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FACTORS THAT INFLUENCE THE COLLEGE ATTENDANCE

DECISIONS OF APPALACHIAN STUDENTS

by

Erica Chenoweth

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Psychology

Approved:

UTAH STATE UNIVERSITY
Logan, Utah

2003

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ABSTRACT

Factors That Influence the College Attendance

Decisions of Appalachian Students

by

Erica Chenoweth, Master of Science

Utah State University, 2003

Major Professors: Dr. Renee Galliher, Dr. David Stein
Department: Psychology

The current study sought to examine the factors that influence the decisions of Appalachian high school students regarding college attendance. Using Bronfenbrenner's ecological systems theory of human development (1986) as a theoretical basis, direct and indirect influences of environmental factors upon the academic aspirations of Appalachian youth were examined using survey methodology. Results indicated that predictors of college attendance for Appalachian students are not significantly different from those of students elsewhere. Variables reflective of individual academic preparation were most salient in predicting college aspirations for both males and females. Other important predictors included parent education, parent occupation, and socioeconomic status. Several analyses suggested that family and peer influences may be more salient for male students than female students. Implications of the results for educators and clinicians working with Appalachian youth were discussed.

(99 pages)

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Erica Chenoweth

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CHAPTER I

INTRODUCTION

The Appalachian region in the United States has historically been an economically deprived area. Unemployment rates are generally high, as is dependence on federal and state supplemental income (Obermiller & Maloney, 2002). Further perpetuating the economic stress, rates of enrollment in institutions of higher education are well below the national norm (Spohn, Crowther, & Lykins, 1992). Colleges and universities in the area have sought to increase enrollment rates, but the majority of students who wish to attend college do not enroll in the first year (Spohn et al.). It is relatively unclear how young adults make this decision and what factors are associated with the choice to enroll in an institution of higher education. While some studies have been able to identify some influences in this decision, there is little insight into how such factors specifically influence youth in Appalachia.

Lower rates of white-collar employment opportunities, poverty, and isolation have resulted in little cultural and economic change in the Appalachian region over the past few decades. Schwarzeller and Brown (1962) have argued that schools are the best hope for change in rural and impoverished areas. Schools are often Appalachian students' only link to the majority U.S. culture, providing an outside view of what needs to happen in order for change to occur. In some areas, completion of high school is regarded as a feat, and students typically give little thought to college enrollment. Parents and educators in many rural areas still argue about the value of physical, laboring work versus technical and professional careers (DeYoung, 2002). The best hope for change in the

region is through education and the educational system. For some communities in West Virginia, educated individuals have been able to make a difference by establishing businesses or teaching in the schools of their home towns (DeYoung). Thus, their own accomplishments have benefited the community as a whole, a most desirable outcome.

The Appalachian region is characterized by a fairly unique set of economic and social influences. From an ecological systems approach, environmental factors affect the development of youth and the decisions they make for the future (Bronfenbrenner, 1977, 1986). Several factors unique to the culture, such as economic climate and family and regional influences, have an indirect impact upon the development of an individual. However, how these factors influence the decision to pursue higher education and career goals is uncertain. The present study is intended to explore the impact of these environmental factors on the decisions made by Appalachian students with regard to higher education. A questionnaire designed to further identify these influences was developed and utilized with students in the Appalachian region. Results of the present study may be utilized to develop intervention programs aimed at increasing college attendance rates for the region, paving the way for educational and, thus, economic change in the region.

CHAPTER II

REVIEW OF THE LITERATURE

The current literature review applies ecological systems theory of development to the educational struggles of Appalachian youth. To elucidate the role of environmental factors in understanding the educational choices of Appalachian youth, the theory is broken down into direct and indirect environmental influences upon the development of an individual. These direct and indirect influences are then examined in regards to educational aspirations and academic achievement. The effects of poverty upon development are discussed as a rather unique entity. The ecological theory is then applied specifically to the Appalachian region, so that readers may gain a better understanding of the specific environmental influences of Appalachia and how these influences impact adolescents in the region.

Introduction to Ecological Systems Theory

To understand the influences upon the development and educational aspirations of Appalachian youth, an ecological model of human development (Bronfenbrenner, 1977, 1986) has utility. Bronfenbrenner proposed that human development should be studied using a contextual approach, taking into account the many possible influences of the environment upon a child. The best developmental research, he argued, examines these multiple influences when trying to comprehend any behavior or aspect of the child. Ecological systems theory describes the many influences of context, situation, and culture upon one individual's development in terms of inter-related systems. These systems can

impact the child directly, such as in family and school contexts, or indirectly, such as in parents' work settings and in the culture or society as a whole. The model offers a comprehensive framework for examining and understanding the development of a child in a sociocultural context.

The ecological model comprises several concentric circles (see Figure 1), each representing a level of influence of the environment upon the development of the child. At the center of the ecological system is the child, representing individual biological and psychological differences. Heredity, physiology, cognition, and social-emotional, behavioral, and motivational factors distinctive to the individual influence the course of development. Such personal aspects account for the differential experiences of individuals in relationships, situations, and contexts (McHale & Crouter, 1996). In addition, reciprocal influence exists between the child and his or her immediate environment. The child's unique biological and psychological composition is impacted by the immediate environment around him or her, and individual characteristics influence the environment around the child. Ethnicity (e.g., Goodenow & Grady, 1993) and gender are examples of individual differences that affect other ecological systems (e.g., Huston, 1983; McHale & Crouter). Personality differences result from the interaction of these environmental influences. Individual choices and responses to the environment occur at this primary level (Bronfenbrenner, 1977, 1986; Bukatko & Daehler, 1995).

The next level in the model, the microsystem, is made up of the child's immediate physical and social environment: family, school, peers, neighborhood, church, health care, and any other agency that impacts the child directly (Bukatko & Daehler, 1995). While the majority of child development occurs within the family, other settings in which

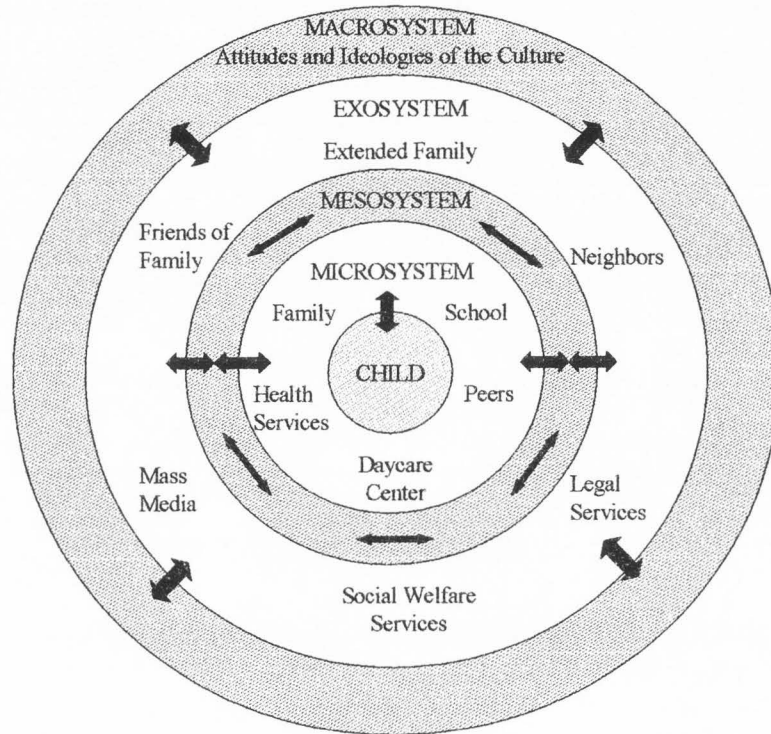


Figure 1. Bronfenbrenner's ecological systems model.

Adapted from Bukatko & Daehler (1995).

the child is likely to interact with others also influence development (Bronfenbrenner, 1986). School and educational settings are prime examples of other situations that visibly influence child development. Teachers, classmates, and other school personnel interact with the child, and as a result, shape his or her attitudes, behavior, thoughts, and emotions. Likewise, the neighborhood in which a child lives, the daycare center which he or she attends, the church to which he or she is a member, and the health care services

and resources which are available to the child all impact his or her development (Bukatko & Daehler).

The mesosystem is a term describing the interaction of elements of the microsystem with one another, which also impacts the child. Developmental processes occurring in different settings are likely to affect one another. A common illustration that this occurs is the example of the impact of the school setting upon the child's development in the home and vice versa. Members of the child's household, resources in the home, classmates, teachers, and educational resources interact with one another to produce an influence upon the child's development. Acquisition of books, learning opportunities, and resources are dependent upon conditions in the home. Aspects of the neighborhood also influence the resources available to the child, thus affecting their development at school and at home (Bronfenbrenner, 1986). Church influences, health care resources, and child care resources are likely to interact with one another to produce an effect upon the child's immediate environment and, consequently, on his or her development (Bukatko & Daehler, 1995).

The extended family, neighbors, friends of the family, media, social and legal services, and any other broader social, political, and economic conditions that influence the way the microsystems impact the child make up the exosystem (Bukatko & Daehler, 1995). The exosystem includes those environmental conditions that are external to the child, but impact development in an indirect way (Bronfenbrenner, 1977, 1986). Parents' work environment is one example of exosystem influences on child development. Stress and relationships at work, the type of work conducted, and economic advantages or disadvantages related to work will impact how the parent behaves toward the child

(Bronfenbrenner, 1986). It also influences the resources available, whether they are tangible (material goods) or intangible influences (emotional support, presence in the home, etc.). Similarly, parents' social network and extended family influence their attitudes and the resources available to them, which are passed on in their parenting styles toward their children (Bronfenbrenner, 1986; Luster & Okagaki, 1993). The mass media, social services, and the legal system also have indirect influences upon child development, by impacting the individuals and systems with which he or she interacts (Bukatko & Daehler, 1995).

The macrosystem, or the general beliefs and attitudes shared by a society or culture, then influences the exosystem (Bukatko & Daehler, 1995). The macrosystem is the most global subsystem, represented by an outer concentric circle, encompassing all other levels. Through its impact upon the exosystem, the macrosystem affects the mesosystem, microsystem, and the child indirectly. Religion, government, customs, and language are examples of aspects of this system. Culture plays a key role in macrosystem influences. Acquired through socialization practices, culture is "the shared experience and knowledge of a self-perpetuating and continuous human group" (Draguns, 1996, p. 2). Inherent in one's culture are assumptions, beliefs, and practices that have become socially acceptable over time. Culture is defined by its society, at local and global scales. Thus, the macrosystem includes all the rules and assumptions of a society, at many levels.

These systems of environmental influence are best examined in terms of their direct versus indirect influences upon the development of the child. Mesosystem models of research tend to focus on the interactions and/or coexistence of individual factors and

microsystem factors involved in child development. Twin studies, studies that examine family factors, studies that examine school factors, and any other research that examines the direct impact of individual factors and immediate environmental factors fall into this category. More indirect influences (found within the exosystem and the macrosystem) upon child development are best examined using an exosystem model of research. Parents' work environment, public policy and law, mass media, and culture are all examples of environmental factors that affect child development in an indirect manner (Bronfenbrenner, 1986). The primary principle to understand in the ecological theory of development is this concept of multiple environmental influences and the impression that combinations of influences have upon the child. Thus, examining the factors that have direct and indirect effects upon child development provides a useful manner of organizing the literature.

Ecological Systems and Child Educational

Performance/Aspirations

Influences at each of the ecological levels impact the educational performance of children and their aspirations for the future. As a child's development progresses, these influences have direct and indirect effects upon emotional, physical, and intellectual growth, and the child's thoughts and behaviors. We will examine some of these effects closer.

Direct Influences

Empirical evidence (Bronfenbrenner, 1986) supports the notion that various levels of mesosystem influences impact child development. For instance, studies of twins separated at birth were re-examined to determine the impact of the community upon IQ. Bronfenbrenner (1975) found that separated twins who were reared in the same types of communities were more likely to have similar IQs than those who were not. His findings were replicated by Taylor (1980), who examined the same studies and additional others. These studies provide a direct argument against the assumptions of many researchers that intelligence is primarily biological. Most twin studies examine only biological commonalities instead of looking at environmental commonalities as well. Bronfenbrenner (1986) has argued that development, including intellectual development, is affected by multiple influences of genetic and environmental origin.

