

THE RELATIONSHIP OF CULTURAL AND CLASS VARIABLES  
TO ATTRIBUTIONAL STYLE AND ACADEMIC  
PERFORMANCE AMONG NATIVE  
AMERICAN AND CAUCASIAN  
HIGH SCHOOL STUDENTS

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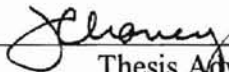
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The Relationship of Cultural and Class Variables to Attributional Style and Academic  
Performance Among Native American High School Students

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## PREFACE

Increased awareness that multicultural issues relate to the processes of education and socialization has resulted in researchers attempting to define and measure those culture-specific variables which may influence such processes. Recent research has indicated that different types of motivating strategies are used by minority and non-minority college students. The present study was designed to examine the various cultural (racial status vs. cultural identification) and class (socioeconomic impoverishment vs. perceived deprivation) variables associated with academic performance and attributional style among Native American high school students, as compared to a Caucasian sample.

An examination of the various cultural and class influences on academic achievement revealed that perceived deprivation was associated with GPA among Native Americans. While these variables were unrelated among Caucasians, GPA was predicted by level of parent education for this group. None of the cultural or class variables were related to attributional style among either Native Americans or Caucasians. As predicted, characteristic negative attributional style was related to increased academic achievement among the Native American sample. These variables were unrelated among Caucasians. Perceived deprivation and parent education were unrelated to academic performance among Native Americans and Caucasians, respectively. For this reason, proposed analyses to examine attributional style as a potential mediating variable of the relationships between cultural and class variables and academic performance were not conducted. Results indicated that a number of differences exist between Native Americans and Caucasians with regard to the manner in which academic success and achievement motivation are predicted.



The Relationship of Cultural and Class Variables to Attributional Style and Academic Performance Among Native American High School Students

Introduction

As a group, minority individuals in the United States have maintained lower levels of income than non-minority individuals throughout history. Furthermore, minority group individuals exhibit lower levels of academic achievement and are underrepresented within higher education settings as compared to non-minority individuals (Locke, 1992). These issues are of particular concern among the Native American population. According to 1990 census data, the median income of Native Americans was \$21,619 (U.S. Bureau of the Census, 1995). This figure reflected the lowest median income reported for any minority group. Moreover, Brod and McQuiston (1983) reported that the median level of education attained among Native Americans was "less than the completion of high school" (p. 4), while the median level of education attained for the entire United States population was at least one year of college. In addition, Coladarci (1982) reported the dropout rate among Native American high school students to be as high as 60 percent of one predominantly Native American student body.

Lack of higher educational attainment leads to further limited opportunities for minority individuals to obtain occupational and financial success. Due to this cycle of poverty, it is unlikely that the number of minority group individuals living below the poverty level will change unless patterns of education first change.

A number of theories have been offered by researchers to account for the lower educational attainment of minority individuals. However, until recently, few researchers have attempted to provide a theoretical account which would integrate the vast amount of literature investigating cultural and class variables related to academic achievement.

Following from a large number of studies investigating the cognitive deficits associated with learned helplessness, Peterson and Barrett (1987) found evidence for the existence of a relationship between academic achievement and attributional style. From this learned helplessness model of motivation (Abramson, Seligman, & Teasdale, 1978), Hernandez (1995) investigated the cultural and class variables associated with academic performance. In addition to providing support for the utility of the learned helplessness model in explaining variables related to academic performance, her results indicated that cultural differences in achievement motivation accounted for decreased academic performance among minority group members.

There are a number of shortcomings in the literature regarding low academic achievement in minority students. First, the use of traditional measures in order to predict academic success among minority group individuals has been questioned by a number of researchers (Astin, 1982; Lay & Wakstein, 1985). Helms (1992) criticized such standardized measures of ability as failing to accurately measure ability among minority group members due to a development based on the concept of intelligence as defined primarily according to Anglo standards. For example, one factor influencing standardized test performance among members of minority groups is the effect of bilingualism, and this issue may be of particular importance among a Native American population, due to the fact that many Native American languages have no standard orthography (Fuchs, 1970).

A second shortcoming of the literature is the failure to distinguish between the effects of cultural and class variables on academic achievement. The failure to distinguish between racial and cultural variables leads to stereotyped expectations. Phinney (1996) points out that although ethnic categories permit researchers to make "descriptive comparisons of societal indexes such as income, health status, mental disorders, and

educational achievement, . . . such comparisons can only serve as a starting point, with the recognition that these descriptions do not explain anything" (p. 924).

It is further important to distinguish between objective and subjective environmental and socioeconomic deprivation. Although researchers may be provided with information regarding socioeconomic status, which is generally lower among minority group members, research indicates that objective indices of socioeconomic status do not adequately account for the impact of such deprivation on the expectancies, or efficacy of such individuals regarding academic achievement (Hernandez, 1995). Hence, it is necessary to investigate the cognitive manifestations or meanings of sociocultural and economic deprivation.

