortion; and a comparison group of teenage girls who were never pregnant. Adolescents' attitudes and moral judgments were systematically examined across these groups. Participants included a sample of teenagers who participated in ongoing medical pre- and post-partum programs at the Boston City Hospital
Adolescent Center. Although most of the teenager participants attended school, it is unclear if they attended special education programs or programs directed at their special needs as mothers or expecting mothers.

In addition to measuring the participants' level of moral development functioning, two other factors were examined across the four adolescent groups (group one was pregnant, group two had their first child, group three aborted their pregnancy, and group four had no previous experience of pregnancy) described above. Abuse in general and sexual abuse in particular are believed to be indicators that contribute to an increase of at-risk behavior patterns, sexual promiscuity, and sexual dysfunction. In earlier stages of development abuse may contribute to poor academic performance and poor attitude toward school activities (Wilson & Joffe, 1995; Wood, Hillman & Sawilowsky, 1996). In the study to be described in what follows, an effort will be made to measure the prevalence of three types of abuse across the four targeted groups. Measures of sexual, emotional, and physical abuse will be compared across groups to document differential levels of occurrence. The intention of the participants to drop out of school is another factor that will be measured across the four groups. The intention to drop out of school as reported by the participants may be related to their perception of their accessibility to school as young parents and/or intended parents. It may also measure their level of comfort and the applicability of the programs offered to them to allow them to continue attending school regardless of their extenuating circumstances. It should be noted that there has been a concerted effort made in the public school system in the Boston area to assist adolescents who become young parents to complete their basic educational programs of study. The results of this study may be instrumental with
respect to measuring the differential intentions for school dropout among the four groups of adolescents targeted for this study.

It is expected that the results of this study may benefit policy makers as well as professionals in the field. Insight into the way these teenagers think and make decisions as well as careful consideration of their specific cultural and ethnic backgrounds should assist us with our efforts to better understand the nature of the teen parenting problem and with the design of educational program interventions. In addition, understanding the moral judgment profile of participants in the study could be a major contributing factor with respect to designing educational programs to reduce pregnancy rates among teens. Careful study and development of educational programs which are based on sound research, could be used to help adolescents delay pregnancy.

In what follows, a brief description of the studies already conducted is presented in an effort to learn more about the concerns associated with teenage pregnancy. At-risk teenage populations who do not have appropriate support systems within the family, school, and/or the immediate social environment often have to face the dilemma of dealing with an existing and perhaps unwanted pregnancy. Thus, when looking at the teen pregnancy dilemma facing society, it appears that teenage pregnancy does not only represent the issue of children being reared by children, it also seems to increase economic hardships that exacerbate a continuous cycle of poverty among the poor and uneducated. As noted by Richard A. Davis (Davis, 1980) in his article: *Teenage Pregnancy: A Theoretical Analysis of a Social Problem*, teenagers are more likely than adults to rear their children in poverty and to be forced to use the support of the welfare system.
CHAPTER II
LITERATURE REVIEW

Research in the area of adolescent behavior and teenage pregnancy encompasses a diverse range of issues. Areas considered to be of particular importance in this study are described in detail in this chapter. An overview of theoretical studies and general theories of personality and moral development are used to anchor the study within the context of adolescent development. Teenage moral development and moral reasoning skills are given special attention. An effort is made to carefully examine issues that may contribute to the occurrence of teen pregnancies such as accidental pregnancies and/or a desire to belong to a particular social group. In the event of accidental pregnancy, the teenager may find herself struggling with issues that are beyond her capacity to solve and the decision to drop out of school may be a necessity in order for her to function as a mother. However, school dropout is considered to be one of the most obvious signals related to predicting the initiation of at-risk behaviors among teenage populations. School dropout as well as other risk factors unique to teen mothers and their offsprings, is then discussed. Educational programs designed to address the special needs of the pregnant adolescent populations are diverse. A few examples of available programs including the abstinence method are described. An effort is made to provide a balance among the alternative methods. The issues of sexual, emotional, and physical abuse which are
reported to contribute to the display of at risk behaviors among teenagers, are also reviewed in this chapter. A comparison of the options available to teenagers in the past relative to their options today and a discussion of the risks that children of adolescent mothers may experience are presented. Finally, a short summary of the study at hand is provided.

Theoretical Perspectives of Adolescent Development

Different researchers in the field of human development, particularly the development of children and adolescents, viewed progression through the stages of development in different ways. In this section, an attempt is made to summarize the major theoretical views in the field of personality and moral development. These views will be applied to teenage sexuality and early pregnancy. Like many other processes in the general developmental progression of humans, childbearing in adolescence is not an isolated event. It is the result of a series of behaviors that begin with the onset of sexual activity and end with pregnancy which may be addressed with either an abortion or childbearing (Zabin and Hayward, 1993). Environment, cultural specific social expectations, and various ethnic backgrounds may be influential in affecting the age of sexual onset and the outcomes of early pregnancy (Garcia Coll, et. al., 1996). However, major theoretical orientations may be useful with respect to establishing a baseline of expected developmental progressions when learning the effects of adolescent pregnancy. Some of the research which was conducted in order to establish theoretical views in the field of human development, were produced by Erik Erikson, Jean Piaget, Lev Vygotsky, Bowlby, Lawrence Kohlberg, and Uri
Bronfenbrenner. Although most of these theoreticians may have neglected to address some of the cultural and ethnic background issues that most likely affect the regular developmental process, their work is considered to be important with respect to enhancing our understanding of the developmental progression expected in ideal circumstances (Zabin & Hayward, 1993). Theories of this nature may offer an adequate baseline from which certain departures may be measured in controlled research situations. Some of the issues that can be systematically addressed within these theoretical contexts include different minority groups, environmental differences, ethnic and cultural expectations, and diverse socioeconomic backgrounds (Lamborn, Dornbusch & Steinberg, 1996).

It is recognized that the theoretical review of the developmental progress presented in what follows represents a Eurocentric bias. In some instances these theories may not apply to under represented groups (Garcia Coll et. al., 1996). However, even though differences may be attributed to cultural and ethnic origins, basic concepts are considered to be applicable to all adolescents when they make developmental transitions into adulthood. When possible, an effort will be made to position the major theories discussed in the following sections within a social-cultural context unique to the population studied.

Erik Erikson (1963) believed that personality develops through a series of crises. His in depth research of adolescents focused on their ability to develop trust, autonomy, initiative, and identity. Personality growth or regression depended on the individual’s ability to resolve the presented developmental crises. Proper resolution of these crises may indicate if the individual’s personality will become more or less integrated. A “healthy”
personality reflects the individual's ability to master the environment. Such mastery may enhance the qualities of the self-actualized individual (Erikson, 1963). In discussing the adolescent course of normative development, the establishment of a sexual self-image is strongly related to the age of the individual and to the environment in which the adolescent lives. However, even though there is a strong environmental influence on behavior during adolescence, personal factors play an essential role in moral deliberations and decision making skills. Adolescents unlike adults need to develop a personal moral code that reflects their individuality. Therefore their ability to function effectively in the role of decision makers may be constrained by the struggle that surfaces while trying to establish their individual moral code (Zabin & Hayward, 1993). Another factor that is perceived as important among minority populations is social position and social context in which the individual develops. Elements such as racism, prejudice, discrimination, oppression, and segregation influence the developmental progression of individuals who experience them throughout their maturing years (Garcia Cole et. al., 1996)

An infant, as viewed by Erikson, will encounter the trust vs. mistrust element. Resolution of this crisis will depend on the love, attention, touch, and feeding relationships shared with the primary care giver and would influence the child's fundamental feelings and interaction with the environment. Although this particular crisis does not directly influence the adolescent, it repeatedly changes the individual's perception of the environment and therefore the individual's ability to effectively function within this environment (Erikson, 1963). Children's range of choices and opportunities to benefit from their life experiences are strongly affected by the
life style of their parents. The geographic distribution of adolescent childbearing in an urban setting is focused primarily in the disadvantaged areas. Some of the typical symptoms that seem to be prevalent in these areas are poverty, ill health, and high risk behaviors. Families in the most disadvantaged neighborhoods are likely to have the fewest resources with which to protect their children from negative influences. Parents who settle for low paying jobs with difficult hours due to poor labor skills, may have little time and/or energy for their children (Zabin, & Hayward, 1993). Children reared in these environments and subjected to their parents' preoccupation with low paying job situations may not be receiving the support and attention that is optimal for healthy resolution of this initial crisis. Many adolescents who are the products of disadvantaged environments are most likely ill-equipped to rear their own children in the same environment and most likely in worse circumstances.

Bowlby's (Gutkin & Reynolds, 1990) attachment theory supports the assumption that early and healthy relationships shared between the primary caregiver and the infant have significant influence on the outcome of the infant as an adult. Attachment behaviors as described by Bowlby are innate, and contribute to the individuals' capacity to survive by adapting to the environment. Bowlby suggests that there is a strong causal relationship between the individual's attachment to one's parents and the ability to initiate and maintain affectionate bonds with others. Children who experience healthy attachment relationships grow up to be secure and self-reliant individuals who are capable of cooperating with and trusting others. On the other hand, individuals who grow up with a poor attachment base may become insecure, anxious, over-dependent, and immature adults. As the field
of psychology includes more research that encompasses factors of attachment, it becomes apparent that some adult depression, loneliness, character disorders, and phobias may be attributed to poor initial attachment (Gutkin & Reynolds, 1990). The community contexts in which adolescents and their families reside seem to surface as significant factors influencing the developmental process of family interaction and family decision making. It appears that ethnicity and the community context have a moderating role on the relations between family decision making and adolescent competence and adjustment during the high school years (Lamborn, Dornbusch, and Steinberg, 1996).

Built on the foundation of trust vs. mistrust Erikson’s next stage occurs during early childhood, and it reflects the resolution of the autonomy vs. shame and doubt crisis. This stage entails extensive testing of the environment and the parents, and acquiring a sense of control by the child. The child becomes familiar with what can be controlled and what cannot. This stage relies on good resolution of the previous stage, where trust is the end result of the crisis rather than mistrust. It allows for the development of a sense of self-control without loss of self-esteem. The next stage which occurs during middle childhood relies on successful resolution of the previous two stages. The crisis of initiative vs. guilt will most likely be resolved with initiative, pending successful resolution of the previous two stages. There is a very fine line between restricting a child too often to not offering adequate limit setting. While over restriction may result in a constricted individual, not offering enough structure may contribute to the creation of an individual whose conscience is not fully developed (Erikson, 1963). Among adolescent parents who may lack the ability to control their own behaviors, establishing
limit setting for their own children may be a challenging task. On the one hand, due to their economic background, they may live in an area where they would not feel secure enough to allow their children free access to the neighborhood. On the other hand, they may not be knowledgeable enough as parents to set consistent limits. Both of these behaviors may result in constricting and limiting behaviors that the children of teenagers may have to endure throughout their childhood. Another element that may increase the tension for the adolescents and their children, particularly if they belong to a minority or ethnic group, is the racism, prejudice, and discrimination that they may have to endure within their social environment (Ogbu, 1981, 1987; Attewell & Fitzgerald, 1980; Barber, 1957; Bendix & Lipset, 1966; Laumann, 1970; Tumin, 1967).

Accomplishment vs. Inferiority occurs among elementary school age individuals specifically between kindergarten and puberty. During this stage, a child becomes proficient in some things within the environment. The child is capable of doing things well and/or even perfectly. Denying feelings of accomplishment may lead to the development of feelings of inferiority and inadequacy. Healthy resolution of this stage leads to feelings of competence. Therefore, during this stage a child should be supplied with opportunities for success that should be created and initiated by the teachers and parents of this child. A sense of inadequacy and inferiority can surface if children do not receive recognition for their efforts. Positive self-concept is strengthen by successful recognition of accomplishment by parents and teachers (Erikson, 1963). This stage of development may also be constrained in poor households due to lack of financial means. Adolescents, in most cases, rear their children in poverty and therefore the challenge of allowing them the same
opportunities that other children from more affluent backgrounds have may not be possible.

Parents need to be prepared for the role of parenthood as well as knowledgeable about how children learn. They should also have the capacity and the motivation to pursue knowledge that will facilitate their child's healthy developmental progression. Adolescents who are still progressing in the developmental process themselves may not be capable of accumulating information that may assist their child's effective developmental progression (Miller, Miceli, Whitman, and Borkowski, 1996). Maternal levels of cognitive readiness, intelligence, attitude, and perception of parenthood seem to influence child cognitive and behavioral outcomes. Most adolescents seem to lack the cognitive readiness to develop this kind of knowledge base on their own. When not supported by an educational program that facilitates their own awareness of what parenthood entails, many adolescents seem to lack the ability to effectively parent (Baron & Kenny, 1986). Vygotsky's theory which supports the basic premise of Erikson's last mentioned stage, introduces the concept of the Zone of Proximal Development (ZPD). Vygotsky believed that development is most apparently recognizable through the acquisition and use of language. Vygotsky perceives the adult as functioning as a tutor or a facilitator to the overall learning process. It is essential that the steps the adult introduces to the child are progressively more advanced. However, they should not introduce a level of complexity that is not approachable to the young learner and therefore induces high levels of frustration. The adult reportedly functions as a competent role model and a nurturing mediator to the process of learning. Some believe that the true level of intelligence is indicated by what a child is capable of producing
independent of the help of others. Vygotsky believes that what the child is capable of producing as a result of interacting with the environment and the support of older mediators is a more significant indication of the individual's true intellectual capacity (Cole et al., 1978). Reuven Feuerstein's approach to the learning process and the developmental progression of individuals, is closely aligned with the approach introduced by Vygotsky. Although Vygotsky and Feuerstein introduce different aspects of the learning and evaluation process, they essentially believe that both occur very systematically and with the help of adult mediators. Feuerstein ascertains that individuals who are not exposed to sufficient mediated learning conditions may develop cognitive rigidity and a general inflexibility toward new learning situations. However, individuals who experience the instrumental enrichment program which is primarily a program designed to improve learning potential, through mediations by competent adults, may become more effective learners overall. Adolescents may not be appropriate role models for their children due to their own level of insecurity and lack of preparation to the role of parenthood (Miller, Miceli, Whitman, & Rorkowski, 1996).

According to Erikson, identity vs. role confusion occurs in adolescence. Establishing an identity is the focal occurrence of this period. This is a very intense experience due to the enormous changes boys and girls experience as they become young adults. Their ability to integrate their personality traits and feelings of detachment as they become men and women are prevalent. During this stage there is an attempt to experience sexual relationships and new levels of intimacy. In addition to the sexual tension that plays a major role in this transition, there is an attempt to clarify the question of who they are and what is their role in the society. There is a genuine concern related to
how people perceive them and how they perceive themselves. Lack of understanding of self and lack of an established sense of identity leads to confusion. Failure to resolve this crisis prolongs adolescence and limits the ways in which people function in adult roles. These individuals do not cope effectively with later crises in the life cycle. A healthy resolution of this crisis leads to confidence in oneself and a sense of security that the future is going to be good (Erikson, 1963). Research in human and adolescence sexuality reveals a reality that is closely related to a successful resolution of this crisis. Adolescent girls with a high level of self-esteem, who perceive that they have a large measure of control over their lives, and that they are competent and capable of choosing and shaping their destinies, are more likely to be effective users of contraceptives. On the other hand, girls who have a low sense of competence, who believe that events in their lives are largely beyond their control, girls who are impulsive, who find it difficult to plan ahead, and who are risk-takers, also tend to have poor records of contraceptive use. In cases of sexually active adolescents, having a poor record of contraceptive use greatly increases the likelihood of early pregnancy (Furstenberg, Brooks-Gunn, and Morgan, 1987; Hayes, 1987).

Correlations have been established between onset of sexual intercourse in middle adolescence and the display of behavioral and emotional problems. The tendency to display problems of this nature were measured in a group of tenth and eleventh graders in the span of two years. The factors that were used as comparison measurements included earlier or later onset of sexual intercourse and persistence across time. Significant differences in behavioral and emotional problems were indicated. The behavioral problems were focused to be primarily delinquency, while the emotional difficulties consisted
primarily of depression (Tubman, Windle, & Windle, 1996). Adolescents who are more likely to be financially disadvantaged relative to an older population of mothers tend to experience maternal depressive symptoms more often during their initial motherhood stages. They also tend to experience those emotional hardships for longer periods of time. Maternal depressive symptoms and maternal-child conflict were found to be the best predictors of child problem behaviors. Perpetuation of depression in families was noted in cases where no maternal-child conflict were reported. However, depression was prevalent (Leadbeater, Bishop, & Raver, 1996). It appears that adolescents who are not ready emotionally, physically, and developmentally to carry the consequences of early pregnancy and parenthood, are at higher risk to have children who are predisposed to problem behaviors. Therefore perpetuating a cycle of poverty and delinquency. Initiating the process of parenthood with significant emotional and behavioral difficulties may interfere with the developmental process of the adolescents as well as the new generation that they parent. Moral development as well as other areas of human maturation may also be significantly affected. Therefore it is expected that teenagers who tend to display emotional and behavioral difficulties may also experience lower levels of moral functioning skills (Fisher, Higgins-D'Alessandro, Rau, Kuther, and Belanger, 1996).

Adolescents while forming their identities are unable to form stable attachments due to their fluctuating self-image. Therefore, they generally experience unstable relationships and they are unable to effectively distinguish between intense love and a casual partnership. The love relationships that are established in early adolescence are considered to be an attempt to create an identity and are not primarily sexual in motivation.
Erikson’s theory suggests that during the early latency period, social controls are internalized and the essential foundation for ego development is established. Crucial decisions about the future or formation of reliable bonds with others is difficult prior to establishing a sense of self. Adolescence is frequently marked by considerable role diffusion and a lack of commitment. These tasks when incomplete intensify even though they are typical of the adolescence stage of development. As age increases it is likely that more sophisticated ego development will occur. Stability increases in many different aspects of teenagers lives as identity formation and ego development grow (Zabin & Hayward, 1993). Teenagers are most likely able to establish consistent levels of moral judgment functioning as their maturation process continues and stabilizes. Their ability to analyze moral issues increases and therefore allows them to function on a higher developmental level of moral judgment.

Development of a knowledge base regarding methods and appropriate use of contraceptive products is an essential factor in the ability of an adolescent to be an effective user of contraceptives. However, despite what younger adolescents learn about timing and the risk of becoming pregnant, they appear to believe that they are not at risk because they are too young (Kantner & Zelnik, 1973). It appears that cognitive immaturity tends to affect the adolescent decision making and the ability to assess the personal risk of pregnancy (Cvetkovidh and Grote, 1975; Cobliner, 1981; McAnanrney and Schreider, 1984). Teenagers who are unable to perceive the risks of becoming sexually active to themselves are most likely unable to analyze the moral dilemma attached to their behavior. In pursuing sexually active relationships, they do not consider the good of the general society relative to
their individual actions. Another strong predictor of regular and effective contraceptive use among adolescent girls was found to be strongly associated with acceptance of their own sexual behavior. Girls who acknowledge that they are sexually active are more likely to obtain and use contraceptives (Lindemann, 1974). Younger girls and adolescents who find it hard to acknowledge that they are sexually active are more likely to delay contraceptive use for up to a year after they become sexually active (Zelnik et al., 1981).

Erikson's next two stages introduce adulthood and the responsibility that is attached to that level of maturation. Intimacy vs. Isolation occurs in young adulthood following a functionally established or in some cases fixed identity. This stage is dependent on a successful resolution of the previous stages. A healthy resolution of this crisis results in the person's ability to confidently give and receive love. Generativity vs. Stagnation occurs in adulthood and reflects the ability to be creative, productive, and interested in guiding the development of the next generation. Maturing within this stage will take place with adults who have the responsibility of caring for a dependent, one for whom the adult maturation process takes place. A healthy resolution of this crisis results in a caring, socially involved person. Interruption of this process may result in an inconsistent treatment and therefore incompetent future generation (Erikson, 1963). Level of maturity and moral reasoning at this stage are expected to be fully developed and allow the individual to be a stable role model for the new generation. Individuals who reached this level of functioning are also capable of contributing to the operation of the general society rather than being primarily dependent.
Within the western thought process and acceptable social behavior, this stage translates to a process each individual is expected to experience prior to having children. The normative process is to complete schooling, gain employment, get married, and then proceed to undertake parenthood. Our society is not prepared or equipped for any major alteration of this process. Therefore early parenthood becomes a more complicated event in this cultural milieu. However, society's acceptance of early childbearing pales when considering the risks to the adolescents and their children. Adolescence is a period of change and growth both physically and emotionally. Early sexual involvement occurs more often among youths living in disadvantaged communities where other at risk behaviors are likely to take place. It is at this stage of development that pregnancy may most interfere with the young mothers' nutrition. The adolescent's growing body may compete for nutrients with the development of the fetus. In addition to this element, the teenager's pregnancy itself faces some significant obstetrical risks that may affect the current and subsequent pregnancies. Research indicates that subsequent pregnancies seem to closely follow complete pregnancies which result with delivery. Adolescents younger than 18 are at risk both medically and socially if choosing to complete their pregnancy with childbirth. (Zabin, & Hayward, 1993).

Human and moral development as studied by Piaget, Kohlberg, and Rest is characterized as a stage progression that marks the gradual maturation of the individual. Jean Piaget established many of his basic theoretical revelations primarily during the 1920's, 1930's, and 1940's. He became well known to Americans during the 1950's and 1960's. To some degree he attached his theory of human development to the acquisition of
language. Using observation as a primary research methodology, Piaget concluded that learning to communicate using language, contributed to the progression of cognitive development through the different stages. Piaget concluded that there are four primary stages in the development of any individual. Although he assigned age levels for each stage he did not expect sharp maturational transitions between one stage to the next. Rather he offered an overall framework within which fluid transition should be expected (Piaget and Inhelder, 1969). The Defining Issues Test is based on the ability of the individual to have better developed language skills and reading levels. Appropriate development in that area will facilitate the individual’s ability to function on tests that require higher levels of language functioning. It is important to note that tests of this nature will most likely reflect relative bias in communities where the development of language is not center stage.