Bronfenbrenner (1986) described other studies that demonstrated the “multiplicative effect of environmental and genetic forces” (p. 726). Skeels (1966) published a longitudinal study examining the IQs of adopted children and children reared by their biological parents. There were three major findings of this study that support the ecological theory of development. First, the researchers noticed a “tendency of children of more intelligent biological parents to be placed in more advantaged adoptive homes,” describing a “selective placement” process in adoption (Bronfenbrenner, p. 726). Second, while correlations of IQs of parents and children in biological families were higher, the mean IQ of adopted children was 20 points higher than that of their biological parents. Third, and most important in ecological terms, the primary explanations for the origins of

such boosted intellectual development were rooted in characteristics of the home environment and parenting styles.

Other research demonstrated that settings, such as hospitals and day care, influence child development more intensely than previously considered. One study examining the impact of hospital environments revealed evidence that such surroundings continued to impact the development of both premature babies and older children for up to a year. Premature infants who received more vigorous care and follow-up were found to score about 10 points higher on an IQ assessment compared to children who received minimal care in these settings (Scarr-Salapatek & Williams, 1973).

Family factors that influence enrollment in higher education include the family as a resource provider, family members as role models, and family as a source of encouragement for higher education. More specifically, the Appalachian Access and Success study (Spohn et al., 1992) revealed that level of parental educational attainment was a factor that influenced: (a) whether or not students could navigate the college application process, and (b) whether or not they witnessed first-hand the benefits of higher education. Similarly, siblings' college attendance influenced enrollment, because older siblings are often role models for their younger brothers and sisters. Low family income and the family's inability to help finance higher education was another factor. High school personnel in Appalachia perceived a lack of parental encouragement for students to attend college.

Other research on familial influences cited parents' education and parental expectations as a major factor in the college decision-making process (Conklin & Daily, 1981; Murphy, 1981). Stage and Hossler (1989) reported results from their study that

suggested “subtle differences in family influence on male and female students’ college-going plans” (p. 301). Father and mother educational achievement, as well as family income, were important factors affecting parents’ educational expectations for their children. Father’s income was most influential for males and females, and family income was nearly as important for the female subgroup. The number of children in the family already attending college negatively affected the likelihood that females were encouraged to attend college. Thus, with more limited resources, females were less encouraged than males to attend college. Males were less affected in general by the differences in family influences and resources. It is clear that development, both individual and family, is characterized by both losses and gains. Such phenomena are best explained by McHale and Crouter (1996):

[A]ccomplishments in one domain are pursued at the expense of skills in another, and personal achievements may come at the price of interpersonal relationships. At the level of the family, promoting the needs and interests of one member may give rise to differences in individuals within the family: differences between brothers and sisters, husbands and wives, or parents and children in their emotional well-being, personal achievement, and evaluations of family life. (p. 191)

Sibling relationships and family systems that surround such relationships are important in the development of an individual. Because many children spend a great deal of time with their siblings while growing up, it is inevitable that such relationships will have a great impact on development. McHale and Crouter (1996) examined sibling relationships in context. Sibling activities, sibling experiences, and sibling and family relationships were discussed based on two longitudinal studies. The target children in these studies were preadolescent children with younger siblings. In terms of sibling care giving, the authors found that contextual differences emerged between children of dual-

versus single-earner families. These differences only occurred during the summer months (while school was out of session) and only for first-born girls. The researchers found that girls of dual-income families tended to take on a caregiving role toward their younger siblings during the summer months. Thus, birth-order, season of the year, and sibling relationships all impacted the individual development of these girls differentially than boys.

Other research has demonstrated the different ways in which ecological factors may impact girls versus boys (McHale & Crouter, 1996). For example, some studies have shown that fathers tend to spend more time with sons than with daughters (Hoffman, 1977; Parke & Tinsley, 1987). Upon further examination, such tendencies are only present when there are both a son and a daughter from which to choose. In fact, girls and boys may take on opposite social gender roles in the absence of an other-sex sibling. For example, a son may become a caregiver to a younger brother, or a daughter may become involved in sports in order to spend more time with her father (McHale & Crouter). McHale and Crouter found evidence for these contextual differences when analyzing data from a longitudinal study. Additionally, they found

...differences in girls' math achievement that are tied to patterns of paternal involvement: Girls with relatively uninvolved fathers showed declines in math achievement from the 5th to the 7th grade, declines not apparent in the performance of girls with more highly involved fathers. (p. 188)

Many studies have looked at the interaction between family and school and the influences of these two systems on child development (see Bronfenbrenner, 1986). For example, Epstein (1983a, 1983b) "examined the joint impact of family and classroom processes on change in pupil's attitudes and their academic achievement during the

transition between the last year of middle school and the first year of high school” (Bronfenbrenner, 1986, p. 727). Home and classroom environments impacted adolescents’ development by providing more or less opportunities for communication and decision-making. Those students with more experience in these areas demonstrated more motivation, independence, and eventually higher grades in high school. Family influences were found to be stronger in the developmental process than classroom influences. School influences were more important to children who were not permitted such opportunities at home. These effects were found to be more substantial than those produced by socioeconomic status or ethnicity (Epstein, 1983b).

More specifically, the school setting has a direct impact on academic motivation. School belonging, or the sense that a student feels “personally accepted, respected, included, and supported by others—especially teachers and other adults in the school social environment” (Goodenow & Grady, 1993, p. 61), contributes largely to academic motivation. In a study conducted with urban youth, Goodenow and Grady found that “school belonging was significantly associated with several motivation-related measures—expectancy of success, valuing schoolwork, general school motivation, and self-reported effort” (p. 60). The effects of school belonging on motivation were different for different groups. Girls’ responses on the measures demonstrated stronger correlations between school belonging and academic success than boys’. Additionally, Hispanic students were more likely to be affected by school belonging than African American students.

Values of peers tend to influence the motivation and achievement of adolescents. Goodenow and Grady (1993) discussed the ecological nature of motivation to achieve by

noting that academic motivation develops from personal values and attributes and influences from close others, culture and ethnicity, and society as a whole. The influence of peers in the school setting has been documented widely (e.g., Brown, 1990; Steinberg, Dornbusch, & Brown, 1992) and adolescence is the developmental period in which individuals are most influenced by their peers (Berndt, 1979; as cited in Goodenow & Grady, 1993). Peers influence academic achievement in positive and negative ways, and for many students of lower socioeconomic status, it is just not “cool” to achieve (Phelan, Davidson, & Cao, 1991).

Ethnicity contributes to many aspects of the microsystem that impact human development and academic achievement. Minority students are more likely to be influenced by peers’ negative values associated with school than White students (Steinberg et al., 1992). Fordham (1988) reported that African American high school students who strive for academic achievement are often accused of “acting White.” Stigma associated with ethnic identity influences students’ conceptualizations of themselves, often leading to more negative ideas regarding their ability to succeed (Brown, 1998). Kao (2000) documented the tendencies of students of ethnic minorities to define their academic goals according to stereotypes of their race. These students were more likely to try to avoid negative stereotypes instead of pursuing achievement-oriented goals. This often interfered with the attainment of academic and career success.

Several studies have explored mesosystem factors that influence an individual’s decision to participate in higher education (e.g., Freeman, 1999; Hamrick & Stage, 2000; Perna, 2000; Stage & Hossler, 1989). Using a survey approach, Oliver and Etcheverry (1987) examined factors associated with the decision to attend college for African

American students. They concluded that individual career objectives, availability of financial aid, job availability, contact with individuals working in professional careers, and peer influences were major factors in educational goals for African Americans. Freeman found that economic expectations influenced the decision-making processes of African Americans considering whether or not to attend college. She found that these students were much more likely to weigh the financial benefits and the costs of higher education and approached the decision with much skepticism. Exposure to financial hardships and inability to access resources of aid in the immediate environment directly influenced this personal decision.

Results obtained from the Appalachian Access and Success study (AAS; Spohn et al., 1992) indicated that college costs weighed against the ability to make an immediate income through employment, and many seniors were uninformed about the availability of financial aid. Identified individual influences in the decision to pursue higher education included the high school students' academic ability, their hopes and goals for themselves in the future, and their expectations for the future. Low self-esteem was also a factor, as many seniors saw themselves as unable to fit into the college scene, or lacking in intelligence or adequate grades for acceptance and success. Indeed, high school personnel in Appalachia felt their students were unprepared for college, both academically and in their expectations for college life.

Indirect Influences

Exosystem influences on development can be found in three main areas of research: parents' work, parents' social networks, and community influences on family

functioning (Bronfenbrenner, 1986). Bronfenbrenner and Crouter (1982) conducted a review of the literature on the effects of parents' job situation on the child. Fathers' employment, type of work organization, and type of activities done on the job all affected the way in which fathers interacted with their children. Mothers' childrearing practices were also affected by fathers' occupations. The mother's childrearing practices in turn influenced the type of academic preparation (vocational, college preparation) a child received and the school activities in which he was involved. Bronfenbrenner and Crouter summarized longitudinal research conducted by Mortimer, stating:

[T]he investigators were able to demonstrate a strong tendency for sons to choose an occupation similar to their fathers', as defined along dimensions of work autonomy and the function of work activities. The most effective transmission of occupational value and choice occurred under a combination of a prestigious parental role model and a close father-son relationship. (p. 728)

Three reviews of the literature have focused on the role of the mother's employment in the development of the child (Bronfenbrenner & Crouter, 1982; Hoffman, 1980, 1983). These reviews have reported consistent findings on the differential effects of mother's employment on sons versus daughters. Overall, mother's employment affected girls positively by encouraging independence and mutual admiration between mothers and daughters. However, sons were negatively affected by the full-time employment of their mothers, especially in middle-class families. Lower academic achievement was associated with boys' mothers working outside the home in these families but not in low-income families. Bronfenbrenner, Alvarez, and Henderson (1984) reported that part-time employment (vs. full-time) tended to have more positive effects on boys in that their mothers were more likely to describe their sons positively than full-time working

mothers. In summary, it is apparent that both father's and mother's employment influence the development of the child in many ways.

Bronfenbrenner (1986) cited evidence for several other exosystem factors that have an impact on child development. Parental support networks such as family, church, and community were associated with lower reports of child neglect. Neglect seemed most associated with low-income status and lack of family support for the parent. Negative effects of stress on child emotional development were reported more often for mothers who were poor, unmarried, and uneducated, and the effects of such stress were reduced when the mothers had a strong support system. Availability of quality health care and other community resources affect the growth and development of children. Differences in the development of children in urban versus rural settings have also been examined. While children in urban settings tend to experience more stress, which negatively impacts their emotional development, they also experience greater intellectual development, probably due to the availability of cultural and educational resources (Vatter, 1981; as cited in Bronfenbrenner, 1986).

Research has demonstrated exosystem influences upon choice of enrollment in higher education. Socioeconomic status and availability of resources has a great impact on the decision-making processes of students (Freeman, 1999; Spohn et al., 1992) Regional isolation sometimes prevents accessibility of information and assistance. The AAS study reported on institutional factors acting as barriers to the attainment of higher education. These factors impacted students through their school personnel and were primarily related to the lack of information available to high school counselors, and, as a result, lack of college information available to students. High school personnel found it

difficult to obtain and maintain access to admission requirements and financial aid information for various colleges.

Of particular interest is the effect of poverty on all levels of the ecological system. Elder, Nguyen, and Caspi (1985) examined data available from longitudinal studies conducted with children of the Depression era. They discovered that poverty instigated by the Depression affected girls more than it affected boys, primarily through fathers' parenting style and behavior toward daughters. Unattractive daughters were much more likely to be negatively psychologically affected by their fathers' rejecting behaviors toward them. The burden of not being able to provide for the family influenced the men's own psychological well-being, causing depression and negative behaviors toward unattractive daughters. The daughters' individual characteristics (attractiveness) reciprocally influenced fathers' behaviors. Thus, the economical circumstances combined with individual traits created a very specific impact on development that can be discussed at multiple ecological levels.

Bronfenbrenner (1986) documented the many areas of research that discuss the impact of economics on child development. Finances affect children in the home, in their interactions with family members, at school, and in their neighborhood play area. Elder et al. (1985) explained:

To understand the impact of economic hardship on children's lives requires the knowledge of the adaptations chosen and played out by their parents. The adverse effects of stressful economic times are not necessarily exercised directly. They may be produced indirectly through their disorganizing effects on family relations. (p. 362)

Socioeconomic status can determine who their peers are, what school they attend, what health services they receive, and which church they attend. At a larger level, family

income also impacts the choice of parents' friends, neighbors, coworkers, and media, legal services, and social services available. Attitudes and ideologies of cultures and subcultures are influenced by economic variables. The culture of poverty affects people in many ways: in the decisions they make, how they view themselves, and the paths available to them in their future. The research has demonstrated that parents' occupational and educational choices affect the development of their children and the choices that their children make in these areas (Bronfenbrenner).

Entire cultures or subcultures are influenced by economics in the expectations and accepted standards of living that are made available to members. In the U.S., there are several subcultures influenced both by economic situations and the histories of the people who settled in those particular areas. We will focus on one such area: the Appalachian region.