In addition to the shortcomings of the literature regarding academic achievement among a culturally diverse population described above, there are a number of issues that are of particular relevance among the Native American population. First, an underrepresentation of Native American individuals in such studies is of primary concern. There are few studies designed to examine cultural and class variables related to academic achievement specifically among Native American populations. However, beyond this, Native American individuals are often underrepresented in research that is conducted among culturally diverse populations (Phinney, 1992). Hence, there is the possibility that members of Native American populations may possess unique characteristics that interfere with the generalizability of results in such studies.

Although there is a need for research to investigate the effects of cultural and class variables on academic achievement on minority groups as a whole, there have been several discrepancies found in research on Native Americans compared to minority groups in general. Self-efficacy and self-esteem levels have been found to be lower among Native

Americans than other ethnic minority groups, particularly among Native American females (Dukes & Martinez, 1994; Lauver & Jones, 1991). In addition, high levels of cultural identification have been found to be related to increased self-efficacy and academic performance among ethnic minority group members (Parham & Helms, 1985; Phinney, 1992). However, among Native American individuals, increased levels of self-efficacy and academic performance have consistently been shown to be related to higher levels of identification with the Anglo, or majority, culture (Just, 1970; Hernandez, 1995; Oetting & Beauvais, 1991).

A final shortcoming of the literature regarding cultural and class variables related to academic achievement is the failure of researchers to integrate results obtained among different age groups (Quintana, 1994). Although Hernandez (1995) found that the relationship between attributional style and academic performance was different for minority versus non-minority populations, these results were obtained using a college population and generalization of these findings to individuals of various ages is limited.

The present paper attempts to examine similar cultural and class variables related to academic achievement among Native American and Caucasian high school populations. Because Hernandez's (1995) study provided support for the utility of the learned helplessness model of achievement motivation in explaining variables related to academic achievement, a similar methodology is employed for the present paper. Thus, an overview of the attributional reformulation of learned helplessness theory is first provided. Then, an integrational review of the literature on cultural and class influences on academic performance and achievement will be provided. Finally a study is proposed which attempts to investigate the influences of cultural (racial status vs. cultural identification) and class (socioeconomic impoverishment vs. perceived deprivation) variables on

attributional style among Native American and Caucasian high school students. The study will further examine the relationship between cultural and class variables and academic performance in these two groups of high school students.

A number of specific relationships were investigated in the present study. First, the relationship between attributional style and academic performance was examined. Second, the associations between cultural and class variables and attributional style were studied. Third, the relationships between cultural and class variables and academic achievement were also analyzed. Finally, the present study investigated whether the relationships between these variables were mediated by attributional style.

### Literature Review

#### Reformulated Learned Helplessness

Overmier and Seligman (1967) and Seligman and Maier (1967) first observed the development of behavioral and motivational deficits among animals following the occurrence of events beyond their control, a phenomenon which came to be known as "learned helplessness." When these animals were placed in situations in which they were exposed to repeated uncontrollable negative events, they learned that their responses did not influence the outcomes of those situations. When they were later provided with the opportunity to control outcome, the animals did not utilize this control. In essence, following a previous actual loss of control, the animals learned to be "helpless," even in situations in which the capacity for such control was available.

Although the learned helplessness phenomenon was consistently observed among animals, the theoretical construct failed to account for several discrepancies in research among humans. Specifically, the original theory of learned helplessness could not explain why humans were often observed to develop a loss in self-esteem (Klein, Fencil-Morse, &

Seligman, 1976; Klein & Seligman, 1976; Miller & Seligman, 1975; Seligman, 1975). In addition, helplessness deficits (i.e., behavioral and motivational) which developed in humans following exposure to uncontrollable events were inconsistently observed to vary in chronicity. Similarly, deficits were varyingly observed to follow from exposure to both general and pervasive as well as specific situations.

Due to these discrepancies, Abramson, Seligman, and Teasdale (1978) revised the learned helplessness model by incorporating an attributional component. Specifically, the reformulated learned helplessness theory is comprised of three attributional dimensions. The first dimension (internality vs. externality) accounts for an individual's tendency to attribute events to personal characteristics versus other individuals or circumstances. This dimension is able to account for the loss of self-esteem which often occurs among individuals either following a negative event or as a result of the perceptions individuals may have that they have no control over the occurrence of positive events. The second dimension (stable vs. unstable) refers to the perception by the individual that the causes of negative events are enduring. This dimension accounts for the observed variations in chronicity of deficits developed by individuals following exposure to an uncontrollable situation. The third dimension (global vs. specific) refers to the perception of individuals that the cause of a negative event affects a number of outcomes (Abramson et. al., 1978). Such a dimension would account for the observed variations in the generality of deficits developed by humans following exposure to an uncontrollable task.

The reformulated learned helplessness model attributes helpless reactions (i.e., deficits in emotional, behavioral, and cognitive responses) to a pessimistic attributional style. Peterson and Seligman (1984) observed such symptoms as passivity, sadness, anxiety, hostility, and low self-esteem to be associated with the development of

helplessness, a combination of symptoms that occurs in the syndrome of major depression. Due to the similarities between a characteristic pessimistic attributional style and depression, this attributional style has been proposed as a risk factor for depression (Peterson & Seligman, 1984). Indeed, a large amount of empirical support has been provided for the relationship between pessimistic attributional style and depression (Brown & Siegel, 1988; Metalsky, Abramson, Seligman, Semmel, & Peterson, 1982; Peterson & Seligman, 1984; Seligman, Abramson, Semmel, & von Baeyer, 1979).