Piaget conceptualized the fourth stage to be the formal operational phase of development which normally occurs between the ages of 11 to 14. Logical thinking with some abstraction is associated with this level of development. This stage encompasses the full knowledge and understanding of the abstract and the concrete. Individuals who reach this stage are able to manipulate abstract information, draw conclusions, and offer interpretations. Their thought process seems to be flexible and vibrant. Adolescents who reach this stage of development are capable of combining two possible propositions in reaching a third higher order proposition. They are capable of analyzing different types of options prior to choosing an appropriate alternative that will be effective for their needs. Generalization that is based on content area and applied to other content areas is another skill that individuals who function at this level, can implement into their interaction
with their environment (Piaget & Inhelder, 1969). The formal stage of operational thinking allows the individual to establish an understanding of probable events. Planning intercourse is not common among adolescents. However, planning is closely associated with the use of more effective contraceptive methods (Zelnik & Shah, 1983). Adolescents are characterized as individuals who have only the initial conception of possibility and a limited orientation to the future. It appears that their inability to predict and plan for sexual encounters reflects a normal cognitive limitation of adolescents. Piaget (1972) suggests that the conception of "possibility" begins at about 12 years of age. Cortical changes are related to this change of cognitive functioning which allows the individual to comprehend the meaning of the concept of possibility. Adolescents who are not able to establish a reliable concept of the abstract and the possible, in most cases have a limited orientation of the future. Poor understanding of their future may interfere with their ability to comprehend that pregnancy will affect their future (Zabin & Hayward, 1993).

As noted earlier, many young teenagers, do not complete the transition from concrete to formal operation thinking. However, teenagers who become parents while not completely becoming versed in the formal operational level of functioning, are still expected to solve some formal operational level problems that are presented to any individual who is a parent. In the case of a teenage mother, this expectation presents a skill that may be far beyond her capacity. She is also expected to plan a future for herself and her child when she is not necessarily able to consider all the options, because of her limited exposure and understanding of the possible alternatives and their consequences. A teenager is in the stage of defining her own roles and place in
the world around her. When becoming a mother she also has to define for herself the role of a mother. Adolescents are often characterized as egocentric and narcissistic, traits which are the antithesis of those required for adequate parenting. Individuals who are generally self-absorbed as most teenagers tend to be, are in sharp contrast to the mutuality that is required between mother and child. An adolescent will most likely experience difficulty empathizing with the needs of a child and effectively responding to those needs. Adolescence is also a period during which the struggle for independence from the individual's family of origin is considered to be crucial. This position changes drastically for a pregnant adolescent who becomes more, rather than less, dependent on her family for assistance and support (Zabin, & Hayward, 1993).

Kohlberg and Piaget hold similar basic conceptualizations of the process of human and moral development. Their theoretical perception is particularly parallel when they discuss young children and the fact that young learners are virtually incapable of effectively processing higher levels of thoughts. Both Piaget and Kohlberg also maintain that formal operational thinking capacity is necessary for any individual to achieve the level of principled reasoning (Biehler & Snowman, 1990). A higher level of education is correlated with the individual's ability to reach principled reasoning. Individuals who are reared in disadvantaged environments tend to be poorly educated. This cycle of poverty and poor education is perpetuated when teenagers pursue parenthood. Teenage parenting is often associated with a higher likelihood of poverty and poor educational opportunities (Furstenberg, 1976; Furstenberg, Brooks-Gunn, & Morgan, 1990; Rest, 1985; Zabin & Hayward, 1993).
Kohlberg’s theory presumes three basic levels of moral thought with two stages of development characteristic of each level. The preconventional level includes the punishment - obedience orientation and the instrumental - relativist orientation. This level of functioning is typical of children up to the age of nine. Experiencing this stage from a young child’s perspective entails the realization that punishment needs to be avoided. Staying out of trouble and avoiding conflict with authority figures, who have control over deciding the outcome of the child’s actions, are some methods of avoiding punishment. During the instrumental relativist orientation a child learns that any action may be carried if it satisfies the individual’s own needs. In some cases even exchange is required, the child will obey the rules in return to some sort of benefit (Biehler & Snowman, 1990). The child will be able to establish an understanding of this stage if the parenting provided is consistent and expected. Consequences for certain actions need to be presented in a consistent and organized manner to support well established reasoning. Children who are exposed to erratic and unreasonable discipline are unable to establish a well organized cause and effect mechanism. In summary, teenagers may not be able to parent consistently (Miller, Miceli, Whitman, and Borkowski, 1996).

Level two is viewed as typical for individuals nine to twenty years old. It is called the conventional morality level and it includes the interpersonal - concordance orientation and the authority and the maintenance of social order orientation. Stage three which is sometimes classified as the good boy - nice girl orientation will entail actions that are likely to please or impress others. Stage four is the law and order orientation and its primary focus is to maintain the social order, society must establish and maintain fixed rules
and it is imperative to respect authority. The postconventional, autonomous, or principled level is the final one and it can be reached only after the age of twenty and only by a small proportion of the adult population. This level includes the social contract - legalistic orientation and the universal ethical principle orientation. People who reach this stage of moral development understand that in order to maintain the social order, rules should not be based on blind obedience to authority but rather on mutual agreement. The rights of the individual should be maintained and protected at all times. The final stage which includes the universal ethical principle orientation supports the assumption that moral decision should be based on the essence of self chosen ethical principles. Principles, once chosen by the individual, should be applied in consistent manner (Biehler & Snowman, 1990). Teenagers and young adults who are capable of reaching a higher level of moral reasoning seem to be based in environments that offer consistency, and stress higher levels of academic functioning (Rest, 1986). Individuals who are exposed to environments which vary from this model may reach higher levels of moral reasoning. However, when measured by the available assessment tools, they may not present in a similar fashion when compared to the majority population group. Once again, it should be noted that evaluation tools available to measure moral functioning may not offer a consistent and accurate picture related to describing the moral development of people from different cultural and ethnic backgrounds (Garcia Coll, et al., 1996).

Stage theories such as those represented above seem to heavily rely on consistency, gradual maturation, and the support of the functional adult world to assure healthy and effective transitions from stage to stage. The healthy maturation progress is significantly compromised in environments
where there is no consistency and no stability. Teenage parents who did not reach appropriate levels of maturity themselves are in most cases ill equipped to provide an appropriate environment for their children. In many instances, teenagers who become pregnant are not capable of pursuing further academic goals. Research indicates strong associations between low intellectual ability, low academic achievement, lack of educational goals, and early sexual experiences among teenagers of diverse cultural backgrounds (Allen, Kuperminc, Philliber, & Herre, 1994; Danziger, 1995; Hayes, 1987; Miller, Miceli, Whitman, & Borkowski, 1996). Moreover, teenagers who lack appropriate academic progress are in most cases poor supporters for their children when they enter school and need help. This is therefore a cycle that cannot be easily remediated by approaching only partial segments of the at risk population. Rather, help needs to be administered on all fronts. It appears that teenagers who tend to become sexually active and therefore more likely to become pregnant at an earlier age, are individuals who are likely to get involved with other at risk behaviors. Some of the most common behaviors that teenagers may engage in are dropping out of school, smoking, drinking, and drug using (Jessor and Jessor, 1975; Jessor et al., 1983).

Based on Piaget's and Kohlberg's theories, Rest designed a tool to measure moral judgment and reasoning skills that offers a simpler scoring mechanism relative to the one developed by Kohlberg. The Defining Issues Test (DIT) is also focused on older populations, the adolescents and young adults, relative to the other moral development measurement instruments. Even though DIT research is centered on the stages of development, it is primarily focused on developmental differences and offers a continuous measurement of moral reasoning skills rather than sharp transitions from
one developmental stage to the next. This type of research can be used to explore the cognitive aspects of the information processing approach (Rest, 1979). It should be noted that Kohlberg's approach to research on moral development was not based on the desire to create an instrument that would measure stages of development. Rather his main objective was to establish a theoretical base for his research assumptions. Kohlberg's attempt to create a system to represent the logic of moral thinking required numerous revisions, a process which cannot accommodate the creation of an effective, well standardized instrument. The DIT is Rest's attempt to minimize variation and to focus research outcomes in learning the stages of moral development. Such an instrument permits the establishment of a valid mechanism to assess those stages that are methodically learned by other theoreticians. Such an instrument can support the assumptions that are explored in theories. However, it can also provide a viable method to measure levels of expected development (Rest, 1979).

Similar to Kohlberg's conclusion of the existence of six stages, Rest's work resulted in the use of six stages that the individual may experience in the process of moral development and maturation. Stage 1 presents the primary caregiver as an individual that establishes demands and expects certain behaviors to follow. This stage is characterized as the morality of obedience. Even though the child is not an active contributor in the process of establishing the rules, the child's understanding that obedience will allow freedom from punishment is a major factor in maintaining the equilibrium (Rest, 1979). The child would most likely respond well to a consistent and well established set of rules. Children who are born to adolescent parents seem to display higher risk for behavioral problems which surface during their
pre-school years. Behavioral problems are associated with insecure and/or disorganized attachment of infants to their adolescent mothers. Another element that may influence the child's behavior is maternal depression and poor self-esteem in very early stages of childhood. Maternal depression in earlier stages of infancy and childhood seems to be a contributing factor related to a child's cognitive outcomes as well as a child's emotional well being (Hubbs-Tait, Osofsky, Hann, and McDonald Culp, 1994; Murray, Fiori-Cowley, Hooper, and Cooper, 1996).

Stage 2 introduces recognition of the fact that each individual has unique interests. However, exchange of mutually decided favors is a major developmental milestone. This stage represents the morality of instrumental egoism, in case both parties anticipate gains from simple exchange they would probably choose to reciprocate. Stage 3 introduces the morality of interpersonal concordance. Reciprocal role taking allows individuals to attain a mutual understanding about each other and the continuous pattern of their interactions. This level of development allows the individual the realization that being considerate, nice, and kind to other people will influence their interactions with people in their environment. Friendships are based on enduring cooperative efforts by both sides (Rest, 1979). Some teenagers operate within this realm of moral development and therefore at some stage of their child's maturational process they will share a similar level of functioning. That is to say that some parents who should function as role models to their children will most likely exhibit similar behavioral patterns to those of their children. Cognitive readiness to the parenting process seemed to contribute to better intellectual and emotional development of children born to adolescent mothers. It should also be noted that there is a
higher risk for initiation of child abuse among adolescent parents relative to adolescent peers who are not parents. Many adolescent parents who were abused as children seem to be predisposed to repeat abusive patterns with their own children. Intergenerational transmission of abuse seems to be compounded among adolescent parents whose psychological as well as other areas of development are in transition and are exposed to dramatic changes. Another factor that is often associated with increased child maltreatment among teenage parents is socioeconomic stress (Becker-Laussen, Rickel, 1995; Miller, Miceli, Whitman, & Borkowski, 1996; Trad, 1993).

Stage 4 introduces all of the society members with expectations that are upheld in public institutionalized law. Social order requires morality of law and duty which is dependent on a society wide stabilized system of cooperation. This stage reinforces the morality of law and duty to the social order. All people are obligated to uphold the law and be protected by the law as well. Cooperation and reciprocal relationships of accepting and reinforcing the laws are necessary for a well adjusted society to function. Stage 5 is based on rational people being able to accept formal procedures that are institutionalized for making laws. The morality of societal consensus reflects the general will of the people to devise law making procedures. All people are obligated to support and be protected at the same time by shared laws. Stage 6 includes the assumption that social organization taken as an ideal criteria is based on logical requirements of non arbitrary cooperation among rational, equal, and impartial people. The morality of non-arbitrary social cooperation is established on the cooperation that negates or neutralizes all arbitrary distribution of rights and responsibilities. This system is the most equilibrated due to outmost maximization of simultaneous benefit to each
member. Any deviation from these rules would advantage some members at the expense of others (Rest, 1979). This higher level of moral experience and understanding requires a higher level of education to allow for logical thought process to occur. Many of the teenagers who become parents tend to drop out of school due to either poor motivation prior to becoming a parent and/or to the consequences of having to care for a child. Therefore, their educational progress in many cases slows down. In some instances the young mothers are able to resume their academic programs at a later stage. However, in many cases they tend to neglect returning to school which places them at a disadvantage relative to their peers who were able to complete their educational program and establish occupational careers for themselves (Furstenberg, Brooks-Gunn, & Morgan, 1987; Rauch-Elnekave, 1994; Rest, 1979).

In addition to the six stages of development, Rest observed four components that influence the production of moral behavior in response to a particular situation. The first component introduces the ability of the individual to interpret the situation. This ability involves the capacity to identify possible courses of action in a situation that affects the welfare of someone else. Being able to predict the effect of the individual's actions on another person requires knowledge and insight about how the world operates. It also requires insight and a degree of sensitivity about other people's feelings and desires. Component two introduces the process of identifying what the ideal moral course of action would be, based on the assumption that the individual is aware of some possible alternative avenues and their consequences on other people. In addition to being aware of the different options, the individual has to be able to integrate the information produced by
the various factors. The individual needs to consider the needs of the other person, however, the needs of the person who is making the decision should be attended to as well. This component introduces the thought process of which course of action would best fulfill a moral ideal. There is also a consideration of how an individual determines what is the moral ideal.

Component three assumes the individual's intention to choose the moral course of action by selecting among valued outcomes. Unlike component two in which the ideal moral choice is defined, component three involves the decision of how one intends to approach the moral issue at hand. Even though a moral course of action may be formulated, other values which may not necessarily include moral elements may be considered as well. Frequently, other values are so important to an individual that they pre-empt or compromise moral value. No single general model of moral decision making can satisfy all different personalities and ways of decision making.

Few people actually carry out complex calculations in the process of decision making. Fluctuation of mood may effect moral decision making and in some cases people choose a moral way to approach a solution just because it is right, without weighing costs and benefits. Some people may not choose the moral way unless it directly benefits them in some fashion, they tend not to respond to the needs of others. Component four includes executing and implementing what the individual's moral intentions are, facilitating a plan of action. This process involves considering the sequence of concrete actions, avoiding any impediments and unexpected difficulties, overcoming fatigue and frustration, resisting distractions and other allurements, and not losing sight of the eventual goal. In order to be able to facilitate appropriated moral development, the individual needs to acquire proficiency in all of the
components processes. Even observable moral behavior may not necessarily indicate a moral person or that the incentives for the behavior were moral. Finally it should be noted that the four components model should not be perceived as a linear decision making model and the expectation should not include subjects to go through the components in some progressive method one following the other (Rest, 1986).

Adolescent Moral Development, Reasoning Skills, and Sexual Decision Making Within a Historical Context

Adolescent development, particularly the development of teenage girls, is strongly affected by being exposed to the greatly increased number of working women as role models and by the heightened awareness of adult women who freely choose living independently of men (Bureau of the Census, 1984; Kamerman and Hayes, 1982; O'Connell and Rogers, 1984; U.S. Congress, House, 1985). Other factors affecting the adolescent population are the marital, employment, and income differences between white and minority parents which have became more pronounced in recent years (Hayes, 1987; Kamerman and Hayes, 1982; O'Neill, 1980; Russell, 1995). The turbulent years of the 1960s and the 1970s challenged many of the traditional American values and behavioral norms that were accepted by the majority of the public up to that point. Among the factors that were disputed were the roles of women and the nature of male-female relationships. The early 1980s reflect a "new morality" which is characterized by the emergence of a new conservatism, both economic and social. While the lingering sexual liberalism of the 1970s was still influential in many segments of the population, the "new morality" was accompanied with growing and vocal
controversy (Hayes, 1987). During the early 1960s the hippie, postwar baby boom, counter culture teenagers, fostered free self-expression and the cultivation of alternative lifestyles (Chilman, 1980; Panel on Youth of the President's Science Advisory Committee, 1974; Coleman, 1961; Douvan and Adelson, 1966; Keniston, 1968; Flacks, 1970, 1971). This approach included drug use and sexual freedom, disregarding previous socially acceptable norms. The younger segment of the population during this era rejected the work of public and private bureaucracy, materialism, and consumerism that their parents' generation had helped create in the aftermath of World War II (Glick, 1975; Hayes, 1987; Masnick & Bane, 1980; Reiss, 1973; Rubin, 1976; Yankelovich, 1974).

The mid and late 1970s mark the dramatically worsened economic conditions of the country. Minority young people were particularly affected by the economic decline, and the prevalent and typical attitude in response to those conditions were apathy, alienation, and hopelessness. White blue collar segments of the population also experienced the economic hardship and responded with the perception of inescapable deprivation and dwindling prospects of rewarding jobs, happy marriages, and adequate income (Rubin, 1976). The economic decline of the late 1970s and its associated social problems opened the door to the new conservatism of the early 1980s. The perception was that excess of personal indulgence and governmental waste were blamed for the declining position of the United States in the world market, in the arms race, and in technological development. Those elements were similarly blamed for social problems ranging from criminal violence to adolescent pregnancy. The result of this over-encompassing attack on the new morality and behavioral patterns was the return to the traditional Protestant
work ethic which began to gain new popularity (Glazer, 1985; Hayes, 1987; Hill and Monks, 1977; Nisbett, 1985).

The process of adolescent development, while constant and predictable in many aspects, is significantly influenced by the historical and social context in which it takes place. Sociocultural factors have important effects on individual development. Drug use either licit or illicit as well as other at risk behaviors have been closely related and in some cases paralleled to pervasive changes in attitudes and behaviors related to sexuality. The social, economic, and cultural contexts of adolescence have been dramatically altered by the historical events of the 1960s and the 1970s. Adolescents were only one of numerous subgroups within American society that were differently affected by the events of these two decades (Hayes, 1987). Technological changes and particularly the increased use of television as a communication medium, dramatically influenced certain aspects of social interactions and perceptions. Television is believed by many to be a serious factor influencing the course of American life and culture during the twentieth century more than any other single development. Adolescent’s knowledge and attitudes in many areas, including sexuality, are undoubtedly affected by viewing television programs. Television provides young people with clues about how to be sexy, but introduces little information about how to be sexually responsible. Advertising of all kinds as well as all other types of programs contain sexual innuendoes and overtones. Abortion and childbearing outside marriage are generally presented without reference to their negative dimensions and consequences (Hayes, 1987).

Early initiation of coitus and a lack of contraceptive use are often viewed as evidence of irresponsible attitudes toward moral behavior among
the current generation of youth. However, when teenagers are allowed to express their opinions and perceptions they generally report attitudes that are consistent with responsible sexual behavior. Similar to the adult role models in their environment, they frequently experience difficulty translating their beliefs into conduct. The majority of young mothers report that they think that the best age to have a baby is older than the age at which they had borne a child. Family, friends, community, and media have an impact on young people's perception of ideal and right behaviors. However, these perceived norms may not translate into a personal code of conduct. Due to the typical adolescent behavior, teenagers may not be aware of the inconsistencies in their interactions and expectations of themselves as well as their social environment (Zabin, & Hayward, 1993). The age and the normative environment in which the adolescent lives determines the development of a sexual self-image. Both adults and teenagers engage in moral deliberation which is an essential process when attempting to make personal choices regarding the process of engaging in sexual relationships. The issue of sexual behavior is dominated by social norms and different taboos for both adolescents as well as adults. Adolescents' moral deliberation regarding the issue of sexual behavior, unlike for the adults, is constrained by the emerging struggle to develop a personal moral code. Kohlberg's theory, implementing both Piaget's cognitive stages and Erikson's levels of identity formation, maintains that changes in moral reasoning during adolescence are apparent. Kohlberg also emphasizes that people may be able to develop moral judgment, which is equivalent to their cognitive capacity, however, they are incapable of developing it beyond that level. This development occurs at the same stressful period that characterizes the
adolescent's increased permissiveness as they separate from their family and increasingly identify with their peers. The development of a personal moral code is a long process, even when it builds on the foundation of a mature self-image (Zabin, & Hayward, 1993).

Determinants of adolescent sexual activity are related to several major factors. Individual characteristics such as puberty, age, race, and socioeconomic status, may influence the adolescent's decision making process. Other individual characteristics that most likely effect the outcome of the adolescent stage of development are religiousness, level of intelligence, academic achievement, and dating behavior. Individual characteristics are extremely significant in determining the outcome of the adolescent experience. However, family background, parental support and controls, and the influence of peer groups are essential factors in the route an adolescent will choose when faced with a decision making that may determine the outcome of their lives in later years. Individual characteristics influence both boys and girls during their pubertal stage of development. Early pubertal development which is marked by age of menarche for girls and body development and hormonal levels for boys is strongly associated with early initiation of sexual activity (Billy and Udry, 1983; Udry, 1979; Morris et al., 1982; Westney et al., 1983; Zelnik et al., 1981). Physical maturity varies by sex and race, research indicates that the association between pubertal development and sexual behavior was stronger for white rather than black girls (Zelnik et al., 1981).

Nutritional status, particularly protein in the diet, seems to be negatively related to age of menarche on a population as well as on an individual basis. The better nourished the population, the sooner, on average, young girls reach menarche. Therefore the higher the social class, the lower the age at physical
maturity. Chronological age is not necessarily a good indicator of physical maturation rather pubertal age is the relevant measure (Zabin, & Hayward, 1993). Although it is unclear how social environment affects girls' behavioral patterns it seems that actual behavior is influenced to a greater extent by their social environment rather than by physical maturation. Regardless of maturation level it seems that more adolescents tend to choose to become sexually active at an earlier age. Correlated with this social occurrence, it appears as though the proportion of sexually active teenagers increases with age (Zelnik et al., 1981).

Adolescent Sexual Development Within a Social Context

Teenage pregnancy is not a new phenomenon, however, the issues attached to this social occurrence are substantially different and diverse than the issues attributed to it thirty years ago. The issues vary from demographic changes, to economic shifts, to legal changes, all affecting the teenagers, their families, their children, and society in general (Hayes, 1987). One of the major demographic changes that is significantly different today relative to thirty years ago is the family structure. More teenagers than ever before live in single parents homes generally female headed. More teenagers than ever before live in homes where either the sole parent, or where there are two parents, both work outside of the home. Other demographic factors show significant differences between the white, African-American, and Hispanic populations. While most white and Hispanic children and teenagers have continued to live with two parents, more than half of all African-American children have not (Bureau of the Census, 1984). Single motherhood rates
increased dramatically, paralleled by the increased occurrence of absent fatherhood (Hayes, 1987).