The Ecological Systems of Appalachia

Students in the Appalachian region are likely to be affected in their development and career choices at the macrosystem level. The ecological systems of the Appalachian region are primarily influenced by the interaction of two major factors specific to this area: "(a) the social-cultural influences of urban America and (b) the lingering aspects of rural folk culture" (The Rural & Appalachian Youth & Families Consortium, 1996, p. 387). Appalachian people are often in contact with and influenced by extended family members such as grandparents, aunts, uncles, cousins, and other relatives. Especially in more rural areas of Appalachia, family members, immediate and extended, often share common residence or plots of land, known as *kinship communities* (The Rural &

Appalachian Youth & Families Consortium). The Rural and Appalachian Youth and Families Consortium best described the influence of Appalachian culture upon ecological systems by stating, "These complicated family systems are best viewed in terms of Appalachia's distinctive ecological context that includes schools, the workplace, religious institutions, unique cultural patterns, economic circumstances, the media, and influences from urban America" (p. 387).

In the previous literature on Appalachian families, there are three factors that continually surface as characteristics somewhat unique to Appalachian culture: localism, historicism, and familism (The Rural & Appalachian Youth & Families Consortium, 1996). Localism is characterized by a sense of belonging, or being a part of the land. Appalachian families tend to maintain a commitment to the place in which they live or where they grew up. This concept is supported by the fact that a large number of individuals from the region continue to live in the area, work in the area, and raise families of their own. Historicism refers to the sense or understanding of one's place in history, within the family and region where one developed. Such devotion to place and time is further accented by one's sense of family. A strong commitment and reliance upon family of origin defines the concept of familism. Individuals in Appalachia tend to maintain close family ties, in both geographic proximity and interpersonal relations (The Rural & Appalachian Youth & Families Consortium).

Gender roles characteristic of rural regions are present and persistent in Appalachia. Traditional gender-related activities, such as mothering and housekeeping, have been supported by the minimal presence of job opportunities for women and the absence of professional career women in the area. Additionally, the culture of poverty

tends to oppress women in this manner, given the limited resources available. Many times, women care solely for children, while husbands are away, in other regions working, or absent from the home completely (Oberhauser, 1995). Girls are brought up in this atmosphere, often with only motherhood to look forward to. Murry (1992) noted that adolescent pregnancy is sometimes celebrated because motherhood is the only viable goal for many girls. Similarly, Williams (1991) concluded that most teenage mothers live in poverty conditions already and were likely brought up in that atmosphere; "thus it is unlikely that they see having a baby as leading to negative economic consequences" (p. 33).

In order to understand the cultural influences of Appalachia, it is important to outline characteristics of the region. Appalachia is the name given to the region in the eastern United States surrounding the Appalachian Mountains. The word "Appalachian" refers either to this geographic region or the culture of the people who reside there. The Appalachian Regional Commission defined the region as including all of West Virginia and parts of 12 other states, stretching along the Appalachian Mountain Range, from New York to Mississippi (see Figure 2). The area is mostly rural, with some metropolitan areas such as Pittsburgh. The region is predominately inhabited by White individuals (93%), although there are people of other various cultures and ethnicities in the area (e.g., Amish, Hispanics, American Indians, and African Americans). Many Appalachians are of Scotch-Irish decent, with generations of ancestors who inhabited the isolated mountainous regions, building a unique culture (Batteau, 1979-1980; Klein, 1995). Some researchers (e.g., Keefe, 1992; Keefe, Reck, & Reck, 1983) have asserted that the culture



Figure 2. The Appalachian region.

Source: Appalachian Regional Commission (2002) (Used with permission)

has developed into an ethnicity. In fact, the city of Cincinnati has adopted “an ordinance prohibiting discrimination in housing, employment, and public accommodations on the basis of race; gender; age; color; religion; disability status; marital status; or ethnic,

national, or Appalachian regional origin” (The Rural & Appalachian Youth & Families Consortium, 1996, p. 388).

Derogatory descriptions of people from the Appalachian region often perpetuate negative stereotypes and discrimination. Klein (1995) described how such stereotypes might be internalized by the Appalachian people and serve to maintain distance between these individuals and career and educational opportunities. Appalachians are often stereotyped as “hillbillies,” destined to be undereducated and often unemployed. Given such a stereotype, families in the region may feel more distant from the general American community and strive to preserve an isolated life style for fear of rejection. Such isolation only perpetuates the cycle of economic and educational deprivation, exacerbated by this self-fulfilling prophecy. Often, such marginalization is the result of misunderstandings between Appalachian individuals and individuals from the larger American culture (Batteau, 1979-80).

The hillbilly caricature implies that the people of Appalachia are mainly farmers, when, in fact the region became quite industrialized in the early 1900s. Coal mines provided the majority of economic sustenance, especially in West Virginia, until the latter part of the 20th century, when the mines became depleted. Since then, other natural resources have been tapped for financial gain (e.g., timber). However, the residents in the region continue to struggle to find employment opportunities in the blue-collar sector (Lewis, 1993). While professional careers have gradually increased over the years, the majority of the Appalachian working class remains unskilled or semiskilled (Spohn et al., 1992). The exploitation of natural resources by large companies combined with the large available labor source has resulted in more low-paying job opportunities rather than

improved economic gains. These dynamics are similar to those found in third world countries (Robertson & Shoffner, 1989; Lohmann, 1990). Indeed Lohmann and others have referred to Appalachia as "America's Third World."

The Appalachian region has been repeatedly identified as an economically disadvantaged area for many reasons. Family and per capita incomes are significantly lower than those reported for the United States as a whole. Higher unemployment rates and concentration of poverty in the Appalachian region have resulted from job losses in the well-paid mining and manufacturing industries. Subsequently, higher rates of dependency on federal and state supplemental income have followed. In addition, the rates of college attendance in this area are lower than the national average. Bickel (1989) reported that less than one third of West Virginia high school graduates enrolled in two-year and four-year colleges and universities. In the fall of 1991, 80% of high school seniors surveyed in Ohio Appalachia stated they wanted to go to college. However, only about one third of high school seniors in the region are likely to enroll in college after graduation. These figures are significantly lower than that of the United States as a whole, reported at 62.4% in 1991 (Spohn et al., 1992).

Problem Statement

Ecological systems theory provides a useful model of conceptualizing the individual and environmental influences that impact youth in Appalachia and the important decision regarding continuance of education. Environmental influences that directly impact youth include those entities that are directly involved with the child, such as family (parents, siblings, other close relatives), peers, school (belonging, academic

preparation), and family income. Indirect influences upon the development of individuals occur when one entity impacts the manner in which another entity directly influences the child. These indirect influences include parents' work and educational attainment, parents' support system and extended family, Appalachian culture, socioeconomic status and poverty. Financial situations can affect individuals in both direct (family income) and indirect (local economy) manners.

Understanding the types of influences involved in human development aid in the understanding of the types of influences involved in the college choice decision. There are direct and indirect influences in this decision just as there are direct and indirect influences in any decision or life course that an individual may take in his or her trek through life. However, how these factors influence the decision is relatively unknown.

The AAS study (Spohn et al., 1992) was useful in identifying some of these factors, but it is the only study discovered to address such issues in Appalachia. To summarize, the Ohio Board of Regents reported that approximately 26% of Ohio Appalachian high school graduates enroll in college. Of the 80% of students reporting intentions to attend college, approximately 32% were male and 68% were female. Students reported lack of financial backing and lack of information regarding colleges and financial aid as barriers to obtaining a higher education. Low level of parental educational attainment, lower family income, and lack of siblings attending college were family factors associated with lack of college enrollment. High school personnel reported that many students were unprepared for college and parents did not encourage college enrollment. However, students reported that parental support was not a barrier to attending college. Lower socioeconomic status and poverty in Ohio Appalachia

discouraged students from enrolling in college. Students enrolled in a four-year college or university within the first year after graduation were more likely to be from higher income families. Peer influence was strong in the AAS study; more than 84% of seniors reported that a close friend planned to attend college. High school grade point average (GPA) was strongly associated with plans to attend college, and the majority of students planning to attend college were enrolled in a college preparatory program or curricula.

While some of the findings are likely to be similar to the AAS study (percentage of Appalachian students planning to attend college, barriers to higher education, and influence of poverty in the area), the current study is designed to examine influences more in-depth with West Virginia Appalachian students, who may be somewhat qualitatively different from their Ohio Appalachian counterparts. West Virginia is a mountainous state, with poor roads and highways. Individuals in rural parts of West Virginia are often isolated, both physically and socially. Unlike other Appalachian states, West Virginia is entirely Appalachian and well known as a state with poor development and economic growth. This study sought to explore the possibility that West Virginia Appalachians experience some unique ecological factors that other Appalachians do not experience, demonstrated by some differences in variables associated with college attendance. Further, the AAS study presented descriptive data in terms of percentages and simple correlations. The present study sought to explore more complex patterns of association between environmental factors and the decision to attend college, examining the influence of various individual and contextual factors simultaneously.

According to the AAS study, only about one third of students in the Appalachian region of Ohio who want to attend college actually enroll. While previous studies,

especially the AAS project, have provided important information regarding the factors involved in participation in higher education, there are no known studies to date examining the differential impact of these types of influences on West Virginia Appalachian students. Moreover, it is unclear how or if the impact of various sources of influence differs for males and females. The Appalachian culture and its unique ecological system are likely to impact the students' decisions to participate in higher education. However, *how* it impacts the decision and *to what degree* are questions that remain unanswered.

Hypotheses

The present study aims to better understand these issues using a survey approach and correlational design. Demographic information, socioeconomic factors, parental influence and educational attainment, peer and family influence, and school achievement and school belonging are examined via a questionnaire. Based on a review of the literature, influences at all levels of the ecological systems are studied in regards to this decision. The outcome measures (dependent variable) for this study are the Appalachian students' ultimate career and educational goals and their plans for continuance of their education for the next year.

Several hypotheses are offered (see Table 1 for a complete list):

1. Based on previous research, sex differences are hypothesized in parent, sibling, peer, school, economic, and cultural influences. Girls are more likely to be influenced by the values of parents and peers, and by their perception of school belonging. In addition, it is suggested that sex differences in college educational aspirations will emerge.

Table 1

Research Hypotheses

Dependent Variable, Dichotomous- Going to college versus not going to college.
College is defined as a 2- or 4-year higher education institution, public or private. Proprietary schools, vocational and technical training institutes and enlisting in military are not included.

Independent Variables		Research Hypotheses
Sex		Are there any differences? Traditional values may lead to less girls planning to go to college in the face of economic hardship
Parents	Support	Positive association with college plans; influences girls more than boys
	Education	Positive association with student college plans, influences girls more than boys Negatively associated with "no info re: college" as a major problem encountered in the college decision process
	Occupation	Positive association with college plans
	Socioeconomic status (SES)	Positive association with college plans Lower SES may affect girls more negatively, especially combined with other siblings attending college SES may be a stronger predictor than GPA
Siblings	Going/not going	Generally, positive association with college plans (when combined with lower SES, may be negatively associated for girls)
Peers	Going/not going	Positive association with college plans, girls will demonstrate stronger association than boys

(table continues)

Independent Variables		Research Hypotheses
School	School belonging scale	Positive association with college plans; girls more likely to demonstrate an association between positive school belonging and plans to attend college
	Enjoy learning	Positive association with college plans
	Comfort in school	Positive association with college plans
Academics/ Individual	Educational goals/ aspirations	Positive association with college plans and positive correlation with parents' educational level
	GPA	Positive association with college plans
	Program of study (college prep, general, vocational)	Students endorsing college prep program are more likely to go college
	Perception of readiness for college	Those who feel ready to attend college are more likely to go
	Self-esteem/perceived intelligence	Positive association with college plans
	Appalachian culture	Localism (do students want to stay in local area)
Familism (have other relatives gone to college)		Higher rates of relatives attending will increase likelihood of student college attendance
Historicism (are parents from Appalachia)		Negative association with college plans?

Females are less likely to pursue educational goals in the face of economic disadvantage, especially when they must compete with siblings for resources. The more traditional roles of women as mother and homemaker in Appalachia are likely to influence females in their decision not to pursue higher education. So, differences in importance of factors involved in the college choice are predicted for females versus males.

2. Direct influences from individual characteristics and the immediate environments in which Appalachian youth are immersed are predicted to impact the college decision. For example, peer enrollment in college is likely to increase the probability of the students' own participation in higher education. School belonging is also likely to increase participation. Family factors such as parental support and sibling enrollment may have both positive and negative influences upon the students' own enrollment. For example, parents may encourage or discourage their children to attend college, influencing this decision directly. Other siblings' attendance in college may encourage enrollment by providing a positive role model, or it may indirectly discourage enrollment (especially for girls) if family resources are stretched too thin to support additional children attending college. Family income will likely influence this decision, and it is assumed that lower family income will decrease the probability of student enrollment in a college.