Recently, researchers have investigated the associations between attributional style and career and academic factors. Research has consistently provided support for a relationship between failure in life situations and the development of helplessness (Brown, 1984; Lin & Peterson, 1990; McFarland & Ross, 1982; Nolen-Hoeksema, Girgus, & Seligman, 1986; Peterson & Stunkard, 1989; Seligman, Nolen-Hoeksema, Thornton, & Thornton, 1990).

From the cognitive mediational perspective of Baron and Kenny (1986), researchers have hypothesized that when individuals repeatedly experience negative life events, they learn that their responses are unrelated to outcome, resulting in the development of a pessimistic attributional style. This pessimistic style then leads to an increase in career or academic failures, in that individuals begin to believe that the occurrence of such negative events is likely, and that they are in some way responsible (Nolen-Hoeksema et. al., 1986; Peterson & Barrett, 1987; Seligman & Schulman, 1986; Weiner, 1979, 1985). According to the learned helplessness paradigm, the individual then begins to react to situations by engaging in little or no effort, despite the actual level of control he or she may have over these situations. In this way, the individual is

perpetuating career or academic failures, which then reinforces the perception of those expectancies associated with a pessimistic attributional style.

Powell (1990) suggested that stereotypical expectations regarding lowered performance among African American individuals in these subject areas may lead to insufficient academic training. Repeated academic failures may then be more likely to occur, leading to the development of a pessimistic attributional style. In fact, support has been provided for the association between attributional style and academic performance. Peterson and Barrett (1987) found that low academic achievement was found to be related to a pessimistic attributional style among college freshmen.

Although learned helplessness theory appears to provide a conceptual framework for understanding poor academic performance, Hernandez's (1995) study found an inverse relationship between pessimistic attributional style and low academic achievement among college minority individuals; a positive relationship was found between these two variables among Caucasian individuals. In other words, minority students ascribing to a characteristic pessimistic attributional style actually obtained higher levels of academic achievement, whereas Caucasian individuals ascribing to such a pessimistic attributional style obtained lower levels of academic achievement.

Hence, although research has consistently provided support for a relationship between attributional style and academic achievement, the results obtained by Hernandez (1995) suggest that "minority and non-minority students utilize different types of motivating strategies in attaining academic success" (p. 50). For this reason, the literature on minority identification will be reviewed in relation to academic achievement, and emphasis will be placed on issues of particular importance among Native American populations.



### Minority Identification

In general, the research investigating the relationship between racial status and academic performance has indicated that there are performance differences among different racial groups. In most of these studies, Caucasian students have been found to exhibit higher levels of academic performance, lower levels of early school dropout, and higher levels of occupational expectancies than minority group individuals (Lay & Wakstein, 1985; Steinberg, et. al., 1992; Sue & Okazaki, 1990). Level of academic performance is of particular concern among Native Americans. As a group, Native Americans have historically exhibited lower levels of academic achievement, higher dropout rates, and lower levels of occupational expectancies than any other minority group ( Kerbo, 1981; Sue & Sue, 1990; U. S. Bureau of the Census, 1995).

Despite the fact that research has indicated a relationship between minority group membership and academic performance, researchers have typically failed to distinguish between race and ethnic identity. Oetting and Beauvais (1991) found that ethnic identity, or “cultural identification” is an important variable due to the fact that such an identification is orthogonal in nature. In other words, an individual may identify with more than one culture. Moreover, when an individual identifies with certain aspects of one culture, he/she is not necessarily precluded from identifying with particular aspects of another culture.

Among a Native American population, Oetting and Beauvais (1991) found wide variation with regard to the level of identification with Anglo and Native American cultures. These authors found that values regarding achievement are related to cultural identification. For example, Native American subjects who provided higher ratings for the importance of job success were more likely to display stronger identification with the

Anglo culture, whereas those who provided higher ratings for the importance of family relations were more likely to display a stronger identification with Native American culture (Oetting & Beauvais, 1991).

Researchers have attempted to define and measure the development of "ethnic identity" in order to examine those factors associated with identity development. Although identity development begins in early childhood, Erikson's (1956; 1963) view of identity development, in which identity formation is the central task of adolescence, has gained much empirical support (Marcia, 1980; Waterman, 1985). Marcia's (1966) study, developed from Erikson's model of identity formation, suggested four identity statuses based on the extent to which individuals explore various identities and exhibit commitment towards one in particular. According to Marcia, the four identity statuses related to self-concept formation include (1) Identity Diffusion; individuals have neither engaged in exploration nor made a commitment to a particular identity, (2) Foreclosed Status; individuals have made a commitment without exploration, usually based on parental values, (3) Moratorium Status; individuals engage in the process of exploration without making a commitment to identity, and (4) Identity Achieved Status; individuals make a firm commitment following a period of exploration.