The sexual freedom which was provided with the introduction of biomedical contraceptive technologies during the 1960s enabled women to control their own fertility without the knowledge or cooperation of their male partners. The new forms of contraception made it possible for sexual intercourse to be largely independent of pregnancy (Hayes, 1987). The evolving nature of the women's movement in the 1970s became equality of sexual expression. Women, it was argued, could and should enjoy sex as much as men. Within the majority of college as well as non-college youth premarital intercourse, abortion, and homosexual relations were viewed as morally acceptable (Yankelovich, 1974). The legalization of abortion in 1973 added another dimension to women's growing sexual freedom. Access to the different contraceptive technologies as well as legalized abortions increased the options available to younger teenagers. The availability of those options drastically increased the level of freedom that such measures provide and therefore allowed younger adolescents to become sexually active (Hayes, 1987).

Educational background and specialized fields increased in importance between 1964 and 1978 and widened the gap between white and minority teenagers ability to be employed. While the number of jobs that required specialized training significantly increased, a significant decrease was noted in the number of jobs that required no skills. Regardless of racial background, absent fathers generally come from more economically disadvantaged homes than do other young men. This trend of limited job opportunities for unskilled workers and the subsequent declining status of
many disadvantaged youth during the 1970s significantly affected their self-
perceptions and their attitudes. This pessimism was shared by minority as
well as blue collar white youth (Rubin, 1976). Adolescent childbearing seem
to be focused within the geographic distribution of disadvantaged areas in
urban settings. These areas seem to reflect poverty, ill health, and risk
behaviors which in addition to early childbearing are also prevalent for the
typical population of these locations. The overall depressed existence in
disadvantaged residential areas, extensively influence young people who are
exposed to the poverty culture. This includes poor schools, health delivery
systems as well as other poor social and institutional structures. Families
who reside in these neighborhoods are likely to have the fewest resources with
which to protect their children from negative influences (Zabin, & Hayward,
1993).

Employment and unemployment patterns are very closely related to
changes in the patterns of marriage, family structure, and family size.
Individuals' earnings have dramatically affected the patterns of family
income (Kamerman & Hayes, 1982). The average earnings of white males are
generally higher, therefore white children in two-parent families benefit from
higher median family incomes relative to their African American and
Hispanic counterparts. Men tend to earn more than women at all job levels.
Consequently in female headed families, in which the mothers' earnings
provide the most important source of income, the woman's wages cover on the
average between 60 and 70 percent of all family financial resources (Masnick
& Bane, 1980). This discrepancy between income and actual expenses
perpetuates a cycle of poverty. In 1984 approximately 18 percent of all young
people between the ages of 14 and 21 lived in families below the poverty level.
Among minority children who live in single parent families, the proportion of children and young adults who live in poverty is even greater (Hayes, 1987).

Black adolescents both males and females become sexually active on the average two years earlier than their white counterparts. At every age level it appears that more black than white teenagers are having intercourse (Zelnik et al., 1981; Zabin & Clark, 1981). Research introduces some evidence that young black girls tend to be slightly more physically mature relative to their white counterparts of comparable ages (Harlan et al., 1980; Devaney & Hubley, 1981). However, the differences between these two segments of the population in physical maturity seems to be negligible and too small to explain the large race differences in early premarital sexual activity (Moore et al., 1985). Researchers disagree over the source of racial differences in the proportion of teenagers who are sexually active and the age of sexual initiation. Some attribute the disparity wholly or in large part to socioeconomic differences among blacks and whites. Another factor that is considered to effect the initiation of sexual intercourse at earlier ages among the minority population is the normative differences in the acceptability of early sexual behavior. Those who believe that there are subcultural differences in adolescent sexual behavior trace them to economic and social disadvantage.

**Adolescent Pregnancy**

Adolescents approach the issue of becoming sexually active, and thus taking the risk of becoming pregnant, from different points of view. While there is a group of young girls who do not think of the consequences of becoming pregnant as viable in their cases, there are others who pursue sexual intercourse with a clear intention of becoming pregnant. The elements
that play a central role in the decision making of girls who do not pursue relationships in order to become pregnant, involve establishing a relationship based on trust and love with their partners. The girls' tendency to avoid sexual intercourse with partners that will potentially abandon them after becoming intimate, strengthen this behavior. The girls' assumption that they are not vulnerable to pregnancy is another element that contributes to unwanted pregnancy. Family relationships in most cases proved to have ineffective authority figures. In addition to the care giver's inability to discuss important developmental issues, such as sexual development, with the teenager, there was no obvious limit setting (Pete & DeSantis, 1990)

Teenagers' lack of awareness of physical, bodily functioning and inconsistent use of contraceptives may lead to accidental occurrences of pregnancy (Hayes, 1987). On some occasions, however, there is a genuine desire on the teenager's part to become a parent as part of either acceptable norm within the subculture in which she lives or a thought that becoming a mother proves a degree of maturity. Having a child for these girls, who in most cases are very likely not to be successful in school, is a tangible achievement that may elevate their status among their peers. It symbolizes for many of them a rite of passage from adolescence to adulthood. Many of their parents were teenage parents themselves and passing on the tradition of teenage parenthood not only is considered to be nothing to be ashamed of, but rather it is considered to be something to be desired (Dash, 1990).

Adolescents in this group think that "possessing" an infant will provide them with someone to love and someone who will love them in return. These teenagers appear to feel better about themselves because they seem to achieve independence, they are able to acquire financial resources in some cases, and they seem to be provided with unconditional love (Stiffman, 1990).
Unfortunately, regardless of the etiology of the early pregnancy, either resulting from an unintentional or intentional desire to become pregnant, the results usually lead to the same conclusion. Early pregnancy is in general an impediment for the developing teenager and it is usually an indication that a very young family unit will require extensive support as well as financial, medical, and educational assistance. Although some of these early pregnancies are resolved with abortions, a substantial number of them introduce another human being into the world. Although apparently the total number of current teenage pregnancies does not exceed the number of teenage pregnancies of thirty years ago, the phenomenon today is still perceived as a more significant problem. This is based on the fact that thirty years ago it was somewhat socially acceptable for teenagers to get married and therefore be sexually active and become parents during the adolescent years. Today, however, social norm, the changing nucleus family, and in many cases the absence of the support of the extended family, dictate a different lifestyle (Davis, 1989). Teenagers paths are well paved for them even when they do not tend to conform. They are expected to complete a basic educational requirement that usually includes a minimum of a high school graduation, they are expected then to become independent, and only then they can pursue family life. The fashion by which current social support systems, and extended family systems function does not allow for too many family members to be dependent on one financial provider without risking poverty. Thus given these societal changes we would have expected a decrease in teenage pregnancies today as compared to thirty years ago had there been no problem (Davis, 1989).

Adding another facet to the overwhelming basic difficulties that are linked to the issue of early pregnancy, is that in most cases the pregnancy is
unintended and unplanned. Most teenagers in many of the cases do not know that they are pregnant and therefore they do not seek the most beneficial and necessary prenatal care in the first trimester of their pregnancy. This usually occurs as a result of lack of preparation, lack of knowledge of what should be done, and in most cases denial of the pregnancy, fearing the consequences and family reaction. This lack of medical treatment and proper care may result in premature births, low birth weight, and most devastating of all infant mortality. In addition to risking the life and health of their infants these young mothers put their own health in jeopardy. These risks may include inadequate diet, or some illnesses such as anemia, that may go undetected for long periods of times and may increase the risk for both mothers’ and infants’ well being. From that point on, these young mothers and their babies are in most cases completely dependent on the society for their daily existence (Davis, 1989).

Although this dependency may not appear severe for most citizens, its implications for future generations may be cause for concern. The young mother whose education abruptly stopped will not be able to obtain and maintain a job that will justify hiring a baby-sitter. Without any built in support system she will not be able to break away from the cycle of poverty and hopelessness and thus she will gradually become more dependent on the welfare system. This dependency may increase her frustration and depression (Reis, 1989). The young mother may possibly start blaming her condition on the baby. This condition may transpire a cycle of child abuse or neglect. Even if abuse does not occur the teenager’s ability to deal with the responsibility of raising a child may turn out to be too complicated and without the support and guidance of a family it may prove to be impossible.
Davis (1989) also points out that one of the problems that society faces today with teenage pregnancy rate is the fact that although everyone has an opinion about this issue, apparently no one has an effective solution. Policy makers, in Davis’ opinion, need to establish their positions in this area to eliminate the risk of interest groups getting involved and start manipulating the outcomes of these decisions in terms of their own ideological commitment (Davis, 1989). The changing societal attitudes towards sex and pregnancy seem to initiate changes in behavioral trends among teenagers. These changes appear to be more instrumental in behavioral alterations rather than specific characteristics of individuals or groups. The characteristics that are considered may range from sexual excesses among teenagers, to sexual permissive attitudes among certain cultural sections of the population (Davis, 1989).

One of the major elements that influences childbearing among teenagers is childhood sexual abuse within the family constellation. Some of the possible consequences include pregnancy as a result of the initial sexual offense. Although it is not a common occurrence it was one of the major factors effecting teenage pregnancy. Another possible reason for sexual abuse to determine subsequent teenage pregnancy is based in the dysfunctional patterns of familial interactions. Some of the obvious signs for dysfunctional patterns that may result in early pregnancy include a powerful father figure, a devalued mother, and a daughter who is expected to perform maternal duties and responsibilities (Butler & Burton, 1990). Symbols of family roles that are taught individually within each family are another factor affecting the risk of early pregnancy. The fashion by which each member of the family is treated shapes the identity of early social experiences and the way social interactions are established. Families that promote the teaching that the
females method of relating to males within the family is sexual, and reinforce this behavior through early indoctrination, will very likely encourage promiscuous behavior that may result in a tendency for prostitution. These types of behaviors will very likely result in pregnancy since teenage girls tend to employ irregular birth control methods or tend not to use any forms of contraception (Butler & Burton, 1990).

Eggebeen and Uhlenberg (1989) conducted a research project in which they compared changes in age distribution of parents of preschool age children between the years 1940 and 1980 for both the white and black population. They compared fertility rates of both black and white women for five years intervals between 1940 to 1980, including women of all possible childbearing ages starting from nineteen and younger up to fifty and older. White and black women were found not to have the same childbearing patterns. Children born to teenage white mothers presented a slight increase between 1960 to 1970 and was marked by a decline by 1980. However, the proportion of white teenage mothers who were sixteen or younger increased during that span of time. The proportion of black children born to young mothers, on the other hand, doubled between 1960 and 1980. Thus by 1980 more than one in five of all black preschoolers had been born to a teenage mother. The status of mothers who were younger than seventeen grew even more rapidly than teenagers who were older than seventeen (Eggebeen & Uhlenberg 1989). Although there is a substantial increase in child bearing among the black teenage population, it is apparent from this study that the problem is not only a black problem rather it is a teenage problem that encompasses the entire teenage population of the United States. This social tendency of teenagers to have children seems to be more pronounced among the teenage
population of the United States when compared to other developed countries around the world (Bronfenbrenner, 1991; Hayes, 1987).

Can teenagers become effective parents? Most at-risk teenagers are more likely to drop out of school and they tend to manifest two primarily problematic behaviors, drug and alcohol abuse and teenage pregnancy. Whether these two behaviors are adopted by the same teenagers or not, both of them disproportionately occur among the disadvantaged societal group. Most teenagers who either become pregnant or choose to abuse drugs or alcohol, share the same basic characteristics: lack of hope and expectations of the future, poor academic achievement, ignorance about reproduction, and family influence and expectations. These characteristics may influence adolescents’ ability to maintain good health, acquire education, and hold stable employment. Both behaviors, drug and alcohol abuse and early age pregnancy, are observed by policy makers as problem behaviors that seem to primarily occur within dysfunctional families (Bempechat, 1989). Thus it is less likely that teenagers who become parents as a result of personal turmoil will be able to function as effective parents. The educational system and their home life situation need to improve before they will be able to improve their outlook on life. Their ability to restore their self-concept and self-worth may help them become effective parents.

**Intervention Programs Available to Parenting Teenagers**

Individuals who are at the highest risk status are in most cases not addressed by the current form of intervention programs which are offered by various agencies. Individuals who subscribe into this category tend to drop
out of school prior to being available to programs of this nature. Due to lifestyle patterns this segment of the population is also very likely to distance itself from any familiar and previously established source of care. Early detection of higher risks populations is essential in attempting to influence and offer any alternative behavioral patterns. Discussions of pubertal development and sexual responsibility should be initiated as early as later elementary and early middle or junior high school years. Children at that age, both boys and girls, are more accepting and open for discussion of such issues. An identified group of teenagers which represents higher risk behaviors would benefit from intensive support and guidance before unacceptable behaviors are adopted. This is also an environment where large groups of pre-adolescents can be approached on a casual basis. Once they leave the protective area of a junior high school they manifest more individual behaviors rather than a group like characteristics. Approaching them at that later stage may present with more difficulty and in some instances may not be possible (Zabin, & Hayward, 1993).

The current approach of the educational system is primarily reactive as opposed to proactive. Based on their research, Christopher and Roosa (1990) suggest that professionals who attempt to assist their students with the decision making process of when to initiate sexual involvement, should encourage abstinence but should also offer alternative options in order for the programs to be effective. They found that educational programs that introduced only the abstinence method, without any real consideration of other options, were ineffective in reaching the at-risk population of adolescents. In their article: An Evaluation of an Adolescent Pregnancy Prevention Program: Is “Just Say No” Enough?, Christopher and Roosa (1990) discuss the abstinence method of intervention. They reported that the only
difference between the experimental group and the control group as a result of this kind of intervention was the tendency of the experimental group to prolong precoital sexual activity. However, their overall behavior did not change. Failure to comprehend that even though adolescents may want to abstain from sexual activity, they may be forced into it as a result of peer pressure, the desire to be a part of a particular social group, or by their biological maturity, may be naive. The “Just Say No” attitude to health education may be ignoring the pressures adolescents face on a daily basis. This method may also overlook those students who were forced to be involved in sexual activities at a very young age against their ability to control the events and/or to understand that they are subjects of abuse. This approach may be unrealistic and create more complex problems with students who find trusting other people in their lives to be impossible (Cristopher & Roosa, 1990).

In an attempt to reduce the number of teenage pregnancy an educational approach that stresses abstinence without considering other options seems to be naive and in most instances ineffective. This point of view seemed to be very pronounced in Christopher and Roosa’s research study mentioned above. The program’s results seemed to stress two major outcomes that will have to be taken into consideration in subsequent programs. First, the students’ motivation and interest in the subject matter. The students’ motivation to participate in such program was taken for granted and thus many high-risk students dropped out of it even though it was offered during regular classroom time. Second, a possible inherent insensitivity in programs that stress abstinence as the only alternative to adolescent pregnancy by ignoring students who have already experienced sexual intercourse. This may be especially pronounced in cases of involuntary
occurrences such as rape or incest. Although the study did not result in excessive sexual intercourse among the participants it resulted in increased sexual activity that included primarily precoital sexual interactions. These results were pronounced among male adolescents and was noted as a significant difference between the experimental and control group. This sexual behavior seemed more pronounced after the program was in progress (Cristopher & Roosa, 1990).

Programs that are too expensive for teenagers or that are available in remote locations that are not easily accessible may not be significant in attempting to offer real options to this population. Facilities that may be effective in servicing adolescents can include schools, shopping centers, and storefronts where teenagers tend to spend their time and are close and easily available to them. Outreach services is another element that needs to be established and available to the teenage population. Clinics designed to serve the adolescent population effectively need to have multitude of services focused in one location. This makes it easier for the adolescent population to access services. It also allows for the service providers to administer multiple interventions to the same individual without risking the opportunity of communicating with the adolescent. Reducing the number of agencies the adolescent needs to communicate with will increase the likelihood of better and more encompassing intervention. Programs offering interventions similar to this pattern seemed to be more successful relative to programs that offered scattered services in different locations. Teenagers seem to display crisis orientation in interacting with clinics and also tend to be relatively impatient which is typical of teenagers' developmental stage. They may also be unlikely to seek help in places where support was at one point refused at a time of need. The more accommodating the facility to the young
clients the better probability it has to be successful in addressing the needs of a larger portion of the adolescent population (Zabin & Hayward, 1993).

Many educators, policy makers, and even parents of teenagers, reject programs that permit the teenage population who become parents to go back to school. This is in most cases the result of not approving or supporting daycare services for the teenagers' children while the adolescents themselves attend their regular school program. Some of the possible reasoning for such reaction may be due to the concern that such measures will attract other teenagers to become parents. Other reasons may involve the cost of such programs and the necessity to use taxpayers' money to support it. When considering the scarce funding available for regular educational programs and the constant desire to save by reducing the number of existing programs, daycare services offered to the children of teenagers seem unrealistic. However, the results of numerous research studies suggest that the alternative options for daycare and appropriate educational plans for at risk teenagers are far more costly. Daycare centers and appropriate interventions at the necessary time period, including medical and nutritional interventions, seem to be the most reasonable and cost effective measures for the teenage population who experiences early parenting.

In trying to deal with teenage pregnancy, numerous programs are offered to young mothers. These programs range from offering day-care services while the young mothers attend their own educational program, to parenting programs that allow the new mothers to cope with their new responsibilities. Attempts to educate adolescents and to alter their at-risk behaviors were initiated as part of a survey done in Phoenix, Arizona on two Teen-Age Parenting Programs (TAPP's).
This survey appeared to have minimal immediate impact on the adolescent mothers' general knowledge and subsequent behavior. Although not specifically documented, the researchers felt that these programs may have long-term influences on adolescent attitudes, their overall ability to function effectively as active members of the society, as well as on their children's development. The teenagers who were part of the study were apparently one or more years academically delayed relative to their peers in school at the time of their pregnancies. Most of them maintained below average grades and poor attendance records. Most of the poor students who were most likely to become pregnant were those who dropped out of school even before becoming pregnant. These students displayed an ongoing need to require the most attention while they were in school and in most cases they did not receive the needed attention (Roosa, 1985). Adolescents who exhibit difficulty in exerting self-control and who tend to display self-destructive behaviors are at a greater risk of becoming parents early relative to their adolescent counterparts. Adolescents who continue to display dysfunctional behavioral patterns may be less effective as parents, a factor which may contribute to eventual depression of their children's developmental course (Furstenberg, Brooks-Gunn, & Morgan, 1987). These teenagers are probably not informed enough and obviously would lack the capacity to help their children and offer appropriate support when they eventually attend school. Thus a cycle of poverty is most likely to perpetuate itself within subsequent generations.

**Children of Adolescent Mothers and Expected Risks**

While the etiology of adolescents' desire to be sexually active can be studied and explained in different fashions, the risks to them and their children are numerous. On the surface, teenage pregnancy appears to initiate
only a short-term set back for the young mother. However, in reality research suggests that the effects of teenage pregnancy linger into the next generation's ability to recover and function effectively. It is typical to observe the adolescent mother being able to overcome many of the deficits imposed on her due to early parenthood and catch up with her peers in her educational and economic career. However, the child of this adolescent will most likely demonstrate specific deficits of his or her own (Furstenberg, Brooks-Gunn, & Morgan, 1987). Research documents areas which are most likely to surface among children of teenager parents to include, personality, adjustment, behavior, and educational achievement difficulties. These characteristics within this particular population may result in subsequent early sexual conduct and unintended fertility. Even when the young mother's changes in life course may have positive effects, the educational disadvantage starts in young ages and often intensifies. The Intergenerational impact of major life events is hard to overcome and the stress of the early years is often passed on to the next generation. Early intervention may offset many of the adverse effects of environmental influences. However, the developmental course of children of adolescents involves many more elements that cannot be alleviated with external means such as poor prenatal conditions, and in some cases deficient biological outcomes (Zabin & Hayward, 1993).