3. Other environmental factors will influence this decision in a less direct fashion. Given the unique subculture of Appalachia, it is likely that some regional influences (e.g., economic disadvantages resulting in lower levels of parental educational attainment) previously described impact the decisions of Appalachian youth to a great extent. Those students who have lived in the region for all or most of their lives and want to remain in

the area for the rest of their lives are attached to the culture, and are less likely to leave the area for an extended period of time, even to attend college. Other students may choose to divorce themselves of the culture or may have never identified with characteristics of a true Appalachian. These students may be more likely to enroll in a college in order to leave the area in which they live. Family loyalty and history, examined by looking at previous relations who have attended college, may be associated with an individual's desire (or lack of desire) to pursue higher education. In sum, from a developmental perspective, the ecological climate of Appalachia is likely to have an influence on this decision-making process and outcome may be assessed by examining the correlations of influences with choice of college enrollment.

CHAPTER III

METHODS

Participants

The target population for the study was Appalachian high school seniors; because West Virginia lies in the heart of Appalachia, students from this state are representative of the Appalachian region. Two hundred forty-two (115 male and 127 female) high school seniors in the most rural counties (populations under 12,000 in each county, based on July 1999 County Population Estimates from the Population Division, U.S. Census Bureau) of West Virginia were recruited based on their schools' agreement to participate. The most rural counties were selected based on the rationale that such counties are more representative of Appalachia than their metropolitan counterparts. School principals were contacted by phone and invited to participate in the study. All seniors enrolled in the participating schools (434) were eligible to participate. Student participants completed the surveys on a voluntary basis, resulting in a 56% response rate. Mean age of participants was 17.86; those under the age of 18 may have been excluded from participation if their parents objected to their involvement in the study. The majority of these students were White (96.7%), with a small percentage of participants from other racial and ethnic groups.

Procedure

Questionnaires were e-mailed, faxed, or mailed to school principals who agreed to take part in the study (see Appendix A for letters of agreement from principals). Parents

were informed of the study approximately one week before data collection took place, in the form of a letter sent home with seniors (see Appendix B). Parents were instructed to contact school personnel if they did not wish their child to participate in the study. Students from two schools completed the survey about a week before graduation, while students from the remaining three schools completed the survey in the first month of their senior year. All subjects completed the questionnaires in their classrooms, administered by their teachers or administrative assistants. No identifying data were included on the questionnaires. Upon completion of data collection, all questionnaires were placed by the students in a manila envelope, which was then collected by school staff and mailed to the student researcher. Upon return of completed questionnaires, codes were assigned to identify specific counties/high schools. Individual participants were not identifiable.

Instrumentation

Participants were administered an anonymous survey, developed by the student investigator (see Appendix C). Because no existing survey captured the information desired for the study, a questionnaire was developed to address this need. The ecological systems theory literature and previous studies conducted on higher education participation (Spohn et al., 1992) provided ample information regarding the types of questions that would yield the information sought in the study. In addition, the school belonging scale from the National Longitudinal Study of Adolescent Health (Add Health; Udry, 1998) was included to assess this aspect of the students' school experience. The final survey consisted of 59 questions asking participants about demographic information, whether or not they plan to attend college (4-year, 2-year, community

college, military, technical school, etc.), possible influences on that decision (peers, family, finances, academic achievement and planning as represented by GPA and college preparation courses), and attitudes about school. The first page of the questionnaire was a cover letter describing the nature and purpose of the study, procedures, voluntary nature of participation, risks and benefits of the study, confidentiality, and parental consent for minors.

Three separate measures comprised the final questions on the survey. These measures required responses from students using a 5-point Likert-type scale (ranging from strongly agree to strongly disagree). The first measure consisted of eight questions regarding feelings about school. Six of these items were adapted from the Add Health study (Udry, 1998) and two items were added by the researcher to assess comfort in school settings. A principal components analysis with Varimax rotation was conducted to assess factor loadings of these eight items. Five of the items loaded in the School Belonging component (eigenvalue = 2.87, 35.91% variance, $\alpha = .78$), while the remaining three items loaded in the School Comfort component (eigenvalue = 2.13, 26.63% variance, $\alpha = .73$; see Table 2).

A second measure consisted of 10 questions asking about reasons for attending college. Students were instructed to complete this measure only if they planned to attend a community college, 4-year college or university, or a military academy within the first year or two after high school. A principal components analysis with Varimax rotation was conducted to assess factor loadings of these ten items, as well. Four items loaded in the self-improvement component (eigenvalue = 2.38, 23.82% variance, $\alpha = .73$), three items loaded in the Money/Status component (eigenvalue = 2.25, 22.46% variance,

Table 2

Two-Factor Model Measure of School Scale

School grouping	Factor Loadings	
	1	2
1. School Belonging eigenvalue = 2.87 35.91% variance (rotated) $\alpha = .78$		
C1. Feel close to people at school	0.75	^a
C2. Feel like part of this school	0.73	^a
C3. Students at school are prejudiced ^b	0.64	-0.45
C4. Happy to be at this school	0.77	^a
C5. Teachers treat students fairly	0.65	^a
2. School Comfort eigenvalue = 2.13 26.63% variance (rotated) $\alpha = .73$		
C6. Feel safe in school	0.42	0.64
C7. Feel comfortable in school setting	0.41	0.72
C8. Enjoy learning	^a	0.77

Note. Factors accounted for 63% of the variance.

^aComponent loadings between -0.40 and 0.40

^bItem reverse scored

$\alpha = .67$), and three items loaded in the External/Escape component (eigenvalue = 1.69, 16.85% variance, $\alpha = .58$; see Table 3).

A third measure comprised 11 questions asking about reasons for not attending college. Students were instructed to complete this measure only if they did not plan to attend a community college, 4-year college or university, or a military academy within the first year or two after high school. This included students who were planning to attend a vocational school or enlist in the military. One item was excluded from the measure due to redundancy ("I want to get away from home"). A principal components analysis with Varimax rotation yielded three major components. Six questions loaded on the Dismissive component (eigenvalue = 3.83, 38.25% variance, $\alpha = .89$), two items

Table 3

Three-Factor Model of Reasons to Attend College

Reasons grouping	Factor Loadings		
	1	2	3
1. Self-improvement			
eigenvalue = 2.38 23.82% variance (rotated) $\alpha = .73$			
A2. Gain a general education and appreciation of ideas	0.72	a	a
A3. Nothing better to do	0.72	a	0.42
A4. To become a more cultured and educated person	0.78	a	a
A6. To learn more about thing that interest me	0.69	0.42	a
2. Money/Status			
eigenvalue = 2.25 22.46% variance (rotated) $\alpha = .67$			
A1. To get a better job	a	0.78	a
A5. To make more money	a	0.79	a
A7. To prepare for graduate or professional school	0.43	0.59	a
3. External/Escape			
eigenvalue = 1.69 16.85% variance (rotated) $\alpha = .58$			
A8. Parents want me to	a	0.53	0.57
A9. Can not find a job	a	a	0.76
A10. Want to get away from home	a	a	0.75

Note. Factors accounted for 63% of the variance.

^aComponent loadings between -.040 and 0.40

loaded on the Barriers component (eigenvalue = 1.87, 18.69% variance, $\alpha = .65$), and two items loaded on the Localism component (eigenvalue = 1.33, 13.26% variance, $\alpha = .47$; see Table 4). Scales comprised of fewer items yielded lower reliability estimates.

Table 4

Three-Factor Model of Reasons Not to Attend College

Reasons grouping	Factor Loadings		
	1	2	3
1. Dismissive of college			
eigenvalue = 3.83 38.25% variance (rotated) $\alpha = .89$			
B1. Don't need it to get a good job	0.79	a	a
B2. Have enough education	0.82	a	a
B3. Have enough culture	0.82	a	a
B4. Will make enough money without college	0.87	a	a
B5. Colleges have nothing that interest me	0.76	a	a
B11. Was not accepted at a college	0.64	0.47	a
2. Barriers to college			
eigenvalue = 1.87 18.69% variance (rotated) $\alpha = .65$			
B9. Can't afford it	a	0.78	a
B10. Not smart enough	a	0.78	a
3. Localism			
eigenvalue = 1.33 13.26% variance (rotated) $\alpha = .47$			
B6. Parents don't want me to go	a	a	0.56
B7. Want to live at home	a	a	0.89

Note. Factors accounted for 67% of the variance.

^aComponent loadings between -.040 and 0.40

CHAPTER IV

RESULTS

Univariate Analyses

Three groups of hypotheses were tested using chi-square analyses, analysis of variance (ANOVA), and logistic regression. First, sex differences were examined among students planning to go college and students not planning to go to college. Second, correlates of individual characteristics and the immediate environment were considered with respect to the college decision. Third, indirect influences (many of which reflect Appalachian culture) in the decision to attend college were examined. In addition, information about students' reasons for attending or not attending college, as well as problems encountered in the college attendance decision, were examined descriptively.

Sex

In most cases, the hypothesized sex differences were refuted. Contrary to expectations, there were no significant differences between males and females in their intention to go to college, $\chi^2(1, N = 235) = 3.512$, n.s., although more females responded that they planned to attend college in comparison to males (see Table 5).

Direct Influences

Hypotheses that direct influences of individual characteristics and the immediate environment impact the college decision were tested. Factors associated with students'

Table 5

Percentage of Students Who Plan to Go to College by Sex

Sex	Going to college			
	Yes		No	
	<i>n</i>	%	<i>n</i>	%
Male	69	63.3	40	36.7
Female	94	74.6	32	25.4

parents were examined first. No significant differences were found between males and females in perceived parental support for college (see Table 6). The influences of other family variables on college plans were investigated using chi-square analyses. Students were asked to compare their family's income with the income of other families in the area. Their responses yielded no significant association with college attendance plans because the majority of all students responded "same as others," $\chi^2(2, N = 227) = 4.682$, n.s., regardless of college plans (Table 7). Additionally, no significant relationships were found between siblings' college attendance and students' plans to attend college for males, $\chi^2(1, N = 105) = .021$, n.s., or females, $\chi^2(1, N = 126) = 1.654$, n.s. (Table 7).

In examining the influence of peers upon a student's college decision, the relationship between a primary friend's plans to attend college and the student's plans to attend college was tested separately for males and females using chi-square analyses. A strong relationship emerged for males, $\chi^2(1, N = 72) = 12.035$, $p = .001$, but not females, $\chi^2(1, N = 108) = .360$, n.s. (see Table 7). Males who were planning to go to college were more likely to socialize with others going to college. Conversely, males not planning to go to college were more likely to associate with others not planning to go to college.

Table 6

Students' Perceived Parental Support in the College Decision

Perceived support		Parents want me to go to college		Parents don't want me to go to college	
		<i>n</i>	%	<i>n</i>	%
Males	Agree	27	38.0	4	12.1
	Neutral	26	36.6	8	24.2
	Disagree	18	25.4	21	63.6
Females	Agree	39	42.4	4	14.3
	Neutral	24	26.1	4	14.3
	Disagree	29	31.5	20	71.4

The majority of females reported that their friends were planning to go to college, regardless of their own plans.