Research on ethnic identity development evolved from these developmental models of identity formation. However, Kalsner (1992) points out that, "racial identity development is different from other aspects of identity development because sociocultural communications from the environment to the individual typically focus on group related appearance instead of an individual's unique abilities and interests" (p. 6). Kalsner's statement is supported by research suggesting a relationship between the level of self-esteem in minority individuals and their academic setting. The academic setting may vary

from an atmosphere of normalcy to one of marginality, in which individuals sense that they are isolated from the mainstream (Fleming, 1985; Livingston & Stewart, 1987; Loo & Rolison, 1986). Research consistently shows that there are many commonalities regarding identity development among minority group members that do not extend to non-minorities. Streitmatter (1988), for example, found that minority group participants were more foreclosed about their ethnic identity as compared to Caucasian subjects.

The research on ethnic identity suggests a relationship between self-esteem and self-efficacy variables and the level of ethnic identity development in minority individuals (Cross, 1978; Phinney, 1992). Level of ethnic identity does not appear to predict self-esteem and self-efficacy variables among non-minority individuals. However, Phinney (1992) notes that although such studies regarding ethnic identity development among minority group members have yielded similar results, most of these studies focused on a particular ethnic group. Due to methodological differences between studies and various ethnic groups, the concept of ethnic identity as a general phenomenon across cultures is difficult to define. For this reason, Phinney (1992) developed the Multigroup Ethnic Identity Measure (MEIM) for use among all ethnic groups as a means of testing the general theoretical construct of ethnic identity.

Phinney's development of the MEIM was based on the earlier research literature aimed at identity development (Erikson, 1968; Marcia, 1966; 1980), as well as research regarding cultural differences in the norms and values of distinct cultural groups (Berry & Annis, 1974; Berry & Kim, 1988). Based on such research, Rotheram and Phinney (1987) developed a model of ethnic identity which focused on four dimensions of cultural differences as possible sources of conflict among different ethnic groups. These included alienation, separation, assimilation, and integration. In terms of alienation, Tajfel (1978)

discussed the willingness of some individuals to view their own culture or ethnicity as it is viewed by the majority. Alienation is also known as marginalization. Such individuals are described as alienated from their own ethnic group due to their wish to change their ethnicity, an attitude that may lead to a sense of self-hatred or inferiority (Atkinson, Morten, & Sue, 1983; Mendelberg, 1986; Parham & Helms, 1985). Withdrawal or separation occurs when individuals attempt to separate themselves from the mainstream culture and to focus instead on their ethnic culture. In this situation, individuals may have a high level of self-esteem, although they may also have little desire to interact with members of the majority culture (Tajfel, 1978). Individuals who engage in assimilation discard their own cultural values and practices in an effort to be a part of the majority culture. Such individuals may maintain a positive level of self-esteem by differentiating themselves from their ethnic group (Phinney, 1989). Lastly, through integration or biculturalism, individuals develop the ability to maintain their ethnic ties without rejecting the values and traditions of the majority culture. Research suggests that although the level of acculturative stress experienced varies among individuals based on a variety of factors, integration is associated with better psychological adjustment, or less stress (Berry, Kim, Minde, & Mok, 1987). Specifically, because minority individuals are more likely to experience conflicts during the process of acculturation than non-minority individuals, acculturative changes may take the form of both physiological and psychological stressors.

Phinney's (1992) study of multigroup ethnic identity measured the relationship between ethnic identity development level and self-esteem in minority and non-minority high school and college age students. The results revealed higher ethnic identity scores among college age students and provided support for Phinney's developmental model of ethnic identity. Furthermore, high school and college age members of ethnic minorities

achieved higher ethnic identity scores than non-minority students, although there were no significant differences between different minority groups. From Phinney's developmental model, these results suggest that minority group members are faced with an "ethnic identity crisis" which forces them to begin the exploration process of ethnic identity, whereas non-minority individuals may not experience a similar crisis. Helms (1990) used such evidence to argue that minority group members spend more cognitive and emotional energy in the ethnic identity development process than non-minority group members.

Phinney (1992) also found a positive relationship between high ethnic identity development scores and high levels of self-esteem among high school and college age minority students, whereas no such relationship was found between ethnic identity development scores and self-esteem level among college age non-minority students. However, a significant correlation was found between ethnic identity and self-esteem among Caucasian high school students who were a small minority in their school setting. These results suggest that when placed in a situation in which they are members of the minority group, Caucasians are more likely to experience an ethnic identity crisis. This may force them to examine their self-concept in relation to their ethnic identity.

The necessity of distinguishing between race and ethnic identity is particularly important among a Native American population. As stated previously, results indicate that high levels of academic achievement are positively related to high levels of identification with Anglo, or non-minority culture (Just, 1970).

There are several important issues to consider regarding the development of ethnic identity among Native American individuals. A first issue relates to the federal recognition of tribal members and self-identification issues. For instance, although an individual may be entirely or primarily of Native American descent, the individual may or

may not be recognized by the federal government as a Native American, depending on whether the individual's heritage is documented. Moreover, an individual may be of primarily non-Native American descent, yet the individual may be a federally recognized tribal member. Pavel, Sanchez, and Machamer (1994) found that only 52 of 259 university students self-identified as American Indian or Alaskan Native were actually able to provide verification of their status as a member of one of the two groups. For this reason, ethnic identity becomes an issue of both self-identification and identification by others.