Numerous research projects report significant health risks related to the children of adolescent mothers and on the average, due to a clear financial disadvantage, continuous poor health care. Children of teenage parents were found to display greater risk of lower intellectual and academic achievement. Although the information pertaining to the association between the age of the mother when giving birth to the intellectual capacity of the child is sparse, the
limited evidence in this area indicates that the child's intelligence as measured on standardized tests was affected (Broman, 1981; Maracek, 1979; Furstenberg, 1976; Belmont et al., 1981; Cohen et al., 1980; Levin, 1983; Moore, 1986; Davis and Grossbard-Schechtman, 1980). Children of adolescents also tend to display problems of self-control that may lead to behavior problems (Hofferth, 1981). In many cases adolescent mothers may be exposed to fewer educational and economical opportunities. A growing concern is currently raised within the psychological and medical communities in response to adolescent sexual activity and the population of adolescent mothers. The growing occurrence of HIV infection which increases the risk of exposure to the AIDS virus is another element that is of concern within the population of children born to adolescent parents. This risk should be viewed as an additional cause of concern to the difficulties, special to adolescent mothers and their children, which are mentioned previously. Finally, drug use and abuse may be a factor in the ability of teenagers to conceptualize and assess problem solving situations and their interactions with the environment. Davis (1989), pointed out that one of the problems that society faces today with teenage pregnancy rate, is that although everyone has an opinion about this issue, apparently no one has an effective solution. Policy makers, in Davis' opinion, need to establish their positions in this area to eliminate the risk of interest groups getting involved and thus manipulating the outcomes of these decisions in terms of their own ideological commitment. All young people need to be exposed to the same opportunities and the same knowledge to allow them to become contributing members of the society. This should be offered to minimize the possibility of being emotionally and economically dependent on the larger society for years to come (Davis, 1989).
Dysfunctional Families and Exposure to Abuse - Their Effects on Adolescent Development

Some of the pertinent issues that are mentioned in the literature involve the growing influence of physical, emotional, and sexual abuse inflicted on teenagers during the growing childhood years. The effects of dysfunctional families on the growing child’s self-esteem are also considered to be major elements in the growing trend of teenagers who seek attention through socially unacceptable behaviors and sexual involvement. In their article: *Rethinking Teenage Childbearing: Is Sexual Abuse a Missing Link*, Butler and Burton describe relative similarities between the family dynamics of incest victims and adolescent mothers. Their study which was based on a limited sample (N = 41) of young rural mothers, yielded five basic conclusions. First, there seems to be an apparent direct relationship between sexual victimization and pregnancy at a very young age. Second, dysfunctional familial interaction patterns may increase the risk of teen pregnancy in families in which a powerful father figure is accompanied by a devalued mother and a daughter who is expected to perform maternal duties and responsibilities. Third, gender and sexual socialization may be directly affected by childhood sexual abuse. A sexually abused young girl may internalize that her role and purpose is to fulfill the sexual desires of others. Fourth, lowered self esteem may result from childhood sexual abuse and may influence the incidence of adolescent pregnancy. Finally, an adolescent may perceive pregnancy as an escape from a bad environment of abuse, therefore more incidents of wanted pregnancy may be found among teenagers with history of sexual abuse. (Butler & Burton, 1990).
Potential Effects of Sexual, Emotional, and Physical Abuse on Initiation of Risk Taking behaviors in Adolescence

All types of abuse seem to introduce cyclical behavioral patterns. Research in this field reflects higher probability of risk taking behavioral patterns among teenagers who were abused during their childhood. Many adolescents also seem to repeat the abusive behaviors in their interactions with their own children. Sexual abuse seems to take center stage in the literature. Sexual dissatisfaction, promiscuity, homosexuality, and an increased risk for revictimization is often manifested as a result of sexual abuse in earlier developmental stages. Many victims of sexual abuse also display a higher occurrence of depression and suicidal ideation. As noted earlier in this chapter, maternal depression is reported to be one of the influential factors related to the ability of the teenager to become an effective parent (Beitchman, Zucker, Hood, and DaCosta, 1991; Beitchman, Zucker, Hood, and DaCosta, 1992; Sheaff & Talashek, 1995; Tharinger, 1990). Some of the research suggests that many adolescent pregnancies are caused by adult men who sexually abuse teenage girls (Klein, 1996; Males, 1994). Victims of sexual abuse and particularly victims of incest seem to display a pattern of unique negative effects related to their self and social functioning. Many victims of incest reportedly suffer threatened self-definition and a poorly developed personality integration. They display poorly developed self-regulatory processes, and a poor sense of security and trust. Each developmental stage may be negatively affected. Some incest victims display serious self and social impairments (Cole and Putnam, 1992).
Child abuse is also a factor in many teenagers' ability to display effective parenting skills. Pregnant and parenting adolescents were found to be significantly more maladjusted when compared to peers who were not pregnant and/or parents. Adolescent parents were not found to be over-represented among maltreating parents or among parents of children in out of home care. However, they displayed a parallel percentage representation of the overall abusive parent population which suggests a repeated and cross-generational cycle of victimization (Becker-Lausen & Rickel, 1995; Massat, 1995). Socioeconomic status and stress related to limited resources is another factor that seems to be significantly associated with child maltreatment. Societal factors such as financial, social, and emotional stresses that are specific to the experiences of adolescent parenting seem to increase the risk for child abuse within the population of teenage parents. These are considered to be compounding factors related to the typical physical and psychological/emotional developmental flux that adolescents experience (Becker-Lausen, & Rickel, 1995; Buchholz & Korn-Bursztyn, 1993; Trad, 1993).

**School Dropout**

School dropout tendencies are related to incidence of child abuse, moral development level, as well as a contributing factor in increased risk taking behavioral patterns. Although some teenagers who become pregnant may have to drop out of school due to their parental obligations, many teenagers seem to drop out of school prior to becoming parents. School dropout seems to be one of the at-risk factors associated with poor academic achievement and a series of other behavioral patterns, that are socially unacceptable such as
drinking, smoking, and illicit drug using. History of abuse and neglect is related to poor school performance, low test scores, low grades, and general school outcome failures. In addition to poor academic outcomes, many abused children display poor social interactions and a limited ability to initiate and maintain age appropriate friendships. They seem to be involved in higher levels of conflict with their peers and display negative affect during social interactions. Children who display negative behaviors within the school environment tend to experience increased conflict with the adult school population as well. School aged children who are involved in delinquent behavior may be influenced by their lack of success in their educational experiences and academic programs. School commitment is restricted among many children and adolescents who display delinquent behaviors. Some of the more common behaviors specific to this population may result in participation in school crime, school misconduct, and school nonattendance (Jenkins, 1995; Leiter & Johnsen, 1994; Parker & Herrera, 1996). In a study designed to measure school achievement among a group of adolescent mothers, scores were found to be one or more years below grade level in reading and language skills. These young mothers had higher levels of self-esteem as well as general acceptance of early out of wedlock parenting by the adults in their environments. This finding may suggest that pregnancy and early motherhood represent alternative avenue to experiencing success for girls who are having academic difficulties. That is to say that there may be a higher likelihood of an increased incidence of undetected learning problems within this particular population. These difficulties may be related to the high rate of school dropout associated with adolescent motherhood (Rauch-Elnekave, 1994).
School success seems to depend on the school and home environment, socioeconomic level, and family support that is provided to the adolescent. Even though home life seems to be significantly related to school success, there is evidence to indicate that when intervention programs are comprehensive and delivered consistently to the population in need, school dropout as well as other at risk behaviors can be offset. School dropout among pregnant teens as indicated in the literature seems to be primarily related to poor academic achievement prior to becoming pregnant. Educational intervention programs that have yielded successful results have included improvement of basic literacy and numeracy skills. They also included confidence building, and education for sexual and relationship responsibility. Two program models of service provision have been identified as being successful with respect to reducing the occurrence of teenage pregnancies and school dropouts. One of the programs was a research based program and the other was a school based program. These programs combined school instruction, counseling, and family planning services. In addition to providing the services noted above, another element that seemed to increase effectiveness of these programs was the quality of the communication links established between the different professionals who were in contact with the at risk teenagers. More fluid communication patterns among the professional groups and the home of the adolescents were found to reduce at risk behavioral patterns among the participants (DeRidder, 1993; Hudson, 1993; Schorr, 1991; Wood, Hillman, & Sawilowsky, 1996).

Although dysfunctional families seem to play an active role in adolescents' initiation of sexual activity, it offers a limited view of a larger
picture. Individual orientation, family characteristics, and influence of peer groups are three major domains which appear to offer numerous factors that are strongly associated with early initiation of sexual activity. First, individual characteristics that may be susceptible to early initiation of sexual activity include early onset of puberty, lower socioeconomic status and level of acceptability of early pregnancy among different ethnic groups. Adolescents who attribute less importance to religiousness, as well as teenagers who have lower intellectual ability, lower academic achievement, and lack of educational goals may initiate sexual activity earlier. These factors, however, may be influenced by the parents' level of education as well as their aspirations for their children. Earlier and frequent dating profiles, as well as more committed relationships among adolescents, are reported to be associated with early sexual experience and intercourse (Furstenberg, 1976; Spanier, 1975; Simon and Gagnon, 1970; Presser, 1976b; Spanier, 1975; Furstenberg, 1976; Sorenson, 1973; Reiss, 1976). The adolescents' individual characteristics, socioemotional level, as well as cognitive development is reported to effect the rate of progression of interpersonal relationships. Recent findings present the progression of sexual intimacy among teenagers as beginning earlier and developing more rapidly than in the past (Hayes, 1987). Second, family characteristics such as parental support and controls may influence early initiation of sexual activity. Mothers who fail to combine affection with firm mild discipline and to set clearly defined limits on behavior, are more likely to contribute to their daughters' early intercourse. Decline in parent child closeness which may result in the adolescent's increased independence seems to be an area of relative importance in early initiation of sexual activity. Strong relations are attributed to the mother's
sexual and fertility experiences as a teenager. The earlier the mother experienced sexual activity and had her first child, the earlier the daughter is likely to initiate sexual activity. Families that are not intact, or families that include large number of siblings seem to contribute to early initiation of sexual activity (Hayes, 1987). Finally, the influence of the adolescents' peer groups, although frequently cited as being the single most important factor affecting the initiation of intercourse, may be overrated (Hofferth Vol. II: Ch.1). As suggested by several studies, same - sex peers seem to be a major source of information about sex, however, they are not necessarily influential in terms of a deciding factor for engaging in sexual activity (Libby and Carlson, 1973; Miller, 1976; Thornburg, 1978).

Summary

Today's environmental and societal norms dictate a different approach to teenage pregnancy than was accepted 30 years ago. Whereas in previous decades most pregnant teenage girls got married, pregnant adolescents today tend to become single mothers, a trend that may lead to an almost certain cycle of poverty and possible social isolation. The lack of larger and extended families today also interferes with the existence of natural support systems that people were accustomed to in the past. In addition to teen pregnancy posing mental health and physical developmental problems, it is unclear if adolescents whose moral development is generally still in progress can be effective parents to their children (Rest, 1986). Two problematic behavioral characteristics which are overwhelmingly associated with at-risk adolescent populations are drug and alcohol abuse and early age pregnancy. Both of these behaviors, as observed by policy makers, tend to primarily occur within
dysfunctional families (Bempechat, 1989). Therefore it is less likely that teenagers who become parents as a result of personal turmoil will be able to function effectively in the parents' role. Thus one can speculate whether the parenting problems encountered by some teen mothers reflect their age, developmental stage, their family experiences, and/or learned parenting styles.

As noted at the end of chapter I, this study was designed to document and examine the similarities and differences between the moral judgment development and the ability to solve moral dilemmas of teenagers who become pregnant during their adolescent years, and teenagers who avoid pregnancy at such a young age. Four different groups of teenage girls who were receiving services from the Boston City Hospital Adolescent Center were compared. One group was involved in the prenatal program of the center and consisted of primigravid adolescents who intended to deliver their babies and keep them. The second group consisted of primiparous teenagers who delivered their babies and became mothers. The third group consisted of adolescents who decided to terminate their primigravida pregnancy. Finally, the control group consisted of teenagers who had never been pregnant. All groups of adolescents were matched with respect to their socioeconomic backgrounds. They were all between 16 to 18 years of age. The participants were either active high school students in grades nine through twelve or high school dropouts. The levels of school performance as reported by the individual participants on their questionnaires as well as their histories of special education and grade repetition were used to establish possible influences on the girls' risk for early pregnancy. Levels of moral judgment development were compared across groups. The adolescents' self-reported
intention to drop out of school, which may be considered a determining factor with respect to the girls’ motivation to remain in school, was also examined as a possible factor related to a choice of future career pathways. Aspirations for developing a professional career may be hindered by early pregnancy. The four groups of adolescent girls were asked to complete the DIT in order to establish a level of moral judgment development. A questionnaire designed specifically for this study was used to document self-reported school performance, dropout rate, and possible exposure to abuse at an earlier age. The questionnaire responses were compared across the four groups.
CHAPTER III

METHOD

Hypotheses

The following null hypotheses were tested:

Ho1: There are no significant differences between the “D” index scores of the DIT across groups.

Ho2: There are no significant differences between the “P” index scores of the DIT across groups.

Ho3: There are no relationships among self-reported abuse and group membership across groups.

Ho4: There are no relationships among school drop out status and group membership across groups.

Participants

Four groups of female adolescents (N = 78) who participated in the different programs offered by the Boston City Hospital Adolescent Center, were selected as participants in the study. The pool of participants was matched on socioeconomic status, grade level attendance, and age range distribution (16 - 18). Group one (X1) (n = 20) consisted of twenty pregnant
adolescent girls who had been participants of a prenatal intervention program at the Boston City Hospital Adolescent Center. These participants were expected to keep their babies following delivery. Group two ($X_2$) ($n = 20$) consisted of adolescent mothers who received postnatal and routine infant follow up services at the Boston City Hospital. Group three ($X_3$) ($n = 18$) consisted of adolescents who had terminated their first pregnancies. Group four, the norm group ($X_4$) ($n = 20$), consisted of teenagers who were never pregnant. They were matched on age, socioeconomic background, and grade attendance in an effort to make them comparable to the participants in the other three groups. This group received general health care services in addition to occasional family planning, HIV, substance abuse, and violence prevention counseling services at the hospital. The programs offered to the youths at the hospital provide them with prenatal care on a regular basis, counseling services when needed, parenting classes, home visits, violence prevention instruction, mentoring services, family planning, substance abuse prevention, and peer support groups. The group of pregnant teenagers was systematically followed through their pregnancy and subsequent delivery, postnatal intervention phase, and the infants’ first two years of life. The adolescents who choose to terminate their pregnancies were medically tested as well as counseled prior to their abortion by the hospital’s staff. Counseling consisted of a brief session prior to the abortion. Focus was given to factual information regarding the abortion process. Although longer-term counseling services were available at the clinic, adolescents who sought abortions were not necessarily expected to participate in long-term counseling services either before or after the abortion process. Participants then underwent the process of the abortion and they received follow up services as well: Data pertaining
to the group of adolescents who underwent abortions was collected at various stages of the abortion process. Some data was collected during the preliminary stages immediately following the participants' decision to pursue an abortion. Participants were contacted during their follow-up appointment and/or during their routine check up visit at the clinic several months after the abortion process was completed. The prevalence of child abuse of the teenagers by adult figures during their childhood years, as reported by the participants, was examined across the four different groups. The DIT scores and the questionnaire responses were compared across groups.

The subjects were approached while waiting to be seen by the staff members at the Boston City Hospital Adolescent Center. They were contacted in the waiting area and presented with the two instruments to be completed. They were asked to sign a consent form. A witness was present to ensure that a complete explanation of the study was presented to each potential participant. When introducing the study outline to the participants, the assessment tools were described along with the requirement that participants needed to complete both instruments in order to receive the twenty dollar monetary incentive. In addition to offering a monetary incentive, short-term group counseling was offered to the participants. It should be noted that the teenagers in this setting did not appear to be interested in becoming involved in these counseling sessions. Another element that was presented during the introduction to the study to the participants was the option of viewing and listening to the DIT stories presentation on a video cassette. The group of adolescents approached in this setting rejected the videotape option. They said that they felt comfortable with their reading ability and chose to read the stories themselves. It is
recognized that another possibility for their refusal to view the tape may be related to the fact that they did not want to be away from the waiting area and therefore miss their pre-arranged appointment with the hospital's staff.

**Procedures**

The following measures were used to assess the groups' levels of current functioning: 1. A questionnaire designed to evaluate school functioning based on the participants' self-reports, possible exposure to various types of abuse, sexual activity, and exposure to alcohol and smoking habits (see appendix A). 2. The Defining Issues Test, which was designed to assess the teens' level of moral judgment development. Due to the anticipated limited reading skills of the subjects, the option of the general instructions and six DIT stories to be read to the subjects was available. The subjects were offered the option to view the questionnaire and the DIT on a videotape read to them by a peer whose reading skills were age appropriate. Each story contained twelve items. Respondents were instructed to classify the items according to their perceived order of importance to the subject. These items were individually represented on index cards to assist the subjects' reading and ordering of them in terms of their perceived level of importance.

Both instruments were carefully piloted on several subjects primarily to determine the time required for administration. Most subjects are able to complete the DIT in 30 to 40 minutes. However, given that the subjects studied in this research project were assumed to have limited reading skills, it was anticipated that more time would be needed to complete the instruments. On a few occasions, the participants took the assessment
materials with them into the examination rooms. This impeded the completion of a few of the questionnaires within the time limit.

Demographic Questionnaire

A demographic questionnaire (see appendix F) was designed for this research project. It included demographic information about the participants as well as perceptions of what the participants thought about some of the adolescent issues they needed to resolve. Some of the questionnaire items included simple problem solving dilemmas. Participants were asked to report their views related to their physical development and school performance levels. They were also asked to report their views related to their peers about having children at a very young age and their own opinions about these issues. It should be noted that the questionnaire responses were used to document the types of abuse that the participants may have been exposed to and the intention of the participants to drop out of school. As noted earlier, there is considerable evidence to suggest that individuals who are exposed to sexual abuse may display an increased level of at risk behaviors. Research also suggests that individuals who are exposed to sexual abuse often display more problematic behaviors within the context of their school environments. Type of abuse and intention to drop out of school were viewed as important factors possibly affecting the participants’ of this study typical course of physical, emotional, and moral development.
The Defining Issues Test

As noted earlier, the Defining Issues Test ("DIT") was developed by James Rest (1972) and his associates at the university of Minnesota. It was designed to assess an individual’s moral judgment development. Moral judgment is assumed to be based fundamentally on a person's conception of how social cooperation can be organized. The DIT is based on the assumption that people tend to use several fundamental problem-solving strategies in order to make sense of social and moral situations. Although Kohlberg's typology of six basic moral orientations was used in creating the DIT, Rest's definition of the six stages is somewhat different. However, Kohlberg's fundamental assumptions that basic problem solving strategies evolve with social development, and that a subject's use of the six types indicates development in moral judgment, remain center stage. Rest emphasizes that moral judgment is not the only cognitive and affective process involved in the psychology of morality. Rather it is one of four major components which are simultaneously instrumental in morality. The DIT was designed to determine an individual's moral judgment level by assessing how this individual uses different considerations in making sense of a moral situation. This is based on the premise that people at different points of development interpret moral dilemmas differently, define the critical issues of a moral dilemma differently, and have different intuitions about what is right and fair in a situation. The DIT scores, which are based on extensive empirical data, offer a developmental assessment that is expressed in terms of a continuous variable rather than location in a particular stage. This continuous variable yields an overall composite index of development which represents the weighted average of adjusted ratings to scaled DIT items related to the
respondent's use of the various stage descriptors. Two indices "D" and "P" are primarily used in order to establish an overall level of performance.

The "D" index which is a weighted rating represents an overall scale of moral judgment development which includes information from all stages rather than only from items based on stages five and six. It is a composite score similar to Kohlberg's Moral Maturity Quotient in which a higher score is established when the subject gives high ratings to high stage items, and lower score results when the subject gives high ratings to low stage items.

The "P" or "Principled Morality" index is achieved by computing the relative importance that a subject gives to items that represent stages five and six. This index represents the top rankings given to these higher stages. It is assumed that the subjects' overall ability for principled considerations is activated when a moral dilemma is presented. It is important to remember that the moral judgment development scores do not reflect a subject's worth as a person, his or her loyalty, kindness, and/or sociability. Rather, the moral judgment scores reflect the basic conceptual frameworks by which a subject analyzes a social moral problem and judges the proper course of action. Each individual may approach the same dilemmas from different perspectives.

Although interviewing methods supply the researcher with data that may not be collected when a standardized test is used, they may produce less valid results relative to objective methods which allow for minimizing the degree of error. The DIT, while offering the benefits of a standardized test, is also somewhat limited. First, a subject's limited reading skills may significantly interfere with appropriate responses to the different test items. Second, the DIT's multiple choice style of questioning, which prevents the subjects from responding and explaining their thought processes in their own
terms, cannot be used as an assessment tool to determine a respondent's cognitive developmental level. Finally, test items may represent different things to different people which may result in some difficulties with respect to the interpretation of scores. However, many of the possible confounding variables can be controlled by selecting subjects who represent similar gender, age groups, grade levels, levels of education, and socioeconomic status levels.

The DIT appears to be reliable (α = high .70s to .80s) and has considerable construct validity which is based on the extensive use of the test and the large data base collected, to support its use. Unlike other instruments, that were designed to measure moral judgment development, the DIT has been used in countries other than the United States. This cross cultural data set may provide researchers within the field of moral development with a better understanding of cultural differences in adolescents' moral judgment development as well as their decision making mechanisms. Based on the instrument's high measure of reliability and validity, the findings of this study may be discussed with some degree of certainty. We are quite certain that moral judgment is not fixed in early childhood, rather people's basic strategies used for moral problem solving continue to change in adulthood. Number of years of education seem to be highly associated with development in moral judgment. Moral judgment scores may assist researchers, educators, and policy makers with respect to predicting the pathways of social development that a person is likely to take. Low scorers tend not to pursue further education and career opportunities. High scorers, on the other hand, seem to seek to further their education. They tend to be more involved with community affairs, and experience more
fulfillment from their daily interactions. Moral education programs that were implemented as interventions (Rest 1975; 1972, Panowitsch & Balkcum, 1975) seem to be effective in promoting development in moral judgment. However, programs of that sort seem to be more effective with adults rather than children and their success greatly depends on the individual’s personality characteristics. In his research program, Rest documented that individual differences in moral judgment represent different ways of construing a situation. He concluded that moral judgment seems to be significantly related to the individual’s behavioral patterns and a wide range of attitudes (Rest, 1979; 1986).

Although measures of Socioeconomic Status (SES) were collected in several studies and the correlations with the DIT scores are evident, there seems to be less information related to the SES variable than the other variables. Within the existent studies, the correlation between SES and DIT is essentially the same as the relation between education and the DIT. However, in many of the studies, SES data sets were considered to be of only incidental importance. Lower SES measurements relative to the DIT are available for ninth graders and twelfth graders and are compared across lower - middle SES, middle SES, and upper - middle SES groups (Rest, 1979). In addition to the findings that there is no apparent evidence of sex bias when responding to the DIT, the findings from a number of cross-cultural studies reveal striking similarities between over twenty countries and the U.S. samples. The U.S. samples do not appear to represent the highest DIT scores relative to the countries which participated in the study. However, the effects of different cultures on moral judgment is clearly evident in many of these cross cultural studies.
Designs and Statistical Analyses

A four groups matched subjects randomized design was used in the study. An analysis of variance procedure was used to test for differences across groups for designs A and B. A $\chi^2$ procedure was used to test for relationships in designs C and D.

Design A:

Used to test hypothesis I.

<table>
<thead>
<tr>
<th>$X_1$</th>
<th>$X_2$</th>
<th>$X_3$</th>
<th>$X_4$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Group Pregnant Pre - Birth Sample (n = 20)</td>
<td>Experimental Group Pregnant Post - Birth Sample (n = 20)</td>
<td>Experimental Group Abortion Adolescents Sample (n = 18)</td>
<td>Control Group Never Pregnant Sample (n = 20)</td>
</tr>
</tbody>
</table>

$Y$

Scores of the “D” index as measured by the DIT

Where:

Independent Variables:

$X_1 =$ Experimental group of pre - birth pregnant adolescents who intend to mother their babies.

$X_2 =$ Experimental group of post - birth pregnant adolescents who intend to mother their babies.

$X_3 =$ Experimental group of adolescents who aborted their babies.

$X_4 =$ Control group of adolescents who were never pregnant.

Blocking variable age at three levels.

Dependent Variables:

$Y =$ Scores of the “D” index as measured by the Defining Issues Test.
Design B:

Used to test hypothesis II.