A 2 x 2 analysis of variance (ANOVA; sex and college aspirations as independent variables and school belonging as the dependent variable) was conducted to evaluate the relationship between sex and college plans, and school belonging. A main effect for sex indicated that males reported stronger school belonging than females, $F(1, 222) = 6.535$, $p < .05$, but school belonging was not associated with plans to attend college, $F(1, 222) = 1.377$, n.s. (Table 8). No interaction between sex and college plans was found, $F(1, 222) = .021$, n.s. Another 2 x 2 ANOVA was conducted to assess the effects of sex and college plans on school comfort. Comfort in the school setting was strongly related to plans to attend college, $F(1, 222) = .22.432$, $p < .001$, regardless of sex, $F(1, 222) = .051$, n.s. No interaction effect was found, $F(1, 222) = .098$, n.s. (see Table 8). Finally, a 2 x 2 ANOVA revealed significant differences between males and females in mean GPA, with females demonstrating higher averages, $F(1, 205) = 5.439$, $p < .05$. Also, students

Table 7

Direct Influences

Influences		Going to college				
		Yes		No		
		<i>n</i>	%	<i>n</i>	%	
Family Income	Less than others	34	21.3	18	26.9	
	Same as others	93	58.1	43	64.2	
	More than others	33	20.6	6	9.0	
Siblings	Attend college	54	33.5	20	28.6	
	Not attend college	107	66.5	50	71.4	
Primary friend planning to attend college	Males***	Yes	55	96.5	10	66.7
		No	2	3.5	5	33.3
	Females	Yes	78	90.7	19	86.4
		No	8	9.3	3	13.6
Educational Goals***	HS diploma/GED	0	0.0	26	38.8	
	Vocational/job training	1	0.6	20	29.9	
	2-yr degree	22	13.6	8	11.9	
	4-yr degree	65	40.1	7	10.4	
	Graduate degree	74	45.7	6	9.0	
High School Curriculum***	College Prep	97	60.6	11	15.9	
	General	57	35.6	40	58.0	
	Vocational	4	2.5	17	24.6	
	Other	2	1.3	1	1.4	
Prepared for college***	Yes	96	59.6	22	31.0	
	No	10	6.2	20	28.2	
	Unsure	55	34.2	29	40.8	
Perceived Intelligence***	Below average	2	1.3	5	7.1	
	Average	99	61.9	54	77.1	
	Above average	59	36.9	11	15.7	

*** $p < .001$

planning to attend college had higher GPAs, $F(1, 205) = 36.104, p < .001$, regardless of sex (Table 8). No interaction effect was found, $F(1, 205) = .033, n.s.$

As expected, individual academic variables were strongly related to the decision to attend college. Chi-square analyses revealed strong relationships in the predicted direction between college plans and ultimate educational goals, $\chi^2(4, N = 229) = 138.707, p < .001$, college plans and high school curriculum, $\chi^2(3, N = 229) = 51.871, p < .001$, college plans and perceptions of preparedness, $\chi^2(2, N = 232) = 26.926, p < .001$, and college plans and perceived intelligence, $\chi^2(2, N = 230) = 14.427, p = .001$ (Table 7). Thus, it appears that most students planning to attend college held the perception that they had taken the necessary steps to prepare for higher education.

Chi-square analyses were conducted to determine the nature of the relationship between students' educational goals (direct influence) and parents' education (indirect

Table 8

Continuous School Variables

School Influences			Going to college					
			Yes			No		
			<i>n</i>	mean	<i>sd</i>	<i>n</i>	mean	<i>sd</i>
GPA***		Males	63	3.32	0.51	31	2.86	0.62
		Females*	87	3.51	0.41	28	3.03	0.62
School Bonding		Males*	67	3.60	0.75	34	3.44	0.81
		Females	94	3.28	0.84	31	3.16	0.73
School Comfort***		Males	67	3.97	0.61	34	3.43	1.06
		Females	94	3.91	0.64	31	3.44	0.76

* $p < .05$

*** $p < .001$

Influence; see Table 9). There was a significant relationship between students' educational goals and mothers' attained educational level, $\chi^2(4, N = 227) = 12.739$, $p < .05$, and an even stronger relationship between students' educational goals and fathers' attained educational level, $\chi^2(4, N = 215) = 13.839$, $p < .01$. As predicted, students who set goals to attend college were more likely to have parents who attended college.

Indirect Influences

Indirect influences associated with family were examined. Some differences emerged between males and females in the association between parents' education and students' plans to attend college or not attend college. Chi-square analyses revealed a

Table 9

Students' Educational Goals and Parents' Attained Education

Parents' education and student goals	Students' Educational Goals					
	High school		Tech/vocational		College	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Mother's Educational Level*						
High school	22	9.7	18	7.9	117	51.5
Tech/vocational	0	0.0	1	0.4	15	6.6
College	1	0.4	2	0.9	51	22.5
Father's Educational Level**						
High school	24	11.2	18	8.4	118	54.9
Tech/vocational	0	0.0	1	0.5	11	5.1
College	0	0.0	1	0.5	42	19.5

Note. Percentages listed are of the total sample used for analysis.

* $p < .05$

** $p < .01$

strong relationship between mothers' college attendance and male students' plans to attend college, $\chi^2(1, N = 51) = 6.297, p < .05$. An even stronger relationship emerged between fathers' college attendance and male students' plans to attend college, $\chi^2(1, N = 48) = 10.259, p = .001$. When both parents' college attendance was considered, a strong relationship emerged for both males and females, $\chi^2(1, N = 45) = 5.559, p < .05$ for males and $\chi^2(1, N = 58) = 3.922, p < .05$ for females (see Table 10).

A strong relationship was also found to exist between students' fathers' occupations and the decision to attend college, $\chi^2(2, N = 174) = 9.796, p < .01$ (Table 10). A greater proportion of students planning to go to college reported that their fathers were employed in professional occupations, while those not planning to go to college were more likely to report that their fathers were unemployed, unskilled, or semiskilled.

The family's social class, represented by the Hollingshead Index of Social Position (ISP; Hollingshead & Redlich, 1958), was associated with male students' plans to attend college, $\chi^2(4, N = 81) = 11.398, p < .05$, but not females, $\chi^2(4, N = 88) = 7.476, n.s.$ (Table 11). Lower SES was associated with males not attending college.

It was hypothesized that SES may affect girls more than boys when combined with siblings' college attendance, because family resources are reduced. A logistic regression analysis was conducted to examine the relationships between family ISP, siblings' college attendance, and college plans for males and for females. There were no significant findings from this analysis, females: Omnibus Tests of Model $\chi^2(2, N = 114) = 3.803, n.s.$, Cox & Snell $R^2 = .033$, 63.2% correct classification; males: Omnibus Tests

Table 10

Indirect Parent Influences

Parent Influences				Going to college			
				Yes		No	
				<i>n</i>	%	<i>n</i>	%
Parents' education	Males	Mother attended college*	Yes	22	62.9	4	25.0
			No	13	37.1	12	75.0
		Father attended college***	Yes	23	69.7	3	20.0
			No	10	30.3	12	80.0
		Both parents attended college*	Yes	16	51.6	2	14.3
			No	15	48.4	12	85.7
	Females	Mother attended college	Yes	26	49.1	4	26.7
			No	27	50.9	11	73.3
		Father attended college	Yes	16	34.0	1	10.0
			No	31	66.0	9	90.0
		Both parents attended college*	Yes	13	27.0	0	0.0
			No	34	72.3	11	100.0
Parents' occupation	Mother	Professional	54	38.6	13	24.5	
		Clerical, sales, tech., skilled	31	22.1	10	18.9	
		Semiskilled, unskilled, unemployed	55	39.3	30	56.6	
	Father**	Professional	39	31.0	5	10.4	
		Clerical, sales, tech., skilled	37	29.4	13	27.1	
		Semiskilled, unskilled, unemployed	50	39.7	30	62.5	

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 11

Indirect Influences: Family Index of Social Position

Influence			Going to college			
			Yes		No	
			<i>n</i>	%	<i>n</i>	%
Family ISP Class	Males*	Upper	5	9.4	0	0.0
		Upper-middle	7	13.2	0	0.0
		Middle	18	34.0	6	21.4
		Lower-middle	18	34.0	17	60.7
		Lower	5	9.4	5	17.9
	Females	Upper	4	6.1	0	0.0
		Upper-middle	9	13.6	0	0.0
		Middle	20	30.3	6	27.3
		Lower-middle	24	36.4	9	40.9
		Lower	9	13.6	7	31.8

* $p < .05$

of Model $\chi^2 (2, N = 98) = 2.729$, n.s., Cox & Snell $R^2 = .027$, 49% correct classification, indicating that ISP and sibling college attendance together did not predict college attendance for either males or females. Another logistic regression analysis was conducted to determine if family ISP was a stronger predictor of college plans than GPA. The analysis revealed that GPA was a much stronger predictor, Omnibus Tests of Model $\chi^2 (2, N = 192) = 27.396$, $p < .001$, Cox & Snell $R^2 = .133$, 73.4% correct classification; GPA variable: $B = 1.524$, Wald = 20.248, $p < .001$.

More indirect influences that impact students can be found in the culture one is reared in. Appalachian culture is often described by localism, familism, and historicism. These concepts were examined by asking students to respond to questions representative of their meaning. There were no significant differences in expressions of localism

detected between males and females (Table 12). The two groups responded in similar ways to questions regarding wishes, $\chi^2 (2, N = 242) = 3.151$, n.s., and plans, $\chi^2 (2, N = 242) = 1.575$, n.s., to stay in the vicinity of their home towns, and these responses had no significant relationship with college plans for either sex: males, $\chi^2 (2, N = 109) = 4.115$, n.s.; females, $\chi^2 (2, N = 126) = 1.749$, n.s. Likewise, open-ended qualitative responses indicated that both a male and a female presented marriage and desire to have a family as a barrier to a college education (listed in "other" under problems encountered in the college decision).

Significant relationships were found in the familism category, as extended family members' college attendance was associated with students' plans to attend college (see Table 12). Because the majority of students' grandparents had not attended college, no relationship was found between this variable and the college decision, $\chi^2 (1, N = 217) = 1.926$, n.s. Aunts' and uncles' college attendance were strongly associated with students' college plans: aunts, $\chi^2 (1, N = 217) = 21.297$, $p < .001$; uncles, $\chi^2 (1, N = 218) = 14.815$, $p < .001$. Cousins' attendance was significant to a lesser degree, $\chi^2 (1, N = 219) = 9.927$, $p < .01$. Any extended family attending college was also significantly associated, $\chi^2 (1, N = 219) = 5.722$, $p < .05$. Thus, students planning to attend college were more likely to report that extended family members had attended college.

Because an overwhelming majority of students and their parents were from Appalachia, no comparisons related to historicism were possible (Table 12).

Table 12

Indirect Influences: Appalachian Culture

Appalachian Values				Going to college			
				Yes		No	
				<i>n</i>	%	<i>n</i>	%
Localism	Males	Want to live here for next 30 yrs	Yes	15	21.7	8	20.0
			No	20	29.0	19	47.5
			Unsure	34	49.3	13	32.5
		Will live here for next 30 yrs	Yes	12	17.4	6	15.0
			No	24	34.8	19	47.5
			Unsure	33	47.8	15	37.5
	Females	Want to live here for next 30 yrs	Yes	20	21.3	10	31.3
			No	26	27.7	6	18.8
			Unsure	48	51.1	16	50.0
		Will live here for next 30 yrs	Yes	19	20.2	8	25.0
			No	31	33.0	10	31.3
			Unsure	44	46.8	14	43.8
Extended family education (Familism)	Grandparents attended	Yes	26	16.9	6	9.5	
		No	128	83.1	57	90.5	
	Aunts attended***	Yes	82	53.2	12	19.0	
		No	72	46.8	51	81.0	
	Uncles attended***	Yes	73	47.1	12	19.0	
		No	82	52.9	51	81.0	
	Cousins attended**	Yes	118	75.6	34	54.0	
		No	38	24.4	29	46.0	
	Any extended family attended*	Yes	135	86.5	46	73.0	
		No	21	13.5	17	27.0	

(table continues)

Appalachian Values			Going to college			
			Yes		No	
			<i>n</i>	%	<i>n</i>	%
Appalachian origins (Historicism)	Student from Appalachia	Yes	148	91.9	61	89.7
		No	13	8.1	7	10.3
	Mother from Appalachia	Yes	137	86.7	58	89.2
		No	21	13.3	7	10.8
	Father from Appalachia	Yes	139	88.5	55	84.6
		No	18	11.5	10	15.4
	Both parents from Appalachia	Yes	127	81.4	50	79.4
		No	29	18.6	13	20.6

* $p < .05$

** $p < .01$

*** $p < .001$

Reasons for Attending and Not Attending College

Two 2 X 3 analyses of variance with one between subjects factor (sex) and one within subjects factor (reasons for attending or not attending college) were conducted to explore relationships between sex and responses on each measure of reasons for attending and not attending college (see Table 13). The "reasons for going to college" measure consisted of three components: the self-improvement scale, the money/status scale, and the external/escape scale. No main effect for sex, $F(1, 160) = .784$, n.s., and no interaction between sex and the three scales were detected, $F(2, 160) = 2.061$, n.s. However, there were significant differences between the overall means of the three scales of this measure, $F(2, 160) = 266.305$, $p < .001$, with the mean on the "money/status" scale highest and the mean on the "external/escape" scale lowest (see Table 13).