A second and further complicating issue relates to the identity development of ethnically mixed individuals. Research suggests that such individuals engage in the highest amount of search, while they achieve the lowest level of commitment to minority group membership (Gibbs, 1987). Phinney (1992) also addressed this issue somewhat in her study, providing an opportunity for individuals to represent both their subjective and objective ethnic identity. More recently, support has been provided for such a distinction. Phinney and Alipuria (1996) found that "About two thirds of multiethnic respondents used a monoethnic label in an initial open-ended question" (p.920). However, many of these individuals changed their responses from a monoethnic label to "mixed" when such a label was included in the list provided to respondents.

With regard to learned helplessness theory, acculturative stress, the process of ethnic identity development, and sociocultural factors such as racism "may be conceived of as chronic uncontrollable stressors about which minority individuals can do little to change" (p.18). From this perspective, decreased levels of academic achievement among minority individuals could be attributed to the emotional, cognitive and behavioral deficits which develop from chronic exposure to such uncontrollable stressors.

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Results obtained by Hernandez (1995) would seem to indicate that a relationship exists between attributional style and academic achievement, yet it is also suggested that reformulated learned helplessness theory fails to explain decreased academic performance among minority individuals. For this reason, it is suggested that a number of culture-specific variables may account for differences observed in the development of motivational strategies between minority and non-minority groups. As discussed previously, Native Americans have been found to display decreased academic performance, high levels of early school dropout, and lower levels of educational attainment as compared to both non-minorities and other minority groups. In addition, a preference for assimilational versus integrational acculturation has been found among Native Americans, whereas the same is not true of other ethnic minority groups. Similarly, values regarding the importance of education are strongly tied to academic achievement (Oetting & Beauvais, 1991). Coladarci (1982) found several factors to be viewed by Native American students as important with regard to their decisions to drop out of school, including the apparent irrelevance of school for Native Americans. It is conceivable that such culture-specific variables as acculturational style may account for the discrepancies which exist regarding the manner in which motivational strategies are employed among minority versus non-minority groups. However, it is impossible to determine the extent to which cultural factors may influence the implementation of such strategies without first examining these relationships among individuals of various age groups and diverse backgrounds.

Rutter (1981) describes the "phenomenon of resilience as show by the young people who 'do well', in some sense in spite of having experienced a form of 'stress' which in the population as a whole is known to carry a substantial risk of an adverse outcome" (p. 334). Regarding an examination of those factors related to academic performance

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among college students, it is necessary to note that such factors as resilience are not accounted for by the influences of ethnic identification alone. Related to this issue, Phinney (1996) points out that there is "greater variation within than between [ethnic] groups", stating that due to this variation, "ethnic group membership alone cannot predict behaviors or attitudes in any psychologically meaningful way" (p. 919). For this reason, it is also necessary to investigate the cultural and socioeconomic factors related to academic performance.

### Perceived Deprivation

Researchers investigating the effects of poverty on academic achievement have traditionally emphasized such factors as socioeconomic status or the environmental factors associated with socioeconomic impoverishment, such as overcrowding and noise pollution. Classification of individuals according to socioeconomic status (e.g., as established by Hollingshead, 1957) is divided into three groups: upper-class, middle-class, and lower-class. These distinctions between particular classes of individuals leads to the establishment of particular lifestyles characteristic of each class. The lifestyle characteristics most often associated with lower-class families include "low wages, unemployment, underemployment, little property ownership, no savings, and lack of food reserves" (Sue & Sue, 1990, p. 43). Based on this classification system, lower-class individuals are considered to experience constant threat to basic well-being.

Calliste (1982) found a positive relationship between poverty and academic failure. As compared to lower-class individuals, students from a higher SES displayed higher levels of academic achievement, better self-concepts, and different employment aspirations. In addition, Cairns and Cairns (1989) found that SES levels were predictive of early school dropout rates.

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A number of studies have investigated the environmental factors associated with socioeconomic impoverishment, such as homelessness, high residential density, and noise pollution. Indeed, such factors have been found to be related to an increased risk for academic failure among students (Glass & Singer, 1972; Rafferty & Shinn, 1991; Rodin, 1976). Specifically, development of cognitive deficits has been observed to develop more frequently among individuals experiencing chronic exposure to these environmental factors associated with lower-class SES.

Based on these studies which have established a link between poverty and poor academic achievement, it is reasonable to expect that "lower-class" individuals perceive themselves as socioeconomically deprived. However, in failing to distinguish between socioeconomic impoverishment based on objective classification and perceived deprivation based on an individual's subjective perception that his or her basic needs have not been met, researchers have overlooked a number of important variables.

Although researchers have found a link between high levels of objective deprivation and development of cognitive and behavioral deficits (Mal, Jain, & Yadav, 1990), it is erroneous to conclude that individuals objectively classified as poverty-stricken will consider themselves to be deprived. In fact, Hernandez (1995) found that SES and perceived deprivation were unrelated among minority subjects, yet these two factors were related among non-minority subjects. Such a finding suggests that it is indeed necessary to distinguish between these two factors. In addition, Hernandez's (1995) results indicated that cultural influences may mediate the relationships between such factors and level of academic achievement.