<table>
<thead>
<tr>
<th>$X_1$</th>
<th>$X_2$</th>
<th>$X_3$</th>
<th>$X_4$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental Group</strong>&lt;br&gt;Pregnant Pre - Birth Sample (n = 20)</td>
<td><strong>Experimental Group</strong>&lt;br&gt;Pregnant Post - Birth Sample (n = 20)</td>
<td><strong>Experimental Group</strong>&lt;br&gt;Abortion Adolescents Sample (n = 18)</td>
<td><strong>Control Group</strong>&lt;br&gt;Never Pregnant Sample (n = 20)</td>
</tr>
</tbody>
</table>

| $Y$ | Special scores “P” index as measured by the DIT |

Where:

**Independent Variables:**

$X_1 =$ Experimental group of pre - birth pregnant adolescents who intend to mother their babies.

$X_2 =$ Experimental group of post - birth pregnant adolescents who intend to mother their babies.

$X_3 =$ Experimental group of adolescents who aborted their babies.

$X_4 =$ Control group of adolescents who were never pregnant.

**Blocking variable age at three levels.**

**Dependent Variables:**

$Y =$ Special scores as measured by the “P” index of the Defining Issues Test.
**Design C:**

Used to test hypothesis III.

<table>
<thead>
<tr>
<th></th>
<th>Y₁</th>
<th>Y₂</th>
<th>Y₃</th>
<th>Y₄</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Experimental Group</td>
<td>Experimental Group</td>
<td>Experimental Group</td>
<td>Control Group</td>
</tr>
<tr>
<td></td>
<td>Pregnant Pre-Birth Sample</td>
<td>Pregnant Post-Birth Sample</td>
<td>Abortion Adolescents Sample</td>
<td>Never Pregnant Sample</td>
</tr>
<tr>
<td></td>
<td>(n = 20)</td>
<td>(n = 20)</td>
<td>(n = 18)</td>
<td>(n = 20)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X₁</th>
<th>Exposure to Abuse</th>
<th>X₂</th>
<th>No exposure to abuse</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequencies appear in cells</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Where:

Independent Variables:

X₁ = Exposure to abuse during childhood and pre-adolescent years.
X₂ = No exposure to abuse during childhood and pre-adolescent years.

Dependent Variables:

Y₁ = Experimental group of pre-birth pregnant adolescents who intend to mother their babies.
Y₂ = Experimental group of post-birth pregnant adolescents who intend to mother their babies.
Y₃ = Experimental group of adolescents who aborted their babies.
Y₄ = Control group of adolescents who were never pregnant.
**Design D:**

Used to test hypothesis VI.

<table>
<thead>
<tr>
<th></th>
<th>Y₁</th>
<th>Y₂</th>
<th>Y₃</th>
<th>Y₄</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>X₁</strong></td>
<td>Experimental Group Pregnant Pre-Birth Sample (n = 20)</td>
<td>Experimental Group Pregnant Post-Birth Sample (n = 20)</td>
<td>Experimental Group Abortion Adolescents Sample (n = 18)</td>
<td>Control Group Never Pregnant Sample (n = 20)</td>
</tr>
<tr>
<td><strong>X₂</strong></td>
<td>Self-reported school drop-out</td>
<td>No school drop-out</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Frequencies appear in cells

Where:

**Independent Variables:**

* X₁ = Self-reported school drop-out.
* X₂ = No self-reported school drop-out.

**Dependent Variables:**

* Y₁ = Experimental group of pre-birth pregnant adolescents who intend to mother their babies.
* Y₂ = Experimental group of post-birth pregnant adolescents who intend to mother their babies.
* Y₃ = Experimental group of adolescents who aborted their babies.
* Y₄ = Control group of adolescents who were never pregnant.
CHAPTER IV

RESULTS

Overall, a four groups matched subjects randomized design was used in
the study. A one-way analysis of variance procedure was used to test for
differences in the Defining Issues Test (DIT) scores across groups for designs
A and B. This statistical procedure was applied to test for differences among
the four different groups with respect to the “P” and “D” index scores.

Comparison of the P and D Score Differences Across Groups

The “D” and “P” are two indices which are used primarily in order to
establish an overall level of performance. Measurement of these two scales
offer an evaluation of moral judgment development and overall level of
reasoning skills within the population tested.

The “D” index, which is a weighted rating, represents an overall scale of
moral judgment development which includes information from all stages (one
through six) rather than only from items based on stages five and six. It is a
composite score similar to Kohlberg’s Moral Maturity Quotient in which a
higher score is established when the subject gives high ratings to high stage
items, and a lower score results when the subject gives high ratings to low-stage items.

The descriptive statistics of the D score means, medians, and standard deviations across all four groups are presented in Table 1. A comparative graphical representation of the mean and median D scores across the groups is also displayed.

**Table 1.**

"D" Index scores by group

<table>
<thead>
<tr>
<th>Group</th>
<th>Number of Subjects = n</th>
<th>Mean $\bar{x}$</th>
<th>Median</th>
<th>Standard Deviation = $\sigma$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregnant Pre - Birth</td>
<td>20</td>
<td>13.3193</td>
<td>14.3785</td>
<td>1.1368</td>
</tr>
<tr>
<td>Group 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregnant Post - Birth</td>
<td>20</td>
<td>14.6851</td>
<td>14.7085</td>
<td>1.1519</td>
</tr>
<tr>
<td>Group 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abortion</td>
<td>18</td>
<td>15.0585</td>
<td>15.0840</td>
<td>1.4638</td>
</tr>
<tr>
<td>Group 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never Pregnant</td>
<td>20</td>
<td>15.617</td>
<td>16.2265</td>
<td>1.3651</td>
</tr>
</tbody>
</table>
The "P" or "Principled Morality" index score is determined by computing the relative importance that a subject gives to items that represent stages five and six. This index represents the top rankings given to these higher stages. It is assumed that the subjects' overall ability for principled considerations is activated when a moral dilemma is presented. It is important to remember that the moral judgment development scores do not reflect a subject's worth as a person, his or her loyalty, kindness, and/or sociability. Rather, the moral judgment scores reflect the basic conceptual frameworks by which a subject analyzes a social moral problem and judges the proper course of action. Each individual may approach the same dilemmas from different perspectives. Descriptive statistics and graphs related to the "P" index scores are shown below.
The descriptive statistics of P score means, medians, and standard deviations across all four groups are presented in Table 2. A graphical representation of the mean and median P scores across the groups is also displayed in Figure 2.

Table 2.

"P" Index scores by group

<table>
<thead>
<tr>
<th>Group</th>
<th>Number of Subjects = n</th>
<th>Mean ((\bar{x}))</th>
<th>Median</th>
<th>Standard Deviation = (\sigma)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregnant Pre - Birth</td>
<td>20</td>
<td>24.16</td>
<td>22.50</td>
<td>1.9697</td>
</tr>
<tr>
<td>Group 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregnant Post - Birth</td>
<td>20</td>
<td>21.26</td>
<td>20.15</td>
<td>2.1672</td>
</tr>
<tr>
<td>Group 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abortion</td>
<td>18</td>
<td>23.75</td>
<td>25.85</td>
<td>1.8566</td>
</tr>
<tr>
<td>Group 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never Pregnant</td>
<td>20</td>
<td>27.175</td>
<td>25.85</td>
<td>2.3513</td>
</tr>
</tbody>
</table>

Figure 2. Graph of "P" Index scores by group
Statistical Tests to Compare Differences in the DIT D and P Scores Across Groups

The results of the analysis of variance related to the mean D scores across groups are summarized in Table 3. The results were found to be not significant at \( \alpha < 0.05 \).

Table 3.
ANOVA and Related Tests for Differences in “D” index scores

D ANOVA

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>DF</th>
<th>Mean Square</th>
<th>F Ratio</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>57.138348</td>
<td>3</td>
<td>19.046116</td>
<td>0.597402</td>
<td>0.310</td>
</tr>
<tr>
<td>Error</td>
<td>2359.237132</td>
<td>74</td>
<td>31.881583</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results indicated that there were no significant differences in the group D index scores across groups. Since there were no overall significant differences across groups, tests of differences between each group relative to the control group were not performed.
Table 4.

ANOVA and Related Tests for differences in “P” index scores

P ANOVA

N: 78

Multiple R: 0.228

Squared Multiple R: 0.052

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>DF</th>
<th>Mean Square</th>
<th>F Ratio</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>352.699449</td>
<td>3</td>
<td>117.566483</td>
<td>1.356180</td>
<td>0.131</td>
</tr>
<tr>
<td>Error</td>
<td>6415.0185</td>
<td>74</td>
<td>86.689439</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No significant differences were found in the P index scores across groups. However, since the p-values were small, and since we want to test for differences in the P index scores relative to the comparison group 4, post-hoc tests of effects were performed on the data set.

Tests of Effects

To compare differences across each group relative to group 4, an analysis of variance procedure was performed to test whether each individual group mean is significantly different from the control group (group 4) mean. These tests are run neglecting the likelihood of committing a type I error. The results of these tests are summarized below.
Table 5.
"P'' index scores for group 1 vs. group 4

Test of Hypothesis

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>DF</th>
<th>Mean Square</th>
<th>F Ratio</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis</td>
<td>90.902250</td>
<td>1</td>
<td>90.902250</td>
<td>0.966151</td>
<td>0.1659</td>
</tr>
<tr>
<td>Error</td>
<td>3575.3055</td>
<td>38</td>
<td>94.086987</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6.
"P'' index scores for group 2 vs. group 4

Test of Hypothesis

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>DF</th>
<th>Mean Square</th>
<th>F Ratio</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis</td>
<td>349.87225</td>
<td>1</td>
<td>349.87225</td>
<td>3.421412</td>
<td>0.0361</td>
</tr>
<tr>
<td>Error</td>
<td>3885.8655</td>
<td>38</td>
<td>102.259618</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 7.
"P'' index scores for group 3 vs. group 4

Test of Hypothesis

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>DF</th>
<th>Mean Square</th>
<th>F Ratio</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis</td>
<td>111.132237</td>
<td>1</td>
<td>111.132237</td>
<td>1.267764</td>
<td>0.1338</td>
</tr>
<tr>
<td>Error</td>
<td>3155.7625</td>
<td>36</td>
<td>87.660069</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A significant difference ($\alpha > 0.05$) in the means between group 2 and group 4 was found.

Finally, a comparison of differences (via the analysis of variance method) in means for all three groups combined as one group relative to group 4 was performed. The results of this test are shown in Table 8.

**Table 8.**

"P" index scores for group 1, 2, 3 vs. group 4

<table>
<thead>
<tr>
<th>Test of Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source</strong></td>
</tr>
<tr>
<td>Hypothesis</td>
</tr>
<tr>
<td>Error</td>
</tr>
</tbody>
</table>

The p value of 0.0461 indicates significantly different ($\alpha < 0.05$) mean values for group 4 relative to the combined groups 1, 2, and 3. Alternative methods used to compare each of the three groups' mean P scores relative to group 4 are presented below.

**Dunnet Method of Multiple Comparisons**

The Dunnet method of multiple comparisons is appropriate for comparing each of the J-1 means and the pre-designated control group mean
(Ott, 1993; Glass & Hopkins, 1984). Thus, for the Dunnet method there are 
\( J-1 \) (in this study \( J=4 \)) planned pairwise contrasts against the pre-designated 
control group (group 4). The contrasts were compared using the t-statistic. 
The contrasts and corresponding one-tail p-values are shown in Table 9.

**Table 9.**

Pairwise contrasts of groups 1, 2, and 3 vs. group 4

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean difference relative to group 4</th>
<th>One-tailed P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-3.015</td>
<td>0.153</td>
</tr>
<tr>
<td>2</td>
<td>-5.915</td>
<td>0.030</td>
</tr>
<tr>
<td>3</td>
<td>-3.425</td>
<td>0.134</td>
</tr>
</tbody>
</table>

The Dunnet test results indicated that there were higher P scores for 
group 4 relative to all 4 groups. That is to say that the p value of 0.030 
indicated significantly higher mean values for group 4 relative to group 2.

**Summary of ANOVA Results Related to the D and P scores**

Qualitatively, group 4 average and median scores were found to be 
higher relative to all the other groups for both D and P scores. However, there 
was no statistically, significant difference in D score means across the groups. 
For P scores, the group 4 mean was found to be higher (\( p > 0.05 \)) than the
When comparing all three groups of adolescents that had conceived a child (groups 1, 2, and 3) relative to the one group which had not (group 4), a significantly higher P score for group 4 was documented. Thus, it is possible that the marginal significance observed when testing the equality of all four means is a result of the fact that the conception group means are very similar to each other but very different from the control group 4. This interpretation is corroborated by examining the descriptive statistics and the accompanying graphs.

Self-Response Survey Results

Two primary issues (history of abuse and participants' intention to dropout of school) were examined in this research project. Data sets related to both issues were documented within the context of the subjects' self-reports to the questions on the questionnaire. The first set of issues that was studied across groups addressed abuse. Abuse was subdivided into three types: emotional (EMAB); physical (PSAB); and sexual (SXAB). The second set of issues that was studied across groups addressed the subjects' intention to drop out (DO) of school.

Once again, it should be noted that the questionnaire that was used to compile this information was designed to address the specific issues related to the study at hand. It was not a standardized questionnaire. Categorical
data sets were collected during the course of the investigation to address the research questions.

Table 10 contains a summary of the $\chi^2$ statistics related to self-reported abuse. Subjects were asked whether or not they experienced each type of abuse. A yes response was coded as a 1 and a no response was coded as a zero. Cramer’s V values are also reported. Cramer’s V is a measure of association across groups.

Table 10.

Chi-Square Summary Related to Emotional Abuse

<table>
<thead>
<tr>
<th>Group</th>
<th>EMAB</th>
<th>NAME</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Totals</td>
<td>25</td>
<td>53</td>
<td>78</td>
</tr>
</tbody>
</table>

Note. Data inputs (EMAB is the number of subjects who state that they have suffered emotional abuse, NAME is the number of subjects who reported not experiencing emotional abuse).
Chi-Square = 20.37

Significant beyond the 99% level - $\alpha = 0.01$

(Cut off is 11.34 at $\alpha = 0.01$, 3 df)

Cramer's V = 0.51

The $\chi^2$ value was found to be statistically significant ($p > 0.01$). This finding indicates that there is a significant relationship between self-reported abuse and group membership across groups. The Cramer's V of 0.51 indicates that the association between emotional abuse and group membership was moderately high.

The next set of tests were directed at determining whether there were significant differences in abuse types across experimental and control groups (see Tables 11, 12, and 13).

Table 11.
Pairwise Chi-Square test of independence for Emotional Abuse

Group 1 vs. group 4

<table>
<thead>
<tr>
<th>Group</th>
<th>EMAB</th>
<th>NAME</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Totals</td>
<td>13</td>
<td>27</td>
<td>40</td>
</tr>
</tbody>
</table>
Chi-Square = 1.025

Not significant beyond the 90% level - $\alpha = 0.01$

(Cut off is 3.841 at $\alpha = 0.05$, 1 df)

Cramer's $V = 0.16$

Table 12.
Pairwise Chi-Square test of independence for Emotional Abuse

Group 2 vs. group 4

<table>
<thead>
<tr>
<th>Group</th>
<th>EMAB</th>
<th>NAME</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Totals</td>
<td>5</td>
<td>35</td>
<td>40</td>
</tr>
</tbody>
</table>

Chi-Square = 5.714

Significant beyond the 97.5% level - $\alpha = 0.025$

(Cut off is 5.024 at $\alpha = 0.025$, 1 df)

Cramer's $V = 0.38$
Table 13.

Pairwise Chi-Square test of independence for Emotional Abuse

Group 3 vs. group 4

<table>
<thead>
<tr>
<th>Group</th>
<th>EMAB</th>
<th>NAME</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>12</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Totals</td>
<td>17</td>
<td>21</td>
<td>38</td>
</tr>
</tbody>
</table>

Chi-Square = 6.653

Significant beyond the 99% level - $\alpha = 0.01$

(Cut off is 6.635 at $\alpha = 0.01$, 1 df)

Cramer's $V = 0.42$

The chi-square tests of independence indicated that there were significant differences in responses to emotional abuse between groups 2 and 4 as well as 3 and 4. The Cramer's $V$ of 0.38 and 0.42 indicate that the association between emotional abuse and group membership was moderately high.

Similar tests were conducted to test for the independence of physical abuse (PSAB) self-responses across the four groups. The results of the chi-square tests of independence are shown in Table 14.
Table 14.

Chi-Square test of independence for experienced physical abuse

<table>
<thead>
<tr>
<th>Group</th>
<th>PSAB</th>
<th>NPSAB</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td>Totals</td>
<td>18</td>
<td>60</td>
<td>78</td>
</tr>
</tbody>
</table>

Note. Data inputs (PSAB is the number of individuals who report they have suffered physical abuse, NPSAB is the number of individuals who reported not experiencing physical abuse.)

Chi-Square = 12.497

Significant beyond the 99% level - $\alpha = 0.01$

(Cut off is 11.34 at $\alpha = 0.01$, 3 df)

Cramer's V = 0.40

The $\chi^2$ test was found to be statistically significant. The Cramer's V of 0.40 indicates that the association between physical abuse and group membership was moderately high.
The next test performed on the data set was directed at determining whether the responses were different for each group relative to the control group (see Tables 15, 16, and 17).

Table 15.

Pairwise Chi-Square test of independence for Physical Abuse

Group 1 vs. group 4

<table>
<thead>
<tr>
<th></th>
<th>PSAB</th>
<th>NPSAB</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td>Totals</td>
<td>11</td>
<td>29</td>
<td>40</td>
</tr>
</tbody>
</table>

Chi-Square = 3.135

Significant beyond the 90% level - $\alpha = 0.10$

(Cut off is 2.706 at $\alpha = 0.10$, 1 df)

Cramer's V = 0.28
Table 16.

Pairwise Chi-Square test of independence for Physical Abuse

Group 2 vs. group 4

<table>
<thead>
<tr>
<th>Group</th>
<th>PSAB</th>
<th>NPSAB</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td>Totals</td>
<td>3</td>
<td>37</td>
<td>48</td>
</tr>
</tbody>
</table>

Chi-Square = 3.243

Significant beyond the 90% level - $\alpha = 0.10$

(Cut off is 2.706 at $\alpha = 0.10$, 1 df)

Cramer's V = 0.28

Table 17.

Pairwise Chi-Square test of independence for Physical Abuse

Group 3 vs. group 4

<table>
<thead>
<tr>
<th>Group</th>
<th>PSAB</th>
<th>NPSAB</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>7</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td>Totals</td>
<td>10</td>
<td>28</td>
<td>38</td>
</tr>
</tbody>
</table>
Chi-Square $= 2.789$

Significant beyond the 90% level - $\alpha = 0.10$

(Cut off is 2.706 at $\alpha = 0.10$, 1 df)

Cramer's $V = 0.27$

For the pairwise comparisons, the differences were found to be significant across groups.

The final analysis performed on this data set was directed at testing for differences across groups with respect to self-reported sexual abuse (see Table 18).

**Table 18.**

Chi-Square test of independence for experienced Sexual Abuse

<table>
<thead>
<tr>
<th>Group</th>
<th>SXAB</th>
<th>NSXAB</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>Totals</td>
<td>16</td>
<td>62</td>
<td>78</td>
</tr>
</tbody>
</table>

Note. Data inputs (SXAB is the number of participants who report they have suffered sexual abuse, NSXAB is the number of individuals who reported no experience of sexual abuse.)
Chi-Square $= 6.686$

Significant beyond the 95% level - $\alpha = 0.05$

(Cut off is 6.251 at $\alpha = 0.05$, 3 df)

Cramer's V $= 0.40$

The $\chi^2$ value was found to be statistically significant. The Cramer's V of 0.40 indicates that the association between sexual abuse and group membership is moderately high. The results related to determining whether the responses were different for each group relative to group four are summarized in Tables 19, 20, and 21.

Table 19.

Pairwise Chi-Square test of independence for Sexual Abuse

Group 1 vs. group 4

<table>
<thead>
<tr>
<th>Group</th>
<th>SXAB</th>
<th>NSXAB</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>Totals</td>
<td>8</td>
<td>32</td>
<td>40</td>
</tr>
</tbody>
</table>
Chi-Square = 0.0
Not significant
Cramer's V = 0.0

**Table 20.**
Pairwise Chi-Square test of independence for Sexual Abuse

<table>
<thead>
<tr>
<th></th>
<th>SXAB</th>
<th>NSXAB</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 2</td>
<td>1</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>Group 4</td>
<td>4</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>Totals</td>
<td>5</td>
<td>35</td>
<td>40</td>
</tr>
</tbody>
</table>

Chi-Square = 2.057
Not significant beyond the 90% level - $\alpha = 0.10$

(Cut off is 2.706 at $\alpha = 0.10$, 1 df)

Cramer's V = 0.22
Table 21.

Pairwise Chi-Square test of independence for Sexual Abuse

Group 3 vs. group 4

<table>
<thead>
<tr>
<th>Group</th>
<th>SXAB</th>
<th>NSXAB</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>7</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>Totals</td>
<td>11</td>
<td>27</td>
<td>38</td>
</tr>
</tbody>
</table>

Chi-Square = 1.643

Not significant beyond the 90% level - $\alpha = 0.10$

(Cut off is 2.706 at $\alpha = 0.10$, 1 df)

Cramer's $V = 0.21$

Although one can reject lack of association in sexual abuse for the groups combined, there was no significant association between self-response of sexual abuse and individual group membership relative to group four.

In order to test for differences in all three types of abuse across all four groups, a Cochran test for consistency in an $n \times k$ table of dichotomous data was performed on the data set. The Cochran Q test is congruent with a chi-square distribution. This test is considered to be valid when the following assumptions are satisfied:
1. The observations are dichotomous and in 0, 1 form.

2. The number of elements is sufficiently large.

The table used to calculate these values consists of using a 0 which stands for a negative answer (no) and a 1 which reflects a positive response (yes).

The summary statistics related to the Cochran Q test are presented below:

Cochran’s $Q = 141$ (computed from the raw data on abuse).

Degrees of Freedom $= 77\ (K-1,\ where\ k\ is\ the\ number\ of\ rows)$.

Chi-Square cut off for $\alpha = 0.01$ and 80 df is 112.33.

The Cochran’s Q value was found to be statistically significant. That is to say that there were differences found in the three combined types of abuse across the groups. Thus, self-reported abuse as a whole was found to be associated with group membership.