The "reasons for not going to college" measure also consisted of three

Table 13

Reasons for Going and Not Going to College

	Males			Females		
	<i>n</i>	mean	<i>sd</i>	<i>n</i>	mean	<i>sd</i>
Reasons to go to college						
1. Self-improvement	71	3.79	0.80	92	3.88	0.61
2. Money/Status	71	4.24	0.80	92	4.46	0.54
3. External/Escape	71	2.75	0.90	92	2.68	0.87
Reasons not to go to college						
1. Dismissive	34	3.39	0.87	28	2.99	0.91
2. Barriers	34	2.81	1.05	28	3.13	1.16
3. Localism	34	2.34	1.11	28	2.21	0.82

components: the dismissive scale, the barriers scale, and the localism scale. An interaction effect between sex and the three scales was marginally significant, $F(2, 59) = 2.986, p = .05$, and may be interpreted cautiously. Males scored higher on the “dismissive” and “localism” scales when compared to females, and females scored higher on the “barriers” scale. Thus, males were more likely to dismiss college as an option or endorse wishes to stay close to home if they were not planning to attend college. Females, on the other hand, were more likely to cite barriers to college attendance if they were not planning to attend college. Again, there were significant differences in the overall means of the three scales in the measure, $F(2, 59) = 21.058, p < .001$. Means on the “dismissive” scale were highest and means on the “localism” scale were lowest (see Table 13).

Problems Encountered in the College Decision Process

Problems associated with the college decision were also examined. These problems resulted from direct and indirect environments; some were associated with the

students' parents, some were individual characteristics, and some were regional barriers associated with lack of information and limited access to resources. A complete list of items can be found in Table 14. Students listed "lack of financial resources" as the top problem encountered in the college decision process. Second, they listed "lack of information regarding college." This item was found to have a significant relationship with the college decision, $\chi^2 (1, N = 235) = 7.781, p < .01$. It was hypothesized that more students whose parents did not attend college would endorse this item compared to students who had at least one parent who attended college. This was not found to be the case. In fact, the majority of students (55% of the total sample) reported that neither of their parents attended college and did not rank "lack of information regarding college" as a top three problem, $\chi^2 (1, N = 220) = 1.450, n.s.$ "Lack of information regarding financial aid" was third most reported. One other item, "don't like school," was found to have a significant relationship with the college decision, $\chi^2 (1, N = 235) = 6.223, p < .05$. Students who were not going to college were more likely to endorse this item. Items at the lower end of the list were not analyzed due to low frequency of endorsement.

Multivariate Analysis

Separate stepwise logistic regression analyses using Forward: Likelihood Ratio procedures were performed to determine which combination of variables were most predictive of college plans for attendance for males and females (as separate groups). Based on univariate analyses, seven variables were entered for each sex: father's occupational level, perceived intelligence, preparedness for college, high school curriculum, either parent's college attendance, extended family college attendance, and

Table 14

Most Frequently Encountered Problems Regarding Attending College

Problems encountered		Going to college			
		Yes		No	
		<i>n</i>	%	<i>n</i>	%
Encountered any problems re:college	Yes	91	56.2	33	46.5
	No	71	43.8	38	53.5
Can't afford it/lack of finances	Yes	48	29.4	19	26.4
	No	115	70.6	53	73.6
Lack of information re: college**	Yes	45	27.6	8	11.1
	No	118	72.4	64	88.9
Lack of financial aid info	Yes	38	23.3	11	15.3
	No	125	76.7	61	84.7
Don't like school*	Yes	18	11.0	17	23.6
	No	145	89.0	55	76.4
Want immediate income	Yes	18	11.0	14	19.4
	No	145	89.0	58	80.6
Not smart enough	Yes	16	9.8	9	12.5
	No	147	90.2	63	87.5
Other problems	Yes	21	12.9	4	5.6
	No	142	87.1	68	94.4
Live too far from a college	Yes	12	7.4	7	9.7
	No	151	92.6	65	90.3
Poor grades in school	Yes	10	6.1	9	12.5
	No	153	93.9	63	87.5
No friends planning to go to college	Yes	7	4.3	3	4.2
	No	156	95.7	69	95.8
Lack of parent support	Yes	8	4.9	2	2.8
	No	155	95.1	70	97.2
Won't fit in at college*	Yes	9	5.5	0	0.0
	No	154	94.5	72	100.0

Note. The frequencies listed for specific problems apply only to the students who replied that they had encountered some problems during the college process. Problems are listed in order of frequency of endorsement.

* $p < .05$

** $p < .01$

primary friend's plans to attend college. For males, three variables accounted for 30% of the variance, Cox Snell $R^2 = .303$, resulting in 89.1% correct classification. Predictor variables were entered in three steps. In the first step, male students' perceived intelligence compared to others was entered, Omnibus Tests of Model $\chi^2 (2, N = 46) = 5.194$, n.s., Cox & Snell $R^2 = .107$, 91.3% correct classification, $B = 6.444$, Wald = .575, n.s. In the second step, primary friend's plans to attend college was entered, Omnibus Tests of Model $\chi^2 (1, N = 46) = 4.016$, $p < .05$, Cox & Snell $R^2 = .181$, 91.3% correct classification, $B = 4.755$, Wald = .054, n.s. In the third step, either parent attending college was entered, Omnibus Tests of Model $\chi^2 (1, N = 46) = 7.404$, $p < .01$, Cox & Snell $R^2 = .303$, 93.5% correct classification, $B = 9.074$, Wald = .027, n.s.

A slightly different pattern emerged in significant predictor variables for females. Two variables accounted for 31% of the variance, Cox & Snell $R^2 = .314$: high school curriculum and perceived intelligence compared to others. High school curriculum was entered in the first step, Omnibus Tests of Model $\chi^2 (2, N = 68) = 19.649$, $p < .001$, Cox & Snell $R^2 = .251$, 70.6% correct classification, $B = 10.897$, Wald = .058, n.s. In the second step, perceived intelligence compared to others was entered, Omnibus Tests of Model $\chi^2 (2, N = 68) = 5.982$, $p = .05$, Cox & Snell $R^2 = .314$, 77.9% correct classification, $B = 11.836$, Wald = .016, n.s.

CHAPTER V

DISCUSSION

Overall, approximately 69% of the students surveyed reported that they planned to attend college. According to the AAS study, it is likely that only about one third of these students will actually attend college within the first two years after high school. Reports from the Office of Planning, Information Management, and Policy Analysis of the West Virginia Higher Education Policy Commission (WVHEPC, 2002) estimate a 56% enrollment rate for West Virginia students in higher education institutions, including proprietary schools (educational institutions that are for-profit businesses providing practical training in specific fields, e.g., business administration, mechanics, medical records technology), in the fall after graduation. So, it is likely that a closer approximation to actual college enrollment lies somewhere between 30 and 50 %.

This study sought to examine the factors that correlate with these students' decisions to attend or not to attend college, using Bronfenbrenner's (1986) ecological model as a theoretical basis. Differences between males and females, factors associated with direct influences and factors associated with indirect influences (including Appalachian culture) were studied. Additional subjects of interest, such as reasons for attending or not attending college and problems encountered in the college decision process, were examined in hopes of better understanding these issues. The only other investigation of college aspirations of Appalachian students, the AAS study, provided a frame of reference for results comparisons with past literature. Results obtained in the current study were similar in some aspects to those discovered in the AAS study.

However, there were many analyses unique to this study that were not previously explored.

Results

Sex Differences

In accordance with Klein (1995), Bronfenbrenner's ecological model was useful for conceptualizing possible influences on the development of Appalachian youth. However, the influences of the multiple environmental factors appeared to be more salient for males than for females in this study. In many cases, the hypotheses presented regarding sex differences were refuted. There were no significant differences between males and females in plans to attend college. Statistical significance aside, a higher percentage of females (58%) stated that they planned to go to college versus males (42%). These percentages are in accord with much of the literature regarding national trends; indeed, more females attend and graduate from college compared to males (Pollack, 1999; Spohn et al., 1992). Although the majority of both males and females reported that they intended to go to college, females appeared to be less influenced by many of the predictor variables tested. In contrast, males demonstrated strong relationships between many predictor variables and their plans to attend college. Such comparisons between males and females were absent from the AAS study.

These sex differences in patterns of prediction of college attendance may be a reflection of the job market in Appalachia. Because there are a number of labor-intensive employment opportunities with coal, timber, and manufacturing industries, males may see employment after high school as a viable option; one which could yield an adequate

income. However, these opportunities are often not available to females, who may envision their options as getting married and having a family, working at a minimum wage job, or going to college. The dichotomy of professional careers versus blue collar or labor careers may create distinct subcultures for males, resulting in greater influence in their college plans by factors such as peers and parents. Thus, males, if they were planning to go to college, were more likely to have friends who were going to college and family factors such as father's education and family ISP were also more salient for males than females. Social influences may be at play, where large subcultural differences exist between males who are groomed for higher education and males who are expected to work labor-intensive jobs in the community.

Females, on the other hand may not be influenced by these variables because their options are more limited; any job paying higher than minimum wage requires a 4-year degree. For these young women, college is usually their best option, in spite of external pressures. Further, even young women who plan to go on to professional careers will likely also plan to be wives and mothers. Thus, there may not be such a large subcultural gap between young women with college aspirations and those who plan to become homemakers.

While such factors may be particular to Appalachia, they are not unique. Pollack (1999) discussed the difficulties faced by boys in society and academics. The climate in which boys are raised is often hostile toward academics, forcing boys to choose sides. Many boys feel less confident and capable in school compared to girls, and they more easily dismiss academics as important. Furthermore, there are many subgroups of boys in which academic achievement is chastised. Investment in these particular subgroups likely

impacts attitudes toward school and educational aspirations. Boys' membership in such subgroups may be part of a larger social milieu, which includes both family and peer influence away from academics.

Multivariate analyses revealed some differences in the importance of predictor variables for males compared to females. For males, perceived intelligence, primary friend's plans to attend college, and either parent attending college were the strongest variables predicting college attendance. For females, high school curriculum and perceived intelligence compared to others were the strongest predictor variables. Again, these findings may be a reflection of the differences in options for males versus females. Males may be more influenced by societal forces such as friends' plans and parents' education because the alternative career paths are more separate and distinct (i.e., blue collar vs. white collar) for males.

Direct Influences

The direct influences described by the ecological model (Bronfenbrenner, 1986) were supported by the results obtained in this study. For all students, influences from the microsystem at both the individual level and the level of the immediate environment were important. Three sources of direct influence on the college decision were examined: family, peers, and school. Perceived parental support, family income (compared to others), and siblings' college attendance comprised the family factors. Peers' plans for college attendance were also examined. School sources of direct influences included individual academic variables (educational goals, high school curriculum, perceived

preparation for college, perceived intelligence, and GPA) and school variables (school belonging and school comfort).

Comparable family factors were examined in the AAS study and the current study. Both the AAS study and the current study reported that students did not feel that parental support of higher education was a factor in their decisions to attend college. The AAS study reported that family income was an important predictor of college attendance in that the majority of students who attend college are from higher earning families. The current study found no major differences in students' perceptions of their family income and their intent to attend college. The AAS study also reported that lack of siblings in college was likely to discourage students from attending college. The current study did not find evidence to support this finding.

The AAS study reported that peers were influential in the college decisions of students and the majority of students reported that a close friend planned to go to college. Findings from the present study were mixed. A primary friend's plan to attend college was a significant predictor, but only for males. Males planning to go to college reported that their friends planned to go to college and those not planning to go to college were more likely to associate with others not planning to go to college. Females, on the other hand, reported the majority of their friends planned to go to college regardless of their own college plans. Again, this is likely the result of sex differences in opportunities available to Appalachian young people discussed in the previous section.

The most salient predictors for plans for college attendance were individual academic factors. This finding is in accordance with much of the general educational literature (Perna, 2000). Appalachian students are apparently not different from other

students throughout the nation in this respect. Essentially all measured variables that were reflective of academic preparation and investment were strongly associated with college plans. More advanced educational goals, college preparatory high school curriculum, self-perception of adequate preparation for college, and higher perceived intelligence were all associated with a greater likelihood of planning for college. High school GPA was a significant predictor for all students' plans to attend college, and females reported higher mean GPA than males. These findings were consistent with the AAS study, which reported that the majority of students going to college were enrolled in college preparatory curriculum and had higher GPAs compared to students who were not going to college. However, the AAS study did not examine school comfort or school belonging in relation to college plans. Comfort in the school setting was equally important for males and females in predicting plans to attend college. Contrary to a priori hypotheses, school bonding was found to be higher for males than females and was not associated with plans to attend college.

Indirect Influences

The indirect influences described by the ecological model (Bronfenbrenner, 1986) were partially supported by the results obtained in this study. At the exosystem level, parents' education and occupations were important for both males and females. Social position was important for males, but not females. Inferences at the level of the macrosystem were difficult or impossible to produce, as the majority of the students sampled were from Appalachia. Thus, influences at this global level likely exist, but were not fully supported by the results obtained.