With regard to learned helplessness, Nolen-Hoeksema (1992) views socioeconomic impoverishment as an uncontrollable stressor. From this perspective,

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Hernandez (1995) states, "children raised in poverty are at increased risk for experiencing higher levels of environmental stressors . . . [which] may lead them to experience a host of cognitive, emotional, and motivational deficits" (p. 24). As mentioned previously, minority individuals have historically comprised a large percentage of families living below the poverty line. Hence, subjective perceptions of deprivation could account for decreased academic performance among minority individuals. However, Hernandez's (1995) finding that SES and perceived deprivation were unrelated among minority individuals would seem to provide further evidence that the traditional theoretical construct of "negative attributional style" is perhaps inadequate in explaining motivation among minority individuals.

### Summary

In comparison to non-minority individuals, minority individuals have been found to exhibit lower levels of academic performance. It is necessary to distinguish between racial status and ethnic identity, as well as socioeconomic impoverishment and perceived deprivation in order to fully account for the independent influences of these factors on academic achievement.

When such factors are viewed separately, it has been found that traditional theories of motivation do not adequately account for academic performance among minority individuals. From this perspective, culture-specific variables can be conceptualized as influencing the way in which motivational strategies are developed. However, the current literature has failed to examine these factors among individuals of various ages and diverse backgrounds.

By integrating research on the influences of cultural and class variables on the development of motivation and academic achievement, it is possible to determine the

unique influences of ethnic identity development and cognitions regarding deprivation on academic achievement among minority individuals. From this perspective, it is conceivable to theorize that an individual's perspectives regarding acculturation may influence levels of academic achievement and values associated with such achievement.

#### Present Study

The purpose of the present study was to examine cultural and class variables associated with academic achievement in samples of Native American and Caucasian high school students. In addition, attributional style was examined as a potential mediator in these relationships. Analyses were performed separately for both racial groups, and the hypotheses focused primarily on anticipated findings among the minority sample.

Four main areas of focus were considered in this study. These four areas primarily followed from Baron and Kenny's (1986) cognitive mediational perspective. To illustrate, in order for a variable to be considered as a mediator, the following criteria must be met: 1) the predictor variable (i.e., cultural and class variables) must be related to the outcome variable (i.e., academic performance), 2) the predictor variable must be related to the potential mediator (i.e., attributional style), 3) the mediator must be related to the outcome variable after controlling for the predictor variable, and 4) the effect of the predictor variable on the outcome variable must not be significant once the mediator is controlled (Baron & Kenny, 1986).

The first area of focus involved the examination of the relationships of cultural identification, socioeconomic impoverishment, and perceived deprivation with academic performance. From the results of previous literature investigating such relationships (Hernandez, 1995), the following three hypotheses were made. First, it was hypothesized that higher levels of ethnic identity development would be predictive of lower GPA among

minority individuals. Second, it was hypothesized that no relationship would be found between SES and academic performance among minority and non-minority individuals. Similarly, it was hypothesized that no relationship would be found between perceived deprivation and academic performance.

The second area of focus involved an examination of the relationships of cultural identification, socioeconomic impoverishment, and perceived deprivation with attributional style. The literature has indicated that perceived deprivation is associated with development of a negative attributional style among minority individuals, whereas the same relationship is not found among non-minority individuals. In addition, no other variables have been shown to influence the development of negative attributional style among minority or non-minority individuals. For this reason, it was hypothesized that no relationship would be found between level of ethnic identity development and negative attributional style. It was also hypothesized that no relationship would be found between SES and attributional style for minority or non-minority individuals, but that higher levels of perceived deprivation among Native American individuals would be related to higher composite negative attributional style scores on the AASQ.

The third area of focus in the present study examined the relationship between attributional style and academic performance. From results indicating that minority individuals utilize different motivational strategies than non-minority individuals (Hernandez, 1995), it was hypothesized that Native American individuals who attribute negative academic events to internal, stable, and global factors (high composite negative attributional style) would have higher GPA's compared to Native American individuals with lower composite negative attributional styles. Related to this issue, it was also hypothesized that non-minority individuals who attained higher composite negative

minority individuals. Second, it was hypothesized that no relationship would be found between SES and academic performance among minority and non-minority individuals. Similarly, it was hypothesized that no relationship would be found between perceived deprivation and academic performance.

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attributional style scores would have lower GPA's compared to other non-minority individuals with lower composite negative attributional styles. Furthermore, because previous literature has shown that depression is related to a pessimistic attributional style (Peterson & Seligman, 1984), the effects of depression were taken into account in the relationship between attributional style and academic performance.

The final area of focus involved determining whether the relationships found between the predictor variables previously discussed and academic performance were mediated by attributional style, according to Baron and Kenny's (1986) cognitive mediational perspective. From results previously obtained (Hernandez, 1995), it was hypothesized that the relationship between the cultural and class variables and academic performance would be independent of the influence of attributional style.