Consider Dropping Out Results

Next, a series of tests were done to see if there were differences across groups with respect to the incidence of intentions to drop out of school. The subjects were simply asked whether they ever considered dropping out of school. A yes response was coded as a 1 and a no response was coded as a zero. Table 22 contains a summary of the incidence values for all groups.
Table 22.

Chi-Square test of independence for considering Dropping Out

<table>
<thead>
<tr>
<th>Group</th>
<th>DO</th>
<th>NDO</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>13</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>12</td>
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</tr>
<tr>
<td>4</td>
<td>4</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>Totals</td>
<td>26</td>
<td>52</td>
<td>78</td>
</tr>
</tbody>
</table>

**Note.** Data inputs (DO is the number of individuals considering dropping out, NDO is the number of participants not considering to drop out of school.)

Chi-Square = 2.85

Not significant beyond the 95% level - \( \alpha = 0.05 \)

(Cut off is 7.815 at \( \alpha = 0.05, 3 \text{ df} \))

Cramer’s V = 0.19

The \( \chi^2 \) results indicated that there were no significant associations between self-reported intentions to drop out of school and group membership. Pairwise comparisons among groups (not shown) were also found to be not significant.
Summary of Results

Differences were found in the DIT scores across groups. Groups one, two, and three had lower scores on both the "D" index and the "P" index relative to group four. However, there were no statistically significant differences found on the "D" index scores across all four groups. On the other hand, there were no statistically significant differences found on the "P" index scores for all groups as a whole. However, group two was found to be different than group four. Comparisons using ANOVA confirm the differences ignoring the likelihood of type I error. Groups one, two, and three combined were found to be significantly different relative to group four.

In analyzing responses on the self-reported questionnaire, the $\chi^2$ test of independence was used. In measuring abuse, three types of abuse were examined (sexual abuse, physical abuse, and emotional abuse). Comparisons across groups revealed that there was a significant association between both physical and emotional abuse and group membership. However, no association was found between sexual abuse and group membership.

With respect to the self-reported intent of dropping out of school, all experimental groups were found to have a higher incidence of choosing to drop out of school relative to group four. However, there was no significant association found across the four groups.
CHAPTER V
DISCUSSION

Interpretation of the results which were detailed in chapter IV will be presented in the first section of this chapter. A special focus will be given to the implications of the findings and how they further our understanding of adolescent moral development and reasoning skills. Suggestions for further research and some limitations will be presented in the final section of this chapter.

Interpretation of The Results

This dissertation research project was designed to focus documented differences across four groups of adolescents (Group 1 pregnant, group 2 mothers, group 3 teenagers who aborted their first pregnancy, and group 4 adolescents who were not pregnant prior to this study). Four hypotheses were tested. Hypothesis one was targeted at testing for differences in the “D” index scores of the DIT across groups. Hypothesis two was targeted at testing for differences in the “P” index scores of the DIT across groups. The third
hypothesis was targeted at testing for relationships and patterns of self-reported abuse across groups. Finally, the fourth hypothesis was targeted at testing for relationships and patterns of school drop out status across groups. The findings of this study led to the rejection of null hypotheses two and three. Null hypotheses three and four were not rejected.

Adolescence is a time of physical, maturational, emotional, and developmental transition. As detailed in the previous chapters, many prominent philosophers and theoreticians in the field of personality and moral development stressed that adolescence is a time of increased turmoil and an unsettled preoccupation with the self. Erikson (1963) offered a very detailed account of this stage of development. He called this period of time the identity vs. role confusion developmental stage. During this time period, most adolescents are busy establishing their identity as well as experimenting with new levels of intimacy. The adolescent’s constant physical and emotional flux in this period of development contributes to their intense experiences and relationships with their environments. In addition to the sexual and emotional tension that is unique to this stage of maturation, adolescents also experience increased sensitivity to how they are perceived by the people in their environment. Their concern is how they are perceived by
their peers, the adults with whom they interact, and their own perception of themselves.

Piaget (1969) and Kohlberg (1966) suggested that the transition between the various stages of development is continuous. There are assumed to be no sharp distinctions between the stages. Therefore, although an individual may experience the capacity to perform on some level within a higher developmental range he or she will not be entirely positioned within one particular stage of functioning. This transitional period is apparent between the concrete to the formal operational stage. Although an individual who is versed in the formal operation stage is capable of logical thinking with the ability to manipulate abstract information, adolescence is considered to be a time of transitional stage in which many logical thinking skills are not completely established. The point is that teenagers who become parents are expected to perform within the formal operation range of development even though they may not have completed the transition into this higher level stage.

It is assumed by most mental health professionals that the individual's level of functioning may be influenced by several factors such as socioeconomic status, social environment, home life, individual differences, and ethnic as well as cultural diversity. This study was designed to focus on
some of the issues that may be related to these more general areas of functioning. The hypotheses tested in this study focused on the comparison of levels of moral development across three experimental and a control group. The “D” index offers a general level of moral development functioning and the “P” index offers a more focused “Principled Morality” measurement. Both indices are based on the Defining Issues Test that was introduced by Rest based on Kohlberg’s theoretical work in this field. Level of education has been confirmed (Rest, 1979) to be a significant factor influencing the ability of an individual to develop an appropriate level of moral reasoning. Due to the limited scope of this study, cognitive and academic achievement measures were not available. Therefore, the individuals’ intentions to continue their educational programs even though they were pregnant and/or young mothers was another factor that was targeted for study. Although school dropout is considered to be a factor in increased at risk behaviors among adolescents, it seems that within the population of this study, school dropout may be attributed to issues connected to child rearing. The adolescents’ intentions of continuing their education may imply the availability and applicability (suitability) of the educational programs in the Boston area to the lives of these teenagers. Sexual abuse as presented in the literature seems to be related as an influential experience with respect to the initiation of many
sexual behaviors. Abuse in general is also presented as an influential factor with respect to affecting children’s ability to adjust to social interactions and school performance. Three measures of abuse (sexual, emotional, and physical) were measured across the four groups of participants in an effort to determine relationships between exposure to abuse and group membership. Implications were then drawn related to comparisons of the different groups and their levels of involvement in at risk behaviors.

When measuring the individuals’ functioning on the DIT, the number of years of education was found to be highly associated with level of moral judgment. An individual’s level of moral development can be used as a predictor to determine the level of richness of social interactions and levels of involvement in the community. Scores on the DIT can also be used to predict the level of education that an individual will pursue. Individuals who score high tend to pursue higher and more advanced education relative to individuals who score low.

This sample of teenagers produced scores that were low compared with the individuals who are usually used as a normative group. Therefore, when the results of this study were taken from the protocols and compared to the vast body of data at the Center for the study of Ethical Development at the University of Minnesota, many of the subjects were rejected from the data
set. Out of 78 total number of subject protocols scored, the number of rejected subjects with more than 8 errors in a single story and/or more than 2 stories with inconsistencies was 49. That is to say that about 63% of the original subjects used in this study were rejected from the data set. However, when analyzing the breakdown across groups related to which groups were most closely aligned with the regular normative population of the DIT, group number 4 fared best. In group four, ten out of the original twenty were found to be comparable to the regular normative sample. Group number two was a close second with 9 participants out of 20 who appeared to respond appropriately to the different stories. Groups number one and three each produced four subjects who responded appropriately to the test. In sum, only 27 participants responded appropriately to the DIT test. It should be noted that these truncated results did not interfere with the overall applicability of comparing the groups to one another.

Discussion Related to the “D” and “P” Index Scores

The information presented in this section relates to interpretations of the findings used to test null hypotheses one and two. Taken together the results clearly indicated that there was a discrepancy between the three experimental groups and group number four which was used in this study as
the control group. The subjects were divided into four groups: group 1 (pregnant pre-birth adolescents); group 2 (pregnant post-birth adolescents); group 3 (adolescents who were pregnant and aborted); and group 4 (adolescents who were never pregnant). All three experimental groups displayed lower scores on both the “D” index scores and the “P” index scores relative to group number four. There were no significant differences found in the “D” index scores across the four different groups. Therefore, hypothesis one was not rejected. However, it should be noted that the p values of the “P” index scores were found to be small when the one way ANOVA procedure was used to test for differences across groups. The differences found with respect to the participants’ performance on the “P” index scores in this study, provides support for the rejection of null hypothesis number two. To further examine the results, post-hoc tests of effects were applied to measure pairwise differences within the data set. Group two was found to have a statistically significant lower performance profile compared to group number four. When considering all three groups combined compared to group number four, statistically significant differences were found. This finding provides some support for the possibility that when required to solve dilemmas based on moral judgment, group number four participants displayed a higher level of
moral development functioning relative to the three combined experimental groups.

The discrepancies that were found between all three experimental groups (particularly group number two) with respect to their ability to produce better DIT scores, may be attributed to their differential levels of involvement in school. It may be that individuals who progress within the different stages of pregnancy and eventual delivery of a baby become more involved with the process of prenatal care and the need to maintain their appointments with their doctors. It should be noted that the appointments at the clinic where all the subjects of this study were receiving their prenatal care were conducted during the mornings. Therefore, their school day was interrupted. Due to the overcrowding at that particular clinic, it appeared that many of the clients spent anywhere between two to three hours before they were able to resume their school schedule. Very few of the subjects seemed concerned about their school materials and the subjects who seemed involved in some school work were usually part of group number four population. It may also be attributed to the young pregnant adolescents' concern with the consequences and the implications of having a baby that they were not able to concentrate on school work. This view is based primarily on the investigator's observations during the course of study. Much of the information collected during the
observational stage of the study was through informal conversations with the adolescents while they waited for their prenatal or routine physical doctor appointments.

It seems from careful review of the literature that teenagers are more likely to pursue risk taking behaviors relative to older individuals. Level of moral development may be considered as one of several factors influencing adolescents' decision making. Other factors that have been found to contribute to overall behavioral patterns within the adolescent population include: socioeconomic status; environmental differences; home life; individual variations; and ethnic as well as cultural backgrounds. Pregnancy at this stage may be one of a wide variety of possible outcomes related to these factors. Consistent with what is reported in the literature, the findings from this study support the hypothesis that teenagers who produce higher scores related to moral development functioning also engage in less risk taking behaviors such as pregnancy. There was also some evidence found in this study that is consistent with Rest (1986) who reported that higher moral development is associated with higher levels of academic motivation within the population of teenagers who share similar backgrounds.

The DIT scores support the observational conclusions and the results from the statistical tests imply that it is highly unlikely that the differences
are attributed to chance. Taken together, the results of this study indicate that although all three groups had overall lower DIT scores relative to group four, the combined DIT scores for all three groups were found to be statistically lower compared to group four. Group two participants also had statistically significant lower scores compared to group number four participants. One possible explanation for these differences is that they may be attributed to the group's relative state of confusion and uncertainty about their short-term future plans. Their uncertainty is based on their inability to determine their emotional and/or financial sources of support. Even though they may have felt supported by their families, their current state of pregnancy or motherhood may influence the ability of their immediate family to offer unconditional love and support (Kaplan, 1996; Scott, 1993). On the other hand, their boyfriends and/or emotional partners in most cases do not seem to provide a solid body of support. Another source of apprehension may be the unknowns related to having a baby and the level of commitment that may be needed for adequate treatment for the new baby to thrive. An examination of the participants' responses on the questionnaire related to documenting their perceptions of the quality of parenthood they could offer a child at this stage in their lives revealed an interesting view. Many of the adolescents perceived themselves as capable of being just as good a mother or
even a better mother when compared to an older woman. Out of the 78 study participants, only one adolescent reported that she would not be a good mother to a child at this point in her life compared to an older woman. This finding is rather encouraging in terms of the participants’ attempts to try their best to be a good and supportive figure in their children’s lives. However, it is also somewhat discouraging in that they may not realize that even though love is an important component in a child’s life, other elements such as maturity and experience are also considered to be important. Factors that seem to be necessary in rearing a healthy individual in the current societal milieu may include financial security, completion of academic and vocationally oriented programs of study, educational, as well as the support of a father figure and strong extended family bond. The teenage participants in this study seemed to view these factors as not being important with respect to rearing a child.

**Occurrence of Previous Physical, Emotional, and Sexual Abuse**

Some of the dysfunctional characteristics that are displayed within families are reportedly due to child abuse (Cole & Putnam, 1992; Klein, 1996). This study was designed to measure the participants’ exposure to sexual, emotional, and physical abuse through self-reports on a questionnaire.
Null hypothesis number three was rejected due to the increased levels of abuse reported by the participants within the three experimental groups relative to the control group. The subjects who were part of the three experimental groups reported an increased incidence of physical and emotional abuse relative to the control group. It should be noted that sexual abuse was not reported by the three experimental groups to be significantly higher relative to the control group. Group number two, which included subjects who were already parents to their first child, were found to be significantly different than group number four. However, they denied being exposed to any abuse during their childhood. Comparing them to group one and group three, it is unlikely that this is an accurate representation of their childhood experiences. In addition to the untreated emotional aspect of abuse in their past, extensive research described above indicates that there is considerable poor self-esteem among individuals who endured abusive relationships in their childhood. These individuals are more likely to engage in at-risk behaviors and they may also display poor motivation in approaching school related work. Within the context of the research described within the previous chapters of this dissertation research project, there is considerable evidence suggesting that many individuals with low self-esteem may choose to become parents at an early age to provide themselves with a
source of unconditional love. However, adolescent young women who are not prepared for the extensive demands of parenthood may initiate the same cycle of abuse that they have experienced in their childhood in relating to their own children. It is possible that adolescents who endured abuse during their childhood may not have the appropriate schemata for any other type of behavior. Their exposure to abusive role models did not allow them to explore other options. In becoming parents at such a young age and not having an opportunity to see other role models, they may not know how to break the cycle of abusive behavior. Even though they are aware of their abusive background, they may not be completely developed and strong enough to help themselves display other behavioral tendencies in relating to their own children.

Sexual abuse, as described in the literature, was found to be one of the most significant factors in becoming young parents among adolescents. The most common desire to have a child seemed to be attributed to the adolescent's attempt to escape the home environment where the abuse was taking place. Even though the individuals who participated in this study did not report increased incidents of sexual abuse, their reports of increased incidents of physical and emotional abuse may lead to similar conclusions. Some of the difficulties that were apparent in this study were related to the
short interactions taking place between the investigator and the participants. No long-term relationships were developed and there was no access to school files or any other personal records. Due to the way the study was conducted and in order to collect the appropriate information from the appropriate group of people, the scope of the study had to be limited and very focused on certain items. In order to get more accurate information it probably would have been more effective to conduct the questionnaire part of the data collection as an interview. However, due to the constraints of the environment and the concern that none of the participants would be singled out to attend a separate session for the purpose of data collection, it was necessary to introduce the study to them and convince them to respond while they were sitting in the waiting room area. Their ability to perform effectively in this kind of environment most likely affected their overall capacity to concentrate and produce their best results.

Reports of Participants' Intention to Drop Out of School

Intentions for school drop out were measured across all four groups to determine the participants' motivation related to school attendance. School dropout is considered in the literature to be a factor that represent the etiology of displaying at risk behavioral patterns within the adolescent
population. However, it seemed that the population of adolescents who participated in this study was generally motivated to continue their educational programs. Given these findings, null hypothesis number four was not rejected. No significant differences were found in the participants' intention to drop out of school across the groups. The possibility of becoming a school dropout was considered by some of them to be an issue they would face if some significant child rearing and/or family issues manifested themselves. All three experimental groups were apparently less motivated to attend school relative to group number four and therefore less likely to invest themselves in schooling compared to group four. However, the differences between the number of individuals within all four groups who considered dropping out of school were not found to be statistically significant. Group number four, although relatively closely related to the general population, displayed many of the same characteristics that were typical of the three experimental groups. They were from disadvantaged homes, they were from lower socioeconomic backgrounds and most of them were of the same cultural and racial origin as the three experimental groups. Group number four, unlike the other groups, did not share the lack of enthusiasm toward school and the level of abuse compared to the other groups. This finding may indicate that the educational programs which were offered to these adolescents did seem to
offer a safe academic and social environment. It may also indicate that the participants felt comfortable regardless of their physical or pregnancy condition to continue their educational program and pursue completion of their high school diploma.

In summary, it seems that these individuals' ability to develop morally relative to other individuals their own age is somewhat affected by their overall attitude, and motivation toward school. They also seem to endure more emotional and physical abuse relative to other adolescents their age, even when within the same socioeconomic background. The teenagers who participated in this study were within the poverty level. Most of them were the offspring of people who needed the financial support of governmental programs such as welfare, food stamps, and Aid to Families with Dependent Children (AFDC). The adolescents' pregnancies at this stage would probably just augment the level of dependency and regenerate the cycle of poverty for that particular generation. It is likely that for most adolescents who would not be able to move away from their mothers' homes, the increasing demands of parenthood in addition to the existing demands may regenerate the cycle of abusive behavior toward the new generation. As discussed previously, the exposure to abusive role models and the lack of independence to allow for appropriate developmental stages to occur, may increase the possibility of
inappropriate behavioral patterns between the young mother and the child. The continuous desire of the adolescent to resume her adolescent, age appropriate activities and the obvious interference of a child may increase the level of fatigue, depression, and overwhelming need to regain her independence. These feelings may result in increased levels of abusive behaviors toward the new generation.

The teenagers' inability to recognize their dependence on society to provide them with their immediate needs for a period of time may be attributed to their young age and level of moral judgment development. However, some of these issues may be the result of poor role models and general expectations within their community, as well as lack of vision for their own future. Their inability to observe themselves as displaying any other role within society may be a factor that may contribute to their decision to become parents at such a young age. It may also seem that the scheme of incentives that is now available to the population of adolescents may contribute to the increased occurrence of early parenting. The overall approach toward the issue of adolescents' at-risk behavior within the fields of education and health care in general seems to be reactive rather than proactive. A reactive approach usually treats the difficulties and the symptoms that should have been avoided and therefore highlights rather than reprimands poor behavior.
Another factor that may seem imbalanced is the fact that individuals who are able to avoid the at-risk behavioral patterns do not receive as much attention and support as do the individuals who present themselves with those difficulties. Therefore, the pattern of reinforcing problematic behaviors rather than controlling for them and/or avoiding their reoccurrence becomes the objective available to the adolescent population. Adolescents who want to avoid sexually transmitted diseases and/or avoid pregnancy may find the support programs, which are available, to be difficult to utilize. In order for them to seek information and contraceptive methods, they usually need to use clinics that in most cases are not located close to home. In the clinics they are introduced to a whole new and foreign environment and a staff that many of them would probably rather avoid. As supported in the literature and by the adolescents' transitional stage of moral judgment functioning, they may perceive the clinics to be unavailable to them and in some cases unnecessary. It may be against their nature as adolescents to seek information and support if they cannot pursue it in a convenient place with people who they know and trust. Teenage pregnancy may therefore be perpetuated by the three factors mentioned above: level of moral judgment development; environmental factors; as well as societal and governmental support programs.
Implications of Findings and Contribution to Existing Literature

The results of this study provide some support for the notion of the negative effects associated with the adolescent's inability to progress at an age appropriate rate relative to other teenagers who decide to postpone parenthood. In addition to the physical implications that adolescents may endure during pregnancy in such an early stage in their lives, their ability to resume academic and age appropriate social routines appear to be seriously hampered with the arrival of a baby. The needs and demands of an infant and a growing baby are immense and may introduce stress levels that an adolescent girl may not be able to respond in an appropriate manner.

Parenthood affects women at all stages of life and at various ages. However, more mature women are considered to be more financially stable and better positioned to make a relatively smooth transition to parenthood. Most older women are also considered to be emotionally and developmentally more sophisticated. They seem to be at the stages of physical and moral maturation that allow them to understand and prepare themselves for the consequences of caring for an infant. In addition, it is assumed that most older women are more prepared academically to help their children perform in their social environment and provide support for their child's school environment. Many older women plan and want the pregnancy and the baby
unlike many of the adolescent pregnancies which are the result of lack of planning and an accident.

Adolescence is also a time during which the teenager is in search of herself. Therefore, the attention and the level of attachment that a baby may require may be too demanding for an individual who is still unsure about her own individuality. Research in the area of attachment strongly suggests that poor attachment in infancy may affect the individual's ability to function as an effective member of the society at a later stage in their lives. It is therefore an essential factor to try and delay pregnancy to a later stage of life rather than approach it during the adolescent years of developmental turmoil. As noted earlier, longitudinal studies have been designed to examine the effects that children of adolescent mothers may experience during their own adolescent years. It seems that a repetition of the cycle of poverty and at-risk behavioral patterns are apparent among teenagers who were the offspring of adolescent mothers. The mothers, on the other hand, even though supported by public funds for different periods of time, seem to bridge the gap of employment and economic security of other individuals with similar financial backgrounds who decided to postpone child bearing to a later age. Therefore it may seem reasonable that a concerted effort should be attempted to prevent adolescent child bearing in order to break the cycle that is created in the
adolescent years. That is to say that it seems that both young mothers and their children may benefit from the young mothers’ further maturation and overall development in all areas of human functioning.

It is recommended that educational attempts should be designed to address the issues of moral development, decision making, and reasoning skills to facilitate appropriate development of higher level of self-esteem. Such proactive interventions within the public school system may allow for some of the adolescents who may experience difficulties in their home environment to find an outlet for their fears and loneliness and maintain peer support. That may help them overcome their difficulties and may assist them to refrain from at-risk behaviors. Maturation in that area and continuous support may help to improve and enhance self-esteem within the population of teenagers who tend to resort to dangerous and antisocial behaviors. Such programs may also enhance the adolescents’ trust in the school environment and school personnel. It may facilitate the teenagers’ motivation and desire to acquire knowledge and pursue age appropriate activities rather than activities that may be more appropriate for older individuals.