Indirect influences of family factors were important, although they were more salient for males than females. Like results from the AAS study, parents' college attendance and their overall attained level of education were significant predictors for both males and females. However, in the current study, males demonstrated a stronger relationship between individual parents' education and their plans to attend college. In this case, father's education was especially important. Occupation of fathers, not mothers, was important in determining whether or not a student (male or female) planned to go to college. This is not surprising because lack of occupation for mothers does not necessarily mean unskilled or unemployed. Mothers were more likely than fathers to be working in the home, caring for children and running households. Thus, while mothers may not have provided models for professional career paths, mothers whose occupations were at the lower end of the socioeconomic spectrum were not necessarily providing models for unskilled or semiskilled professions.

The AAS study reported that family income, not SES, was associated with college attendance. However, the current study found differences between males and females in the influence of family SES, but not in the manner expected. Males were more influenced by family ISP class, resulting in fewer male students from lower classes planning to go to college. As mentioned previously, males from working and lower class families may view other labor and manufacturing jobs as preferred options, while females may view college as the only escape from low paying service jobs.

Unlike the AAS study, the current study examined indirect influences from Appalachian culture. There were not strong relationships between the variables selected to assess engagement in Appalachian culture and college attendance. It was difficult to

examine hypotheses associated with historicism and familism. The majority of students who completed surveys reported that they were from Appalachia, as were their parents. The uneven distribution rendered comparisons between Appalachian and non-Appalachian students meaningless. There was some indirect evidence for the influence of familism in Appalachia, as college attendance of extended family members was an important factor in predicting students' college aspirations. Again, however, because the majority of students were from Appalachia, it was not possible to compare importance of extended family members' college education in college plans of Appalachian students versus non-Appalachian students. Finally, there was not evidence to support the hypothesis that localism influenced the college decision. Students who planned to go to college were no more likely than those who did not to endorse items related to the desire to remain in Appalachia. A more intensive, qualitative approach to assessing investment in Appalachian culture may be necessary in order to detect any associations between cultural factors and educational aspirations.

Reasons for Going and Problems Encountered

Reasons to attend or not to attend college were examined to gain a better understanding of factors that influence the college decision. Money and status were endorsed the most among reasons to attend college. This finding is consistent with previous literature on the subject, summarized by Gray and Herr (1995) and the AAS study. Self-improvement followed closely behind. On the "reasons not to go to college" measure, dismissive of college and barriers for going to college were most endorsed. Interestingly, the items on both measures least endorsed related to localism—or the desire

to remain in the area in which one is raised. On the “reasons to go” measure, escape was least endorsed and on the “reasons not to go” measure, localism was least endorsed. Thus, the majority of students did not report that their desire to stay or leave the area influenced their decisions. These findings were similar to those reported in the AAS study.

A marginally significant interaction effect between sex and the three scales of the “reasons not to go to college” measure may be cautiously interpreted. Females were more likely to list barriers to attending college on this measure when compared to males. Males, on the other hand, were more likely to dismiss college as important or state that they did not wish to move away from home as their reasons for not attending. This finding is consistent with previously discussed sex differences in opportunities available to males and females in Appalachia. Males may dismiss college as important because, for them, it is not as important in obtaining a decent job. For females, however, college is very important if they wish to obtain employment earning greater than minimum wage. It should be noted that many of the students responded that their mothers were teachers in local schools, if they were employed. Such positions require at least a bachelor’s degree. Likewise, staying in the local area may be a more influential factor for males than females because there are opportunities close to home. Females may be more likely not to attend college because there are real barriers preventing such, like lack of financial means and lower academic or intellectual ability.

Like the results reported in the AAS study, the most frequently cited problems encountered in the college process dealt with lack of money and information. Of the students who stated that they encountered problems in the college process, approximately

54% stated that they could not afford to go to college. Approximately 43% stated that they lacked information about college, and 40% stated that they lacked information regarding financial aid. Students may be reporting lack of information for two reasons: either students are neglecting to seek information from school counselors or other means, or school counselors are not accessing and disseminating information as needed. It is very possible that counselors are overworked and unable to maintain and update information regarding college. However, in today's technologically advanced society, it would seem this problem could be remedied through list-serves or other internet utilities. If the breakdown is occurring at the school level, this is a serious issue that must be addressed.

When students were given the opportunity to make recommendations regarding the college process, many of them replied that they would appreciate more scholarships based on need and funded trips to visit colleges. Some seemed frustrated that this process was only accessible for students who already had financial support. This is important information for school personnel and college recruiters. There are many qualified students from Appalachia who do not reach their academic potential simply due to lack of information or education regarding the college process. In some cases, there is funding and information available, but not accessed. In other cases, the state or college recruiting offices may initiate programs designed to help these students.

Limitations

There were several limitations in this study. First, as the present study evaluated correlates of intent, an investigation of these variables in light of actual enrollment in college within the first two years of high school graduation might have been uniquely

revealing. Future longitudinal or follow-up research could resolve this dilemma. As noted previously, many students who plan to go to college do not actually attend. Further, many students who enter college do not succeed. Examination of factors associated with actual college attendance and college success is probably more significant than appraising correlates of intention.

Second, the impact of Appalachian culture upon the college decision may not have been optimally examined. A method to tap into students' identification with Appalachian culture would be necessary in order to answer questions related to the indirect influences of Appalachia on the college decision. Qualitative approaches that assess students' actual endorsement of Appalachian cultural ideals are necessary in order to examine the full impact of cultural factors.

Third, it is important to note that college is not the best career preparation option for many students. In fact, students who are not at the top of their class, the "academic middle" (Gray & Herr, 1995, p. 3), are likely to profit more from a technical education than a college education. This study was initiated in hopes of better understanding the influences in the college decision process per se, so that students who may be good candidates for college are not lost or neglected. In fact, some students not planning to go to college within the first year or two after high school have plans to return to school after serving in the military. These more mature individuals may be better prepared for college after military service than many recent high school graduates. College recruiters may wish to design a program specifically geared for military veterans, especially because there is guaranteed funding for these students from the federal government.

Finally, problems associated with multicollinearity due to the large number of highly correlated predictor variables limited the usefulness of multivariate analyses. Such would be expected given the relationships among the direct and indirect influences of a person's ecological systems. Environmental influences upon a person's development are known to be inter-related according to Bronfenbrenner (1986). Reliance on univariate statistical analyses allowed for a careful examination of all hypotheses, but experiment-wise error may have occurred due to the multiple analyses applied to the data. Given the exploratory nature of this study, individual analyses were necessary in order to address the many hypotheses proposed.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Results from this study suggest that Appalachian students are not significantly different from other students throughout the United States, in terms of factors associated with educational aspirations. The majority of students report that they plan to attend college, and individual academic factors such as preparation for college are most predictive of college attendance. However, there were some findings worth discussing in the context of Appalachia. Some patterns of results emerged that suggest a difference in opportunities available for males and females. Influences from friends and family played a larger role in the college decision for males than females. Perhaps there are subcultural differences associated with the range of career opportunities available to males without college, whereas females may view college attendance as one of their only options. It is very likely that such differences influence students' perceptions of future possibilities. There may be differences in the goals set by males and females in the region, thus influencing the plans they make for their futures and the barriers perceived in reaching those goals. It is clear that a better measure is needed for assessing the influence of Appalachian culture in the lives of these students. The question of how culture influences the college decision remains somewhat unanswered.

There are many directions possible for future research based on this study. A longitudinal study focused on following students throughout the college decision process could be more revealing. Such a project could begin in the early years of high school and follow students throughout their college career. Focus on influences that occur

throughout this period could yield information regarding pivotal periods of decision-making, including whether or not students follow through on their plans to attend college and obtain the degree desired.

Other research could focus on aspects of Appalachian culture, and how closely students identify with the culture. For instance, how long must a person live in Appalachia in order to identify with the characteristics of the people and the area? A few years, or a lifetime? Are these students aware of their cultural heritage? What does it mean for a person from Appalachia to obtain higher education and is it always a good thing? There are many questions that could be explored. A method of assessing identification with Appalachian culture must first be developed, and then an exploration of students' goals and possibilities could occur. The implication of such research is better understanding of these students, with regard to their culture, so that lasting change can occur in this precious region. Investment in these students is an investment in Appalachia.

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APPENDICES

Appendix A. Permission Letters from Schools

FROM : Gilmer,CO,High.School,....

FAX NO. : 304 462 8578

Msg. 13 0002 06:11PM P1



Gilmer County High School

300 Pine Street, Glenville WV 26351
 (304) 462-7880 Fax (304) 462-8578

John D. Bennett, Principal
 John G. Wolfe, Ass't. Principal

Rosemary Williams, Counselor
 Anita Roberts, Counselor

Institutional Review Board
 Utah State University
 Logan, UT 84322

Dear Board Members:

Erica Chenoweth has my permission to conduct some research with our high school seniors. Our school will participate in her study. I have talked to Erica about this study and previewed the documents. Everything seems ready to go. Should you need additional information please do not hesitate to contact me.

Sincerely,

John D. Bennett, Principal

0001-13-0002 179 LB

304 462 8578

P. 01

MAY-15-02 01:15 PM WIRT COUNTY HIGH SCHOOL

Wirt County High School

Edward T. Jordan, Principal
Amos D. Heiney, Assistant Principal
J.R. Adams, Guidance Counselor

P.O. Box 219
Eatonton, WV 26149
(304) 275-4241

May 15, 2002

IRB,

The Wirt County Board of Education has approved Erica Chenoweth's questionnaire for high school seniors.



Ken Heiney
Principal
Wirt County High School

1997-15-0602 107129

304.275.4241

P. 02

Doddridge County High School
201 Stuart St.
West Union, WV 26456
(304) 873-2521

August 23, 2002

Institutional Review Board
Office of the Vice President for Research
Utah State University
Logan, UT 84322
(435) 797-1521

Dear Board Members:

I have spoken with Erica Chenoweth regarding data collection for her study entitled *Factors that influence the college attendance decisions of Appalachian students*. I have agreed to allow seniors at this high school to participate in the study. The letter to parents informing them of the study will be sent home with students, then the questionnaire will be distributed for completion. Should you have any questions or concerns, please feel free to contact me.

Sincerely,



Edward Cumpston
Principal

FROM : WEBSTER CO HIGH SCHOOL

FAX NO. : 3042235732

DATE: 25 AUG 2002 11:30:00 PM



Webster County High School

Joe Mack, Principal
Jung Yang, Vice Principal

1000 BRIDGE ST
WEBSTER COUNTY, WV 26062
(304) 223-5732 FAX (304) 223-5732

David Bryan, Counselor
Janel Haskett, Secretary
Stella Swafford, Secretary

August 29, 2002

Ms. Erica Chenoweth
Department of Psychology
2810 University Blvd
Logan, WV 26042-2810
FAX (435) 797-1460

Dear Ms. Chenoweth,

I have read your proposed survey and it looks like a very worthwhile project. I am going to allow our seniors to participate if they and their parents so desire. After the survey is complete I would like a copy of the results from Webster County High and the results from the other collective counties in the Appalachian area. The results of the study may be useful data for us as we continue to try and increase the college going rate of our students. You may send the parents' letter and the survey to me and we will proceed as per our earlier phone conversation.

Sincerely yours,

Jim Marsh, Principal

RECEIVED PRINCE As Good As We Can Be!

Calhoun Middle High School
HC 89 Box 118
Mount Zion, WV 26151

August 23, 2002

Institutional Review Board
Office of the Vice President for Research
Utah State University
Logan, UT 84322
(435) 797-1821

Dear Board Members:

I have spoken with Erica Chenoweth regarding data collection for her study entitled Factors that influence the college attendance decisions of Appalachian students. I have agreed to allow seniors at this high school to participate in the study. The letter to parents informing them of the study will be sent home with students, then the questionnaire will be distributed for completion. Should you have any questions or concerns, please feel free to contact me.

Sincerely,

Michael Offutt
Principal

Appendix B. Sample Letter to Parents

Utah State UNIVERSITY

DEPARTMENT OF PSYCHOLOGY
2810 Old Main Hill
Logan, UT 84302-2810
Telephone: (435) 797-1450
FAX: (435) 797-1448

May 13, 2002

Attn: Parents of Seniors
Gibber County High School
300 Pine St.
Glenville, WV 26031

Dear Parents,

I am currently a graduate student at Utah State University in the Professional-Scientific program, earning a Master's and a Doctor of Philosophy degree in psychology, with training in school, counseling, and clinical psychology. Renee Gallher, Ph.D. is supervising my research in rural mental health. For my master's thesis, I am looking at the decision-making processes of Appalachian students in their choices of whether or not to attend college. I am a native of West Virginia, I was born in Wheeling, graduated from Parkersburg High School, and obtained my bachelor's degree in psychology from West Virginia University. I am a first generation college student, and so I am interested in learning more about what compels or discourages Appalachian students to enter college. The study investigates factors related to this decision, taking into account the unique cultural influences in Appalachia. Some factors that influence the decision include family and friends, preparedness for higher education, low socioeconomic status and cost of higher education, and beliefs about oneself and in one's ability to succeed at a college level.