## Method

### Participants

Ninety-five students (36 Native Americans, 59 Caucasians) enrolled in grades 9 through 12 in three school systems participated in the study. The schools were all within the same geographical location in small, rural, southeastern Oklahoma communities. Native American participants reported primarily Choctaw Chickasaw, and Cherokee Plains Indian tribal ancestry. Other tribes represented at a relatively low frequency and often in combination with the above tribes included: Comanche, Cheyenne, and Aztec. Due to the small numbers of students from the first two schools who participated in the study, an incentive for participation was added prior to administration of the survey instrument at the final site. The names of all students at that site who participated were entered into a raffle, and the winner of the raffle received a \$50.00 gift certificate to a local movie theatre. A total of 48 males and 47 females participated in the study (Native American =

16 male, 20 female; Caucasian = 32 male, 27 female). Subjects who identified themselves as either Native American or Mixed (Native American and Caucasian) were categorized as Native American. Parental consent was obtained prior to student assent, and both were required for participation in the study. Participants in the Native American and Caucasian groups were comparable in age and socioeconomic status,  $F(2, 90) = 1.72, p > .05$ . See Table I for sample descriptive statistics.

[Insert Table I]

### Materials

Academic Performance. Cumulative grade point averages (GPA's) obtained from school records were used as the measure of academic performance. The GPA's were based on a four-point scale.

Background Questionnaire. The background questionnaire assessed demographic information and socioeconomic status (SES). Level of parent/guardian education was used as the sole indicator of SES due to the unavailability of information regarding household income. Level of parent education was assessed according to a seven-point scale, with scores ranging from 1 (indicating junior high or less) to 7 (indicating beyond Master's degree).

Attributional Style Questionnaire (ASQ). The ASQ (Peterson, Semmel, von Baeyer, Abramson, Metalsky, & Seligman, 1982) is a 48-item, self-report instrument designed to measure the extent to which individuals attribute events to internal, stable, and global factors (attributions characteristic of a pessimistic attributional style) in contrast to external, unstable, and specific factors. Subjects were administered the ASQ, in which they were presented with six positive and six negative events. Attributional style for negative events was assessed according to three 7-point Likert scales, which corresponded

to the internality, stability, and globality dimensions on the six negative items. Scores for each of these three dimensions were averaged, and the composite negative score (consisting of the sum of all three dimensions) was used to assess subjects' overall attributional style for negative events. Scores for missing items were obtained by averaging across scores on a single dimension. However, this procedure was only used in a few instances in which no more than a single score on any given dimension was missing.

Multigroup Ethnic Identity Measure. A modified version of the Multi-Group Ethnic Identity Measure (Phinney, 1992) was administered in order to assess subjects' ethnic identity developmental level. Cultural identity as independent from racial status was obtained from subjects' responses to an open-ended question regarding self-identification of ethnic identity. The 24-item self-report scale assessed subjects' sense of belonging to their self-identified ethnic group, their attitudes toward the group, their ethnic behaviors, and their understanding of the meaning of their ethnicity according to a 4-point Likert scale. Composite ethnic identity scores were obtained by reversing negatively worded items, summing across items, and obtaining the mean; scores ranged from 4 (indicating high ethnic identity) to 1 (indicating low ethnic identity). Reported reliability coefficients for the scale were .81 for the high school sample and .90 for the college sample (Phinney, 1992).

Perceived Deprivation Scale (PDS). The PDS is a scale that was derived from the Prolonged Deprivation Scale developed in India by Misra and Tripathi (1978). The self-report instrument assessed deprivation across 15 aspects of the environment. The scale was adapted by using only the identified clusters of the instrument. The scale assessed subjects' perceived levels of deprivation in the following areas: housing, food, clothing, money, health care, transportation, family/parental support, peer support, religious



support, teacher support, extra-curricular activity, quality of education, and quality of neighborhood. Level of deprivation in each of these areas was assessed according to a six-point Likert scale, with higher scores indicating higher levels of perceived deprivation. Composite deprivation scores were obtained by summing across items. Split-half reliability was reported at .91, while internal consistency was .92 (Hernandez, 1995).

Childhood Depression Inventory (CDI). The Beck Depression Inventory (Beck, 1967), which assesses the severity of depressive symptoms among adults, was used as a model from which the CDI (Kovacs, 1992) was developed. The ten-item CDI Short Form assessed the severity of depressive symptoms among subjects. The severity of each of the ten symptoms was assessed according to a three-point Likert scale, with a higher score indicating greater severity in depressive symptoms. Kovacs (1992) reported internal consistency estimates ranging from .71 to .89 for the entire scale, and correlation of the CDI Short Form with the original scale was reported at .89. The scale was designed for use with children aged 7 to 17.

### Procedures

Parental consent for participation in the study was obtained by asking parents to complete an informed consent form indicating whether their child was permitted to take part in the study. Children were considered eligible for the study if parents returning the forms indicated their consent. Furthermore, informed consent forms were provided to high school participants prior to their participation in the study. The informed consent forms indicated that the purpose of the experiment was to examine the ways in which cultural and individual experiences influence academic achievement. The consent forms also informed subjects that participation in the study would involve the completion of several paper and pencil questionnaires. Subjects were administered the survey at the

various high schools during the time in which they attended regularly scheduled English courses.

After consent was obtained, subjects were administered a standard series of questionnaires, in the following order: the Demographic Questionnaire, the Attributional Style Questionnaire, the Multigroup Ethnic Identity Measure, the Perceived Deprivation Scale, and the Childhood Depression Inventory.