Moral judgment scores may assist us with respect to predicting the pathways of social development that a person is likely to take. As described in the literature, individuals with low scores tend not to pursue further
education and career opportunities. On the other hand, individuals who display high scores seem to seek further education. They tend to be more involved with community affairs and experience more fulfillment from their daily interactions. Although moral education programs seem to be effective (Rest, 1986) with respect to promoting development in moral judgment, these kinds of programs seem to be more effective with adults compared to children (Rest, 1986) and their success greatly depends on the individual’s personality characteristics. However, individuals within the middle school and high school levels may benefit from support group interventions that may lead to more complex moral judgment and reasoning skills interventions. Rest (1986) was able to document and conclude from his research study that individual differences in moral judgment solutions, display different perceptions of the same situation. Different individuals’ interpretation of a situation resulted in different ways of approaching and solving a problem. Moral judgment according to Rest seemed to be significantly related to the individual’s behavioral patterns and a wide range of attitudes.

In order to facilitate age appropriate moral judgment development and to incorporate the knowledge contributed from this study, it is recommended that groups of adolescents be formed in which moral dilemmas are systematically discussed. As suggested by Kohlberg (1966), individuals who
are at different levels of moral judgment functioning benefit from interacting in mixed group settings. This exposure of some individuals who function within the lower levels of moral judgment to participants who function within the higher levels of moral judgment can benefit all of the participants. In addition to elevating the levels of moral judgment functioning of the individuals who function in the lower levels, those who function in higher levels of moral judgment development may also become more secure. These challenging interactions may actually allow them to become leaders in other areas within the school environment as well as other settings within the community. As noted above group four (the control group), displayed higher levels of principled moral judgment functioning. Placing them in groups to discuss moral dilemmas with individuals who were part of the other three experimental groups, may facilitate the development of principled moral reasoning among the experimental groups participants.

The findings of this study suggest a relatively short-term set back to the adolescent mothers. This finding is congruent with the results of a previous longitudinal study conducted by Furstenberg, Brooks-Gunn, and Morgan (1990). In their study, the researchers were able to follow the adolescent mothers and their children until their children became adolescents. Although it was apparent that the young mothers were able to
bridge the gap with their peers and improve their financial status, their offspring were somewhat neglected in the process. Many of the new generation teenagers displayed at risk behavioral patterns. Some had many school adjustment difficulties that resulted in poor academic achievement records. Within the population of teenagers who were born to teenager mothers, many tended to pursue at-risk sexual behaviors that resulted in unintended and early fertility patterns. Although the initial group of teenagers was able to establish themselves economically, their children seemed to perpetuate the cycle of early fertility and therefore imposed poverty that their mothers experienced a decade earlier when they chose to display the same at-risk behavioral patterns.

Another element that was apparent during the study that was initially introduced in the 1960's was the general inability of the original group of teenagers to maintain long-term marriages and therefore create unstable home environments for their children. Based on a series of informal conversations with the participants of this study, most of the teenagers reported that they did not consider getting married to the fathers of their children to be important for legitimization purposes. In this study it appeared that the teenagers did not consider the option of sharing their lives and the life of their babies with any father figure. Unlike the study
(Furstenberg, Brooks-Gunn, and Morgan, 1990) mentioned earlier, the participants in this study did not perceive having the baby's father as an integral part of the child's life to be important and/or necessary. Although that may not change the overall moral perception of this particular population, it may be a shift in how young people perceive their involvement in society and their dependency on constant financial support from outside sources. Of course, the emotional issues attributed to lack of a father role model are numerous. Other research studies need to be designed to address this issue.

In addition to enhanced level of self-esteem and improved self-concept and confidence among teenagers, a more pragmatic approach to planned parenthood may be more beneficial. An experiment (Roosa, 1985) that proved to be a success was a planned parenthood program that offered access to medical staff and birth control methods within the school environment. This program was enhanced with an extension of the same personnel and facilities outside the school but in close proximity, to cover after school hours, weekends, and vacation times. Adolescents who had been reluctant to use previously established clinics that were located in hard to reach locations, with unfamiliar staff, seemed to benefit most from this type of service. Programs of this type appear to be more effective in providing teenagers with
planned parenthood services on a more consistent basis. Overall, it seems that when these programs were offered, there was a higher rate of success with respect to preventing higher levels of accidental and early pregnancy. It should be noted that programs of this type do not negate programs directed at helping young mothers and their children once an accidental pregnancy results in the delivery of a baby. However, it may help reduce some of the pregnancies that could have been prevented if the facilities to assist in this prevention were well established and readily available for the adolescents to use.

Programs that may assist in reducing repeat pregnancies and better parenting may help both babies and young mothers with basic information and parenting skills. Children who are enriched in their daily environment will develop better skills to cope with future demands. Therefore programs that emphasize enrichment for the children of adolescents and parenting skills classes for the adolescents themselves may be the most effective.

Programs of this nature may be more effective in reaching at risk populations because of the cooperation between school personnel and clinic personnel. Like other established clinics, they should include short-term counseling and teaching of how to use the chosen birth control methods. However, they can also be attached to other counseling facilities that work with the schools and the school counselors themselves to reach a wider
segment of the adolescent population. Cooperation of this kind can help the professionals who work with the adolescents to have better and more continuous access to the teenagers with whom they work as well as provide for better and more consistent follow up routines. Adolescents who in general display more behavioral difficulties may respond better to an environment that may facilitate listening to their own feelings and a consideration of their desires. They may also respond to a more structured and watchful environment in which they can pursue help from adults without being judged or criticized. Health classes have the potential to be more effective if taught by professionals such as nurses, trained health teachers, social workers, and/or psychologists rather than people who are not well trained in this area. Classes most likely will affect a larger percent of the student population if they start at earlier stages. Providing classes of this nature on a longer term basis in conjunction with clinic personnel responding to the needs of the students have the potential to reach larger segments of the population and leave lasting impressions. Safe environments where students can discuss issues of self-esteem and self-respect can start as early as fourth or fifth grade. More detailed information can be added as it seems appropriate for the particular age groups during later school grades. However, this should be viewed as a continuous process. Earlier and more serious approaches to these
issues will assist in the eventual presentation of materials that may cause embarrassment with some students. Parenting classes and sharing of information of what is presented in these classes is considered to be important with respect to allowing parents to participate in the process of educating their children and being a part of the schools' attempts to help children feel better about themselves.

Many of these kinds of programs are described in the existing body of literature. They may be found to be beneficial with respect to addressing the issues of the population that display a high risk of becoming a young parent. They may be beneficial with respect to enhancing some of the programs that do not offer such a comprehensive variety of services and therefore help a larger segment of the population in need. These programs may enhance the ability to offer early intervention services to populations that are suspected of being exposed to abuse. More comprehensive programs that may address issues of abuse and help us with designing interventions that would enhance the participants' moral judgments prior to the initiation of at-risk behavioral patterns may reduce some of the occurrences of unwanted behavioral outcomes. They may also support the existing generation and reduce a regeneration of the poverty and abusive cycle that appears to be a current concern regarding this particular population.
In summary, overall moral development seems to be connected to the ability of the individual to develop in other areas (i.e., physically, emotionally, educationally, and cognitively). As supported in the rather extensive body of literature in the area and in the more focused areas of inquiry of this study, it seems that when an adolescent young woman becomes pregnant and decides to have a child, much of her overall development slows down and significant growth is not apparent. It may be that the baby who develops at that period of time consumes most of the adolescent mother's energy and the overall ability of the mother to become a functional adult. Although research supports the fact that the adolescent tends to bridge the initial gap and in many cases becomes self-sufficient economically and sometimes academically, many children who are part of the next generation seem to suffer in the process. The adolescent mother who seems to experience slower growth during the first few years of pregnancy and motherhood, is not able to give her infant and later on growing child the support necessary for appropriate development. The attachment period may be difficult and compromised for the young mother who in many cases has no support of another adult who could help her become an appropriate attachment figure. In many cases, she has to resume her school schedule and in some cases some work commitments. The lack of consistent supports for these adolescents
within their immediate environments and the need to provide them and their children with care, make them strong candidates for welfare support. Finally, it should be noted that most of the programs provided to them and their children post delivery are supported by public funds.

**Directions for Future Research**

Experimental group number two, which consisted of parents of their first child, as well as the combined scores for groups one, two, and three, displayed statistically significant discrepancies in their moral judgment performance levels compared to group number four. Focusing on groups with similar characteristics and establishing a study that would include more individuals who displayed similar behavioral patterns may assist us to recognize behavioral patterns that will be peculiar to these groups. In addition to enlarging the size of the sample and including participants from other urban areas, access to student and school personnel files, may yield results that would be useful with respect to determining some of the warning signs that are specific to this population. Detecting such signs with the younger generation may help in establishing proactive services to teach, guide, and possibly prevent some of the accidental occurrences of pregnancy as well as other at-risk behaviors.
Some programs may approach intervention tactics in a more concrete and pragmatic fashion during which pre-adolescents are assigned a life like doll to take care of, for a specific period of time. Classes that are designed to train pre-adolescents and adolescents in moral judgment and reasoning skills are very rare. It is recommended that research efforts be addressed to the issues of training in this area. A combination of both methods may also prove to be beneficial.

The state of Massachusetts is known for its overwhelming distribution of social support programs which may not be as extensively established in other parts of the United States. It will probably be beneficial to compare the population tested in this area to other urban areas and compare the results on the basis of the state established programs available to the adolescent population within the public schools. Teenagers who experience early pregnancy, in addition to getting subsidized health care support, get extensive academic and child care benefits. In some cases, children are bussed to daycare centers allowing the young mothers to resume their school schedule. In other cases, the daycare center is located in the school where the mother attends her own classes. Special tutoring services are provided to allow for continuous educational programs of study in cases where the young mother cannot attend her regular school. These special programs are considered to be
necessary for teenagers who decide to parent their children. They are also considered to be desirable for the babies with respect to assisting them to develop at age appropriate intervals. At this time, the kinds of programs available for adolescent parents in other urban areas is not clearly documented. It is recommended that programs be compared.

Another recommendation for further research is to design studies related to developing moral development interventions and follow up evaluations. These programs could include moral development classes, health education classes, and the creation of support groups with adolescent populations that display at risk behavioral patterns. These program offerings would be targeted at children and adolescents who may be the victims of abuse. It is recognized that this model of intervention is most effective if strongly supported by school personnel, clinic personnel, and the parent population. Public funding could allow for a longitudinal view of results to ensure a long-term involvement with the same group of adolescents. Long-term involvement of that nature would allow for early interventions among abused populations of teenagers and may help facilitate programs to address some of the difficulties specific to this group. The results of a study of this nature may provide support for the need for funding to create similar models for proactive interventions within the schools' environment. Schools in
this capacity would serve as community centers and serve the entire student population rather than only those students who decide to use clinics or students who receive services from counseling centers either with the help of their parents or by themselves.

Continuous attempts to enrich the lives of the children of adolescent parents from a very young age can be established through play and reading activities. Parenting classes provided to the young parents are another area that needs to be systematically explored. This arrangement may reduce the initiation of abuse among immature, poorly educated, adolescent parents. They may benefit from observing appropriate role models. Some issues are more important than others at different stages of the parenthood process. Adolescents may not be able to recognize their needs without the support and assistance from others. In addition to the technical issues of raising a child, issues of discipline and consistency need to be addressed and practices need to be established to achieve good results. Adolescents who pursue parenthood to escape abuse at home, are very likely still burdened with the same issues that caused them to make that original decision to become a parent. Counseling programs may be useful with respect to providing a context in which to discuss unresolved issues.
A significant limitation of this study is the lack of access to school records and to other personal records of the study’s participants. With more information about the participants, some of the responses to the questions could be more directly documented and we could achieve a much better picture of the participants. Another limitation was our inability to make follow up contacts with the individuals who participated in the study for further clarification due to confidentiality constraints. In addition, it would have been desirable to have had more access to the study participants. The trust between the participants and the researchers was clearly lacking and there did not seem to be any way to remediate the lack of trust within the restricted setting.

Unfortunately, it was not possible to collect information using informal observations and/or conversations with the participants. Even though the participants were asked to answer all of the questions on the questionnaire, they could not be carefully monitored. Many invalid data sets could not be used. It is recommended that should the study be repeated that careful consideration be given to simplifying the questions. The adolescents who were mothers to their first child seemed to be preoccupied with their new responsibilities and the reality of caring for a child. Like many mothers at the beginning stages of motherhood, many of the participants seemed tired.
Most of the participants were not married and said that they did not have any plans to be married. It should be noted that some of the children’s fathers played a role in their lives. However, in general fathers were not consistently involved with them. Some support seemed to be available from the extended families, primarily the mothers of the adolescent mothers. However, most of the responsibility for care of the young children relied primarily on the adolescents themselves. Many of these issues could probably be measured and more efficiently recorded using an interview format rather than a questionnaire.

Another area of discrepancy that was not systematically addressed by using the instruments of this study was the group of adolescents who chose to abort their first pregnancy. This information again was not systematically recorded. Group number three displayed a mixed variety of responses with respect to answering the question related to why the respondents decided to abort their first pregnancy. It should be noted that many of the teenagers initially approached to participate in the study and who were targeted individuals were part of group number three. Many of these individuals refused to participate. They indicated that they refused to be involved in the study due to their concern that their mothers and/or family members would be able to trace their abortion through their disclosure within the context of
the study. Others reported that their decision to abort was forced on them and that if they could, they probably would choose not to abort their pregnancy. Adolescents who were part of group three were found to be generally less reliable than the adolescent participants in the other groups with respect to responding to the investigator's requests to complete the DIT and the questionnaire.

Adolescents from group number four seemed to carry themselves in a different fashion relative to the other three groups. They seemed more confident, self-directed, and more motivated to seek out a better life. Overall, they displayed a better disposition and seemed more accepting of the whole process of responding to the different activities. They appeared to relate to the materials more seriously and wrote comments on the questionnaire forms when given the opportunity to do so. Many of the group four participants presented other goals to be achieved prior to becoming a parent. However, like their counterparts in the other three groups they also reported that they had little, if any, desire to have a partner when they became mothers. Many of them said that having a boyfriend or a husband prior to having a family was unnecessary. However, they did report that an education, job opportunities or a career, and a car were important prior to becoming a mother.
Other informal conversations with the participants yielded the following information. Many of the teenagers said that they did not plan to become pregnant and parents at an early age. Many were convinced that they would be supported throughout the process. Others reported that they did not feel they could abort their pregnancy because of either religious and/or philosophical beliefs. It seems that their involvement with the process of pregnancy and the actual arrival of the new baby influenced their ability to participate in the ongoing schooling process. It is also possible that their achievement level prior to becoming pregnant was relatively lower when compared to group number four. Their reading levels appeared to be lower relative to other adolescents their age, which most likely affected their ability to perform on the DIT. However, this finding is not completely consistent with their self-reports of their school performance on the questionnaire. As noted earlier, all subjects chose to read the protocol themselves rather than be helped with viewing and listening to the video tape that was available to them. The educational gap that is forced on the teenagers during their pregnancy and early stages of childrearing may be one of the major contributing factors affecting their ability to perform in a compatible fashion to group number four. The control group subjects did not appear to experience
Other informal conversations with the participants yielded the following information. Many of the teenagers said that they did not plan to become pregnant and parents at an early age. Many were convinced that they would be supported throughout the process. Others reported that they did not feel they could abort their pregnancy because of either religious and/or philosophical beliefs. It seems that their involvement with the process of pregnancy and the actual arrival of the new baby influenced their ability to participate in the ongoing schooling process. It is also possible that their achievement level prior to becoming pregnant was relatively lower when compared to group number four. Their reading levels appeared to be lower relative to other adolescents their age, which most likely affected their ability to perform on the DIT. However, this finding is not completely consistent with their self-reports of their school performance on the questionnaire. As noted earlier, all subjects chose to read the protocol themselves rather than be helped with viewing and listening to the video tape that was available to them. The educational gap that is forced on the teenagers during their pregnancy and early stages of childrearing may be one of the major contributing factors affecting their ability to perform in a compatible fashion to group number four. The control group subjects did not appear to experience
the overwhelming time commitments that are associated with prenatal care and child rearing.

Many of the individuals in the three experimental groups, when compared to group four, were products of families who were supported by some financial public assistance in addition to receiving health care benefits. They were either welfare recipients, used food stamps, or were part of the Aid to Families with Dependent Children (AFDC) program. In some cases, the participants were uncertain about their families financial status. The three experimental groups presented a general profile of being poorly motivated and were most likely poorly prepared to perform in school. The adolescents who were part of the three experimental groups were reared within the context of communities that were primarily supported by public funds. This is a pattern that seems to be the norm within their immediate environment. Overall, they did not seem to perceive their lives as being negatively affected by having a child. Most high schools in the Boston Metropolitan area and primarily in large urban areas, have baby-sitting services for the children of teenagers to allow them to continue to attend classes and complete their educational program. Teenagers who are unable to regularly attend classes due to poor pregnancy conditions receive tutorial services to help them maintain some academic continuity. Unfortunately, many of the participants clearly
displayed poor attitudes and low motivation regarding their school attendance. Many will likely perform poorly in their educational attempts regardless of the educational system's efforts to maintain academic continuity.

Although most schools attempt to address some of the issues presented above through health education classes, the participants' reports on the questionnaire indicated that in general they were not exposed to any class that was designed to address health issues. Even in schools in which classes of this type exist, they usually do not aggressively approach issues of pregnancy prevention and protection from sexually transmitted diseases in a way that would make a lasting impression on the students. Many of the teenagers who were part of the three experimental groups continue to report that they did not use any contraceptive methods. Individuals from group four reported that they did not use any contraceptive methods. They chose abstinence and/or were not involved with a boyfriend. The available programs in the schools do not encourage use of different contraceptive methods and do not systematically address the overwhelming responsibilities of parenthood. These programs tend not to address issues of self-esteem and peer pressure. When addressed, the approach to these issues is usually very academic. The programs are often a small part of a cycle of other elective classes that the
student may elect to take such as music and art. Even though enrollment in these classes is encouraged, the overall student perception of these classes appears to be that the classes are not as important as their core academic subject classes. These classes are usually only one quarter in length and the overall objective is to discuss as many issues as possible, such as drug abuse, alcoholism, and sexually transmitted diseases. Generally an extensive amount of information is transmitted to the students but there is no obvious concern and discussion about how the students really feel about those issues. In addition, the environment is often not supportive for sharing personal information. Therefore, even though the subjects are generally discussed, the issues that would bring the students to critically address at risk behaviors are often not attended to. The paradox of on the one hand offering programs to support pregnant adolescents and their babies, and on the other hand not offering a comprehensive prevention program, continues to exacerbate the problem of adolescent pregnancy. It should be noted that the issues discussed in this section are based on information that was introduced in informal conversations with the participants and working in the public school system in the Boston area.

On-going groups in which to discuss self-esteem issues and/or moral judgment issues are generally not available to public school students. Some
special therapeutic groups that are available to students who are diagnosed as students who require special education services do provide a context in which to address these issues. However, the discussion is not consistent and the issues are determined by the therapist, either a social worker, a guidance counselor, or a school psychologist, who is leading the group. Usually, there is no systematic attempt made to offer these discussions uniformly across all groups and/or in all schools. In addition to poor uniformity across the educational system in dealing with those issues, the regular population of students is not exposed to these options. The only population of students which can benefit from these services are students who display some sort of learning problem, due to either poor intellectual functioning, emotional, and/or behavioral difficulties. In many cases, when the student displays some behavioral issues that do not affect his or her academic achievement, the school suggests to the parents that they seek therapeutic services outside of school. In this instance, the parents are responsible for paying for services to their child. Many of the children who display at risk behaviors tend to be from families that are not intact or may display some dysfunctional characteristics. Particularly within a community of lower socioeconomic background students, it is unlikely that the required help will be provided. Unfortunately, a child with that profile is very likely to develop increased
behavioral difficulties and be more prone to use poor judgment and make poor decisions that in general would lead to at-risk behaviors. These issues were not addressed in this study due to their larger scope. It is recommended that future researchers design studies to address some of the issues.

Summary and Conclusions

This study was designed to examine the moral development of adolescents who were either pregnant, parented their first child, or decided to abort their first pregnancy during their teen years. A group of teenagers who had never been pregnant and who shared the same socioeconomic status and was exposed to similar environmental factors was used as a control group. The overall hypothesis tested was that no discrepancies existed among the three experimental groups and the control group even though they shared similar economic and environmental backgrounds. The Defining Issues Test - DIT, was used to examine the participants' moral development functioning. Although this test appears to be biased against this particular population, when comparing the results among the four groups, clear differences among the groups surfaced. The control group subjects displayed a higher moral development functional levels relative to the experimental groups. Statistically significant differences were apparent in comparing group two
subjects who were parents to their first child, to group four subjects (the control group subjects). It should be noted that no statistically significant differences were found related to comparing the three experimental groups “D” index scores to the control group scores. Group two “P” index scores were found to be significantly lower when compared to group number four. The combined “P” index scores for all three experimental groups reflected statistically significant lower scores relative to the control group “P” index scores.

The ability of an individual to perform well on the DIT has been attributed to their ability to perform on academically related tasks. The experimental groups poor performance on the DIT was assumed to be partly related to their overall level of poor performance in school. Unfortunately, school achievement levels could not be reliably measured in this instance. The participant’s self-disclosure of school performance did not seem to reflect a very reliable measure of their actual level of school performance. It is recognized that the participants’ performance on the DIT may also have been attributed to fatigue, concern and preoccupation with the new role of parenthood, missed school time, and their general inability to focus on school related materials. As noted above, the DIT may not be a reliable measure to use to determine moral judgment development for this particular population.
The participants' characteristics were significantly different than the population that was used to standardize the DIT. Should others desire to use this instrument with a similar population, it is recommended the DIT be normed on a similar at-risk group. This normative sample should include subjects from diverse social, ethnic, and cultural groups.

The qualitative data in this study was collected through the use of a questionnaire systematically designed to address the specific issues of the study. It was apparent that consideration to drop out of school was relatively higher in the experimental groups compared to the control group. The experimental groups' subjects displayed poorer attitudes toward school and lower motivation to continue to attend school. However, there was no statistically significant difference across all four groups with respect to their intent to drop out of school. The differences found between the three experimental groups and the control group with respect to intention to drop out of school may account for the anticipation of many of the needs that may arise when rearing a child. Experimental groups one and three subjects also shared a higher incidence of physical and emotional abuse relative to the control group subjects. The subjects who were part of group number two denied that any type of abuse was part of their childhood experience. Due to the overwhelming denial of that group with respect to all types of abuse, it
may be that this finding is inaccurate. It is unclear why these results manifested themselves with this particular group. It may be a protective mechanism that was adopted to cope with group two participants’ anxieties and difficulties related to caring for a new baby.