Students who participate in the study will complete a questionnaire asking them about their decision to attend college or not to attend college and about demographic variables and school attitudes that we believe are related to the decision to pursue higher education. All forms are to be completed without student names, so anonymity is guaranteed. The first page of the questionnaire describes informed consent and voluntary participation. It will take students approximately 20 minutes to complete the survey. If your child is under 18 years of age and you have concerns regarding their completion of the survey, you may 1) contact the school and inform staff that you do not wish your child to participate in the study or 2) simply instruct your child to decline in completing the survey.

In sum, this research project aims to gain a better understanding of the educational choices of West Virginia youth. It is my hope that the information we gather through this study will help parents, teachers, administrators, and policy makers in their efforts to promote the education of our youth. Thank you for your time and cooperation and feel free to contact me with any questions through the Department of Psychology at Utah State or by e-mailing me at eric@psych.utah.edu. You may also contact my faculty research advisor, Renee Gallher, Ph.D., at (435) 797-1451 or by e-mail at rgallher@psych.utah.edu.

Sincerely,



Eric S. Chenoweth

Appendix C. Questionnaire

COLLEGE DECISION STUDY

*Thank you for taking your time to help us with this important study.
Please remove this page and keep it for your records.*

About the study: Erica Chenoweth and Professor Renee Galliher in the Department of Psychology at Utah State University are collecting information for a study. Erica Chenoweth grew up in West Virginia and graduated from West Virginia University. She is especially interested in how students like herself make the decision to go to college or not to go to college. You have been asked to fill out this survey because we want to know about the decisions you have made about college. About 300 students in the state of West Virginia have been asked to fill out this survey.

What you can do to help: If you agree to be in this study, you will be asked to complete a survey. The survey asks questions about your thoughts about attending college and plans for the future. It also asks questions about your family background and your feelings about school. We do not want to identify you in any way, so please do not put your name on the form. Since we can not know who you are based on your responses, please be as honest as possible when filling out the survey. It should take about 20 minutes to fill out the survey.

Risks to you: Filling out the survey will not hurt you in any way. Some students may feel uneasy letting researchers know about their personal life, thoughts, and attitudes. Please remember that your name will never be associated with your answers in any way.

Benefits to you: Many students benefit from the chance to re-examine their choices for the future. Filling out the survey also gives them the chance to consider the reasons why they decided to attend or not to attend college.

Any questions: If you have any questions about this project or the survey you completed, you can contact the Principal Investigator, Dr. Renee Galliher, by phone at (435) 797-3391 or by e-mail at rgalliher@cor.usu.edu. You may also contact the Student Researcher, Erica Chenoweth, by phone at (435) 797-1460 or by e-mail at erica.chenoweth@cor.usu.edu.

It's your choice: You are not required to complete the survey. You choose whether or not to fill it out. If you decide to answer the questions on the survey, after you have finished, you can put the survey in the manila envelope at the front of the room. If you choose not to answer, you can put the blank survey in the same envelope at the front of the room and no one will know that you decided not to answer the survey. You may skip over any questions or stop at any time, but you will help us the most by answering every question that you can.

No one will know your answers: ALL of your responses will be completely nameless and unidentifiable. We will NOT ask you for your name, and the answers to these questions will never be associated with you in any way. PLEASE DO NOT PUT YOUR NAME ANYWHERE.

IRB Approval Statement: The Institutional Review Board at Utah State University makes sure people who take part in research are protected. The board has reviewed and approved this research project. The IRB office may be contacted by calling (435) 797-1821.

Your comments: You can write comments on the surveys; in fact, we hope that you will give us lots of opinions and advice!

Permission from parents: Since there are no names on the survey and filling it out will not cause you harm, your parents have been informed of the study through a letter. They have been given the chance to request that you not complete the survey if they object to it in any way.

PLEASE DO NOT WRITE YOUR NAME ON THIS FORM

PART I

1. How old are you? _____ Years and _____ Months
2. Are you: _____ Male
_____ Female
3. Ethnicity _____ Caucasian/White
_____ African American
_____ Native American/ Alaska Native
_____ Hispanic
_____ Asian/Pacific Islander
_____ Other (describe) _____
4. With how many natural parents do you live? _____ Two (both mother and father)
_____ One (either mother or father)
_____ None (other guardian)
5. Your parents are: _____ married
_____ divorced
_____ separated
_____ never married
_____ one or both deceased
_____ other (specify) _____
6. How many brothers and sisters do you have? _____
What are their ages? _____
7. Do you want to live within 100 miles of your present home for the next 30-50 years of your life? __Yes __No __Unsure
8. Do you think you will live 100 miles of your present home for the next 30-50 years of your life? __Yes __No __Unsure
9. How long have you lived in West Virginia? _____ Years and _____ Months
- If you have lived in West Virginia less than 10 years, where did you live before that?
- City _____ State _____
How long did you live there? _____
City _____ State _____
How long did you live there? _____
City _____ State _____
How long did you live there? _____
10. Where did your parents grow up?
Mother _____
Father _____

11. Father's occupation _____
12. Mother's occupation _____
13. What is the highest education level achieved by each parent (or legal guardian)?
- Mother _____ Did not graduate high school or obtain GED
 (Female adult caregiver) _____ Obtained GED, did not graduate high school
 _____ Graduated high school
 _____ Technical/Vocational training
 _____ Obtained (2-year) Associates degree
 _____ Obtained Bachelor's degree from college/university
 _____ Obtained Master's degree
 _____ Obtained Doctorate degree (M.D., Ph.D., etc.)
- Father _____ Did not graduate high school or obtain GED
 (Male adult caregiver) _____ Obtained GED, did not graduate high school
 _____ Graduated high school
 _____ Technical/Vocational training
 _____ Obtained (2-year) Associates degree
 _____ Obtained Bachelor's degree from college/university
 _____ Obtained Master's degree
 _____ Obtained Doctorate degree (M.D., Ph.D., etc.)
14. How many people are living in your family home? _____
15. What is your family's annual income? (list if known) _____
16. Compared to other families in the area, do you feel your family income is less, more, or about the same? _____ Less _____ More _____ About the same
17. Number of brothers and sisters who are attending or have attended college: _____
18. Do you have any extended family members that have attended or are attending college ?
 If Yes, then check the appropriate blanks.
 _____ Grandparents
 _____ Aunts
 _____ Uncles
 _____ Cousins
 _____ Other (specify) _____
19. Are you graduating from high school or obtaining a GED in May or June, 2003?
 _____ Yes _____ No
 If No, do you plan to graduate or obtain your GED? _____ Yes _____ No
 When? _____
20. What is your current grade point average (GPA)? _____

21. Are you planning to continue your education within the first year or two after high school?

_____ Yes _____ No

22. If Yes, then where?

_____ 4-year college or university
 _____ Community college
 _____ Technical/Vocational school
 _____ Military Academy
 _____ Military, Enlisted
 _____ Other (briefly list here) _____

23. If Yes, how will your education be paid for? (mark all that apply)

_____ Scholarships
 _____ Grants
 _____ Student Loans
 _____ Parent Loans
 _____ Parents
 _____ Military
 _____ Work
 _____ Other _____
 _____ Don't Know

24. What are your ultimate educational/professional goals?

_____ High school diploma
 _____ Vocational/Job skills training
 _____ 2-yr degree (Associate's degree)
 _____ 4-yr degree (Bachelor's degree)
 _____ Graduate degree (Master's, Doctorate)
 _____ Other (specify) _____

25. Think of the names of your four closest friends. What are their plans for the future? Are they planning to continue their education after high school?

Friend 1 _____ Male _____ Female

Is he/she planning to continue his/her education?

_____ Yes _____ No _____ DK (Don't Know)

If Yes, then where?

_____ 4-year college or university
 _____ Community college
 _____ Technical/Vocational school
 _____ Military Academy
 _____ Military, Enlisted
 _____ Other (briefly list here) _____

Friend 2 _____ Male _____ Female

Is he/she planning to continue his/her education?

_____ Yes _____ No _____ DK (Don't Know)

If Yes, then where?

_____ 4-year college or university

_____ Community college

_____ Technical/Vocational school

_____ Military Academy

_____ Military, Enlisted

_____ Other (briefly list here) _____

Friend 3 _____ Male _____ Female

Is he/she planning to continue his/her education?

_____ Yes _____ No _____ DK (Don't Know)

If Yes, then where?

_____ 4-year college or university

_____ Community college

_____ Technical/Vocational school

_____ Military Academy

_____ Military, Enlisted

_____ Other (briefly list here) _____

Friend 4 _____ Male _____ Female

Is he/she planning to continue his/her education?

_____ Yes _____ No _____ DK (Don't Know)

If Yes, then where?

_____ 4-year college or university

_____ Community college

_____ Technical/Vocational school

_____ Military Academy

_____ Military, Enlisted

_____ Other (briefly list here) _____

26. Have you encountered any problems or difficulties in deciding whether or not to go to college, or which college to attend? _____ Yes _____ No

If Yes, rank the three major problems or difficulties you have encountered regarding college.

(1=greatest problem; 2-second greatest problem, 3-third greatest problem)

- _____ lack of information regarding college and other educational programs
 _____ want an immediate income
 _____ no friends planning to go to college
 _____ live too far from a college
 _____ lack of parent support
 _____ lack of financial aid information
 _____ won't fit in
 _____ not smart enough
 _____ poor grades in school
 _____ don't like school
 _____ can't afford it/lack of finances
 _____ other (specify: _____)

27. How would you rank your intelligence?

_____ Above average _____ Average _____ Below average

28. Are you educationally prepared for college? _____ Yes _____ No _____ Unsure

29. What high school curriculum have you followed?

- _____ College preparatory
 _____ General
 _____ Vocational
 _____ Other (specify) _____

30. How strongly do you agree or disagree with each of the following statements?

1 Strongly Agree	2 Agree	3 Neither agree or disagree	4 Disagree	5 Strongly disagree
---------------------	------------	-----------------------------------	---------------	---------------------------

a. I feel close to people at this school	1	2	3	4	5
b. I feel like I am part of this school	1	2	3	4	5
c. The students at this school are prejudiced	1	2	3	4	5
d. I am happy to be at this school	1	2	3	4	5
e. The teachers at this school treat students fairly	1	2	3	4	5
f. I feel safe in my school	1	2	3	4	5
g. I feel comfortable in a school setting	1	2	3	4	5
h. I enjoy learning	1	2	3	4	5

Part II

- A. If you are sure you WILL BE attending college next year (you will be going to a community college, a 4-year college or university, or a military academy such as West Point), please complete this section.
(If you are not going to college, skip to section B.)**

Please answer the following items by circling the number that corresponds with your feelings:

1 Strongly Agree	2 Agree	3 Neither agree or disagree	4 Disagree	5 Strongly disagree
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1. I will be able to get a better job if I go to college	1	2	3	4	5
2. I want to go to college in order to gain a general education and appreciation of ideas	1	2	3	4	5
3. There is nothing better to do than go to college	1	2	3	4	5
4. I am going to college to become a more cultured and educated person	1	2	3	4	5
5. I will be able to make more money if I go to college	1	2	3	4	5
6. I am going to college to learn more about things that interest me	1	2	3	4	5
7. I am going to college to prepare myself for graduate or professional school	1	2	3	4	5
8. I am going to college because my parents want me to	1	2	3	4	5
9. I am going to college because I cannot find a job	1	2	3	4	5
10. I am going to college because I want to get away from home	1	2	3	4	5

B. If you have decided NOT to attend college next year, you are planning to obtain vocational or technical training, or you are enlisting in the military, please complete this section.

Please answer the following items by circling the number that corresponds with your feelings:

1 Strongly Agree	2 Agree	3 Neither agree or disagree	4 Disagree	5 Strongly disagree
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1. I don't need to go to college to get a good job	1	2	3	4	5
2. I have enough education	1	2	3	4	5
3. I have enough culture	1	2	3	4	5
4. I will make enough money without going to college	1	2	3	4	5
5. Colleges have nothing that interest me	1	2	3	4	5
6. My parents don't want me to go to college	1	2	3	4	5
7. I want to live at home/in my home town	1	2	3	4	5
8. I want to get away from home	1	2	3	4	5
9. I can't afford to attend college	1	2	3	4	5
10. I am not smart enough to attend college	1	2	3	4	5
11. I was not accepted to a college	1	2	3	4	5

C. For all students:

List any recommendations to schools or colleges for helping people to attend college or educational programs.

THANK YOU FOR YOUR TIME AND EFFORT!