Previous research suggests that adolescents who become parents at such an early stage seem to delay their development, but then bridge the economic and sometimes educational gaps created by their peers who delayed parenthood. However, the children of teenage parents seem to display some of the same behavioral patterns displayed by their parents during their adolescent years. Therefore a cycle of poverty, of poor education, and of abuse often seems to regenerate itself among adolescent populations that are the offspring of adolescent parents. Even though the expense of establishing proactive intervention programs and maintaining them on a long-term basis without observing clear results at first, is enormous, it is recommended that an effort should be made to approach the issue of adolescent pregnancy in this fashion. Programs designed to address moral development issues and prevention of recurring child abuse may benefit the new generation of children born to adolescents. In sum, prevention of pregnancy among teenagers may benefit the adolescents and allow them to mature at an age appropriate pace.
APPENDIX A

CONSENT FORM GROUP 1 - PREGNANT ADOLESCENTS
A Consent Form signed by pregnant adolescents who represented the typical characteristics of group number one.

Consent Form

“A Comparative Study of Moral Judgment Development and Problem Solving Styles”

I have been asked to take part in a study titled “A Comparative Study of Moral Judgment Development and Problem Solving Styles”. This study is designed to learn more about how teenage girls think about making decisions. Four groups of teenage girls from the Adolescent Center at the Boston City Hospital will participate in this study. You have been asked to participate in this study because you are currently pregnant. I understand that I will be asked to fill out a questionnaire, watch a video of a woman reading six short stories, and answer questions about it. When I watch the video and respond to the questionnaires, I may be in a room with other girls my age. I understand that I can ask for help when I work on the questionnaires. I understand that all of my answers will be kept private and confidential, and that my name will not be connected to the results of this study.

The risks of the study to me are:

I understand that if I agree to participate, I may have to come to the Adolescent Center one more time in addition to my regular visits if I am not done answering the questionnaires in one time. I also understand that I may need to work on these questionnaires for about an hour, and that some of the questions are about personal things that I may have strong feelings about.

The benefits of this study to me are:

I know that if I complete the whole study, I will receive a gift certificate for $20. However, if I decide to stop before I am done, I will not receive this gift certificate. In addition, I understand that I can participate in a peer
support group that will be offered by Mrs. May at the Adolescent Center to talk about issues that are important to teenagers.

This project has been explained to me and I have been allowed to ask questions about it. I understand that I do not have to fill out the questionnaires if I don’t want to. I can stop part way through if I want to and skip questions I don’t want to answer. I understand that I may refuse to answer any question and may stop taking part in the study at any time, and that my decision to take part or not will have no impact on my care at the Adolescent Center. I understand that if at any time I feel that I want to talk about my reactions or feelings, I can talk with the center’s social worker. I also understand that unless I decide to complete the questionnaire at a different time or if I don’t answer more than half of the questions (as determined by the researcher) I will not receive the gift certificate.

I have read this form, understand the project, and agree to participate.

__________________________________________  _____________________________
Subject Name and Signature                  Date
I have witnessed that the elements of the above informed consent form have been adequately and appropriately explained to the subject.

__________________________________________  _____________________________
Witness Name and Signature                  Date
I attest that I have fully and appropriately informed the subject of the nature of the above study and have offered to answer any questions he / she may have.

__________________________________________  _____________________________
Principal Investigator Name and Signature or Designate

"If you have any questions concerning this study and / or you consent to be a participant, you may contact the Human Studies Committee of the Trustees of Health and Hospitals of the City of Boston, Inc. (Chairperson,
534 - 5842) created for the protection of the human subjects involved in proposed studies. Although the Human Studies Committee has approved this study as protocol #________ - ________ on ____________ (date), your participation is purely voluntary." "You may wish to discuss this study and / or your participation in it with your regular doctor or nurse. You may also request the person who is in charge of this study to speak with your doctor."
APPENDIX B

CONSENT FORM GROUP 2 - ADOLESCENTS WHO ARE PARENTS TO THEIR FIRST CHILD
APPENDIX B

A Consent Form signed by adolescents who were parents to their first child and represented the typical characteristics of group number two.

Consent Form

“A Comparative Study of Moral Judgment Development and Problem Solving Styles”

I have been asked to take part in a study titled “A Comparative Study of Moral Judgment Development and Problem Solving Styles”. This study is designed to learn more about how teenage girls think about making decisions. Four groups of teenage girls from the Adolescent Center at the Boston City Hospital will participate in this study. I have been asked to participate in this study because I have recently had my first child. I understand that I will be asked to fill out a questionnaire, watch a video of a woman reading six short stories, and answer questions about it. When I watch the video and respond to the questionnaires, I may be in a room with other girls my age. I understand that I can ask for help when I work on the questionnaires. I understand that all of my answers will be kept private and confidential, and that my name will not be connected to the results of this study.

The risks of the study to me are:

   I understand that if I agree to participate, I may have to come to the Adolescent Center one more time in addition to my regular visits if I am not done answering the questionnaires in one time. I also understand that I may need to work on these questionnaires for about an hour, and that some of the questions are about personal things that I may have strong feelings about.

The benefits of this study to me are:

   I know that if I complete the whole study, I will receive a gift certificate for $20. However, if I decide to stop before I am done, I will not receive this gift certificate. In addition, I understand that I can participate in a peer
support group that will be offered by Mrs. May at the Adolescent Center to talk about issues that are important to teenagers.

This project has been explained to me and I have been allowed to ask questions about it. I understand that I do not have to fill out the questionnaires if I don’t want to. I can stop part way through if I want to and skip questions I don’t want to answer. I understand that I may refuse to answer any question and may stop taking part in the study at any time, and that my decision to take part or not will have no impact on my care at the Adolescent Center. I understand that if at any time I feel that I want to talk about my reactions or feelings, I can talk with the center’s social worker. I also understand that unless I decide to complete the questionnaire at a different time or if I don’t answer more than half of the questions (as determined by the researcher) I will not receive the gift certificate.

I have read this form, understand the project, and agree to participate.

Subject Name and Signature ___________________________ Date _____________

I have witnessed that the elements of the above informed consent form have been adequately and appropriately explained to the subject.

Witness Name and Signature ___________________________ Date _____________

I attest that I have fully and appropriately informed the subject of the nature of the above study and have offered to answer any questions he / she may have.

Principal Investigator Name and Signature ___________________________ Date _____________
or
Designate

"If you have any questions concerning this study and / or you consent to be a participant, you may contact the Human Studies Committee of the Trustees of Health and Hospitals of the City of Boston, Inc. (Chairperson,
534 - 5842) created for the protection of the human subjects involved in proposed studies. Although the Human Studies Committee has approved this study as protocol #__________ - __________ on _____________ (date), your participation is purely voluntary.” “You may wish to discuss this study and / or your participation in it with your regular doctor or nurse. You may also request the person who is in charge of this study to speak with your doctor.”
APPENDIX C

CONSENT FORM GROUP 3 - ADOLESCENTS WHO ABORTED THEIR
FIRST PREGNANCY
A Consent Form signed by adolescents who aborted their first pregnancy and represented the typical characteristics of group number three.

Consent Form

“A Comparative Study of Moral Judgment Development and Problem Solving Styles”

I have been asked to take part in a study titled “A Comparative Study of Moral Judgment Development and Problem Solving Styles”. This study is designed to learn more about how teenage girls think about making decisions. Four groups of teenage girls from the Adolescent Center at the Boston City Hospital will participate in this study. I have been asked to participate in this study because I have recently had an abortion. I understand that I will be asked to fill out a questionnaire, watch a video of a woman reading six short stories, and answer questions about it. When I watch the video and respond to the questionnaires, I may be in a room with other girls my age. I understand that I can ask for help when I work on the questionnaires. I understand that all of my answers will be kept private and confidential, and that my name will not be connected to the results of this study.

The risks of the study to me are:

I understand that if I agree to participate, I may have to come to the Adolescent Center one more time in addition to my regular visits if I am not done answering the questionnaires in one time. I also understand that I may need to work on these questionnaires for about an hour, and that some of the questions are about personal things that I may have strong feelings about.

The benefits of this study to me are:

I know that if I complete the whole study, I will receive a gift certificate for $20. However, if I decide to stop before I am done, I will not receive this gift certificate. In addition, I understand that I can participate in a peer
support group that will be offered by Mrs. May at the Adolescent Center to talk about issues that are important to teenagers.

This project has been explained to me and I have been allowed to ask questions about it. I understand that I do not have to fill out the questionnaires if I don't want to. I can stop part way through if I want to and skip questions I don't want to answer. I understand that I may refuse to answer any question and may stop taking part in the study at any time, and that my decision to take part or not will have no impact on my care at the Adolescent Center. I understand that if at any time I feel that I want to talk about my reactions or feelings, I can talk with the center's social worker. I also understand that unless I decide to complete the questionnaire at a different time or if I don't answer more than half of the questions (as determined by the researcher) I will not receive the gift certificate.

I have read this form, understand the project, and agree to participate.

_________________________________________  ____________________________
Subject Name and Signature                  Date

I have witnessed that the elements of the above informed consent form have been adequately and appropriately explained to the subject.

_________________________________________  ____________________________
Witness Name and Signature                   Date

I attest that I have fully and appropriately informed the subject of the nature of the above study and have offered to answer any questions he / she may have.

_________________________________________  ____________________________
Principal Investigator Name and Signature    Date
or
Designate

"If you have any questions concerning this study and / or you consent to be a participant, you may contact the Human Studies Committee of the Trustees of Health and Hospitals of the City of Boston, Inc. (Chairperson,
534 - 5842) created for the protection of the human subjects involved in proposed studies. Although the Human Studies Committee has approved this study as protocol #_________ - _________ on _____________ (date), your participation is purely voluntary.” “You may wish to discuss this study and / or your participation in it with your regular doctor or nurse. You may also request the person who is in charge of this study to speak with your doctor.”
APPENDIX D

CONSENT FORM GROUP 4 - ADOLESCENTS WHO HAD NOT BEEN PREGNANT PRIOR TO THE STUDY
APPENDIX D

A Consent Form signed by adolescents who had not been pregnant prior to the study and represented the typical characteristics of group number four.

Consent Form

"A Comparative Study of Moral Judgment Development and Problem Solving Styles"

I have been asked to take part in a study titled "A Comparative Study of Moral Judgment Development and Problem Solving Styles". This study is designed to learn more about how teenage girls think about making decisions. Four groups of teenage girls from the Adolescent Center at the Boston City Hospital will participate in this study. I have been asked to participate in this study because I am between 16 to 18 years old. I understand that I will be asked to fill out a questionnaire, watch a video of a woman reading six short stories, and answer questions about it. When I watch the video and respond to the questionnaires, I may be in a room with other girls my age. I understand that I can ask for help when I work on the questionnaires. I understand that all of my answers will be kept private and confidential, and that my name will not be connected to the results of this study.

The risks of the study to me are:

I understand that if I agree to participate, I may have to come to the Adolescent Center one more time in addition to my regular visits if I am not done answering the questionnaires in one time. I also understand that I may need to work on these questionnaires for about an hour, and that some of the questions are about personal things that I may have strong feelings about.

The benefits of this study to me are:

I know that if I complete the whole study, I will receive a gift certificate for $20. However, if I decide to stop before I am done, I will not receive this gift certificate. In addition, I understand that I can participate in a peer
support group that will be offered by Mrs. May at the Adolescent Center to talk about issues that are important to teenagers.

This project has been explained to me and I have been allowed to ask questions about it. I understand that I do not have to fill out the questionnaires if I don't want to. I can stop part way through if I want to and skip questions I don't want to answer. I understand that I may refuse to answer any question and may stop taking part in the study at any time, and that my decision to take part or not will have no impact on my care at the Adolescent Center. I understand that if at any time I feel that I want to talk about my reactions or feelings, I can talk with the center's social worker. I also understand that unless I decide to complete the questionnaire at a different time or if I don't answer more than half of the questions (as determined by the researcher) I will not receive the gift certificate.

I have read this form, understand the project, and agree to participate.

__________________________  ________________________
Subject Name and Signature  Date

I have witnessed that the elements of the above informed consent form have been adequately and appropriately explained to the subject.

__________________________  ________________________
Witness Name and Signature  Date

I attest that I have fully and appropriately informed the subject of the nature of the above study and have offered to answer any questions he/she may have.

__________________________  ________________________
Principal Investigator Name and Signature  Date
or
Designate

"If you have any questions concerning this study and/or you consent to be a participant, you may contact the Human Studies Committee of the Trustees of Health and Hospitals of the City of Boston, Inc. (Chairperson,
534 - 5842) created for the protection of the human subjects involved in proposed studies. Although the Human Studies Committee has approved this study as protocol #________ - _________ on _____________ (date), your participation is purely voluntary.” “You may wish to discuss this study and / or your participation in it with your regular doctor or nurse. You may also request the person who is in charge of this study to speak with your doctor.”
APPENDIX E

RELEASE FORM
A Release Form signed by the individual who agreed to videotape reading the six moral judgment stories of the Defining Issues Test (DIT)

Release Form

“A Comparative Study of Moral Judgment Development and Problem Solving Styles”

I Vanessa Pollard have agreed to make a videotape in preparation for a study titled “A Comparative Study of Moral Judgment Development and Problem Solving Styles”. This study is designed to learn more about how teenage girls think about making decisions. Four groups of teenage girls from the Adolescent Center at the Boston City Hospital will participate in this study. I agreed to help Dalia May prepare the videotape for this research project by reading six short situational stories and the questions that accompany each story.

I understand that the videotape will be shown to teenagers at the Boston City Hospital Adolescent Center.

I have read this form, understand the project, and agree to participate.

__________________________
Name and Signature

__________________________
Date
APPENDIX F

QUESTIONNAIRE BASED ON THE PARTICIPANTS' SELF REPORT
APPENDIX F

Questionnaire used to collect demographic data based on the participants' self report.

ID #: □ □ □ □ □ Age: __________

Date of Birth: □ □ - □ □ - □ □
    Month    Day    Year

Which of the following ethnic groups would you classify yourself as:
□ African American □ Haitian
□ White □ Portuguese
□ Hispanic / Latino □ Other __________

Which of the following best describes your yearly family income:
□ Do you or your family earn $20,000 or higher

□ Do you or your family earn $20,000 - $10,000

□ Do you or your family earn $10,000 or lower

Do you or your family receive welfare
□ Yes
□ No
Do you or your family receive food stamps

☐ Yes
☐ No

Do you or your family receive AFDC

☐ Yes
☐ No

How old were you when you had your first menstrual period

☐ ☐

How old were you when you first had sexual intercourse

☐ ☐

Have you had sex in the last six months?

☐ Yes
☐ No

Do you have a steady boyfriend

☐ Yes
☐ No

Which of the following contraceptive methods do you use

☐ Birth Control Pills
☐ Diaphragm
☐ Condoms
☐ Depoprovera shot
☐ Norplant (in your arm)
☐ Foam
☐ None
☐ Other ___________________
Were you ever pregnant

☐ Yes
☐ No

If you do not have a child now, do you want to have one now?

☐ Yes
☐ No

How many times were you pregnant

☐

What happened to each of your pregnancies:

<table>
<thead>
<tr>
<th>Gave Birth and kept the baby</th>
<th>Abortion</th>
<th>Miscarriage</th>
<th>Gave for adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td></td>
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</tr>
<tr>
<td>2nd</td>
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<td>3rd</td>
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</tr>
<tr>
<td>4th</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If you are pregnant now, did you want to be pregnant, or was your pregnancy a result of an accident

☐ Wanted to be pregnant
☐ Unwanted pregnancy - accident

If you are pregnant would you like the father of the child to be involved in raising the child

☐ Yes
☐ No
Do you think that you can be a good mother to your child

☐ Just like a woman older than me
☐ Less than a woman older than me
☐ Better than a woman older than me

Why do you think teenagers want to have babies? Check the one you think is most common and important:

☐ Because their boyfriend wants a baby
☐ Because they want someone to love, who would love them back
☐ Because their best girlfriend has a baby
☐ Because many of the girls in school are having babies and it looks like fun
☐ If they become pregnant they can get government assistance and move on their own or with their boyfriend
☐ Any other reason ____________________________
Why do you think teenagers do not want to have babies - check the one you think is most common and important:

☐ Because their boyfriend would leave them if they have a baby
☐ Because their parents will be disappointed and not support them or the baby
☐ Because they are afraid of being a mother right now; they don’t think that they are ready
☐ Because they don’t think it’s fair for the baby to have a mother that is not prepared for him/her
☐ Because they want to get education and have a career first
☐ Because they think a baby should have two married parents who live together and they are not married and not planning to get married in the near future
☐ Because if they have a baby now they will have to get government assistance until they are able to support themselves
☐ Any other reason

Have you ever been sexually abused
which means: raped, or touched sexually against your will.

☐ Yes
☐ No

Have you ever been physically abused
which means: beaten with fists, a stick, or a belt until you had black and blue marks on your face and body, or burned or otherwise seriously physically hurt.

☐ Yes
☐ No
Have you ever been emotionally abused which means: you were continuously told that you are stupid or not worth anything, or you were insulted and embarrassed in front of your friends on a regular basis.

☐ Yes
☐ No

Were you ever neglected by your parents or other care givers

☐ Yes
☐ No

Did you ever live in a foster home?

☐ Yes
☐ No

Are you adopted

☐ Yes
☐ No
What do you think a person needs to have before they have a child?

An apartment of their own

☐ Yes
☐ No

A stable job

☐ Yes
☐ No

A husband

☐ Yes
☐ No

A car

☐ Yes
☐ No

A steady boyfriend

☐ Yes
☐ No

☐ None of the above
☐ Something else (write in)

Answer only if you have ever been pregnant:
Before you became pregnant, did you want to have any of the following:

Your own apartment

☐ Yes
☐ No

A stable job

☐ Yes
☐ No

A husband

☐ Yes
☐ No

A child

☐ Yes
☐ No

A car

☐ Yes
☐ No

A steady boyfriend

☐ Yes
☐ No

A long trip somewhere far

☐ Yes
☐ No

☐ Other ___________________
How often do you smoke cigarettes:
- □ Several times a day
- □ Once a day
- □ Once a week
- □ Once a month
- □ Only on special occasions
- □ Never

How often do you drink beer or alcohol:
- □ Several times a day
- □ Once a day
- □ Once a week
- □ Once a month
- □ Only on special occasions
- □ Never

In the last 3 months, have you gone to school at least 4 days a week most weeks?
- □ Yes
- □ No

What grade are you in now?
- □ 9th
- □ 10th
- □ 11th
- □ 12th

If you did not attend school in the last 3 months at least 4 days a week most weeks, when was the last time you went to school that regularly?
- □ About six months ago
- □ At the beginning of this school year for about 3 months
- □ During last school year
- □ Other specify: ____________________
AND what grade did you last graduate from?

☐ 8th    ☐ 11th
☐ 9th    ☐ 12th
☐ 10th

Are you a good student

☐ Yes
☐ No

What are your grades in the classes you are taking now?

☐ All A's
☐ Mostly A's and B's
☐ Mostly C's and D's
☐ Mostly F's

Did you have to take sex education or health education classes in school

☐ Yes
☐ No

Did you ever have to repeat a grade in school?

☐ Yes
☐ No

If yes which years did you have to repeat?
Specify: ____________________________

Did you ever get special help in school (like a resource room or a tutor) ?

☐ Yes
☐ No
Did you ever consider dropping out of school

☐ Yes
☐ No

Would you drop out of school for any of the following reasons?
Being pregnant

☐ Yes
☐ No

Flunking too many classes

☐ Yes
☐ No

Just don’t like school

☐ Yes
☐ No

Hard times at home and need to be at home

☐ Yes
☐ No

Other reasons? What ____________________________

Which of these things are important for your future life?

* Put 1 by the choice that best fits you
* Put 2 by the choice that second best fits you
* Put 3 by the choice that third best fits you
* Put 4 by the choice that fourth best fits you

☐ Be married

☐ Be both a mother and have a fulfilling career

☐ Stay home and be a mother to my children

☐ Make a lot of money

☐ Be self employed

☐ Continue my education and have a professional career, Specify: ________________

☐ Have a fulfilling career

☐ Other Specify ________________
Please write here anything you would like us to know about the questions we asked in this questionnaire:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Thank you for your time and your ideas!
REFERENCES


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VITA

Dalia May was born on April 25, 1961, in Israel. Dalia graduated from Levinsky Teachers' College in Tel Aviv, Israel as a Certified Music Teacher in 1982. Following a year of military service for the Israeli Defense Force, Dalia arrived in Chicago, Illinois on July 4, 1983. Dalia graduated Roosevelt University in Chicago with a Bachelor of Music Education in 1988. She worked as a teacher within the private Hebrew Schools in the Chicago area throughout her school attendance. In 1992 Dalia received the degree Master of Education in School Psychology from Loyola University Chicago and became a certified school psychologist in the state of Illinois. Dalia worked as a school psychologist for the Chicago Board of Education during the 1992-1993 school year.

After a move to the Boston area, in 1993, Dalia resumed her work within the Newton Public School system during the 1994-1995 school year. She then worked as a school psychologist and a special education team coordinator in Haverhill, MA during the 1995-1996 school year. Dalia is now working for the Billerica Public School system in Massachusetts as a school psychologist and a special education team chairperson. As a school
psychologist, Dalia has been responsible for the cognitive and psychological evaluation of middle school students between the ages of 11 and 15. She is also involved in crisis intervention counseling. She consults with the mainstream as well as the special education school personnel. Dalia is involved in interventions to improve academic performance. Dalia's fluency in two languages (English and Hebrew) allows her to evaluate bilingual and bicultural students. It also affords her the opportunity to work with the families of these students and facilitate the development of comprehensive and developmentally appropriate educational programs within a diverse and challenging population of students.
The dissertation submitted by Dalia Ovdat May has been read and approved by the following committee:

Ronald R. Morgan, Ph.D., Director
Associate Professor of Curriculum Instruction and Educational Psychology
Loyola University Chicago

Carol Harding, Ph.D.
Professor of Counseling Psychology
Loyola University Chicago

Jack Kavanagh, Ph.D.
Professor of Counseling Psychology
Loyola University Chicago

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.