### Statistical Analyses

#### Preliminary Analyses

Two sets of preliminary analyses were performed initially on the data. First, because the data were collected in three different school systems, a one-way multivariate analysis of variance (MANOVA) was conducted to test for differences across sites with regard to depression, attributional style, and GPA. No significant site differences were observed,  $F(10, 162) = .41, p > .05$ . Following these comparisons, all students were collapsed into one aggregate sample.

Second, a multivariate analysis of variance (MANOVA) was performed to assess for minority vs. non-minority group differences across Native American identification, Anglo identification, SES, perceived deprivation, depression, attributional style, and academic performance. No statistically significant differences were found between Native American and Caucasian groups,  $F(8, 72) = .67, p > .05$ .

There was a statistically significant main effect of gender on level of parent education,  $F(8, 72) = 4.72, p < .05$ , and academic performance,  $F(8, 72) = 10.55, p < .01$ . No significant gender effects were observed among the Native American sample. However, MANOVA's examining gender effects within each group revealed that among Caucasians: a) Males perceived higher levels of deprivation than females  $F(1, 53) = 5.35,$

$p < .05$ ; and b) Females had higher levels of academic success than males, as measured by GPA  $F(1, 53) = 10.15, p < .01$ .

### Primary Analyses

The primary analyses conducted in the present study addressed the four main areas of focus following from Baron and Kenny's (1986) cognitive mediational perspective. First, the relationships between cultural identification, socioeconomic impoverishment, and perceived deprivation with academic performance were examined. Second, the associations between these cultural and class variables and attributional style were examined as well. The third area of focus examined the relationship between attributional style and academic performance, and the final area of focus involved determining whether the relationships found between the predictor variables and academic performance were mediated by attributional style. Zero-order and partial correlations were performed separately for Native American and Caucasian groups to assess the direct relationships between the study variables. Because no significant effect of gender was observed in the Native American sample, it was not examined as a covariate in the relationships between the predictors and mediator variables and GPA.

The first area of focus examined the relationships of cultural identification, socioeconomic impoverishment, and perceived deprivation with academic performance. Perceived deprivation was the only class variable significantly related to GPA for Native Americans,  $r = -.38, p < .02$ . Although depression originally was hypothesized as a potential covariate in these relationships, it was unrelated to GPA among the Native American sample. See Table II for correlations among study variables for Native American subjects.

[Insert Table II]

Although perceived deprivation was unrelated to GPA among the Caucasian sample, lower parent education was associated with lower levels of academic success among Caucasian students,  $r = .24$ ,  $p < .05$ . See Table III for correlations among study variables for Caucasian subjects.

[Insert Table III]

Because gender had a significant effect on GPA in the Caucasian sample, it was examined as a covariate along with depression in the relationships between both the predictor and mediator variables and GPA. Partial correlations revealed that none of the predictor variables were related to GPA when gender and depression were controlled.

The second area of focus involved an examination of the relationships of cultural identification, socioeconomic impoverishment, and perceived deprivation to attributional style. None of the cultural and class variables investigated were found to be related to attributional style among either Caucasians or Native Americans.

The third area of focus examined the association between composite negative attributional style on the ASQ and academic performance, accounting for the influence of depression. As predicted, results for the Native American group indicated a significant positive relationship between composite negative attributional style and GPA,  $r = .33$ ,  $p < .05$ . Hence, composite negative attributional style was associated with higher levels of academic achievement among Native Americans. Results for the Caucasian group indicated that composite negative attributional style was not significantly associated with GPA.

The final area of focus examined in the present study involved determining whether attributional style mediated the relationships between the cultural and class predictor variables and academic performance, taking into account the effects of depression. As

discussed previously, perceived deprivation and parent education were the only two predictor variables related to academic performance among Native Americans and Caucasians, respectively. However, both of these variables were unrelated to composite negative attributional style among both groups. Hence, the criteria outlined by Baron and Kenny (1986) requiring that a predictor variable must be related to the potential mediator (i.e., attributional style) in order for a variable to be considered as a mediator was not met. For this reason, proposed hierarchical regression analyses to examine composite negative attributional style as a potential mediator of the relationships between perceived deprivation and parent education with academic performance were not conducted.

#### Exploratory Analyses

In addition to the four main areas of focus, several exploratory analyses were conducted to investigate more fully the nature of the associations between various cultural and class variables and academic achievement.

Partial correlations revealed that parent education and depression remained significantly associated with GPA among Caucasians after partialling out the influence of gender,  $r = .39$ ,  $p < .01$ , and  $r = -.43$ ,  $p < .001$ , respectively. To examine the effects of depression as a covariate in the relationship between parent education and GPA, second-order partial correlations (controlling for both gender and depression) were conducted. Results indicated that parent education was no longer significantly associated with GPA,  $r = .21$ ,  $p > .05$ . Although not proposed as a specific research question, analyses indicated that the association between parent education and GPA was mediated by the association of decreased parent education with depression and the subsequent influence of depression on GPA.

As discussed previously, results revealed that attributional style and perceived deprivation predicted GPA among the Native American sample, although perceived deprivation was not significantly related to attributional style. Additional analyses were conducted to examine the relative influence of perceived deprivation and composite negative attributional style on academic success among the Native American sample. When perceived deprivation was partialled out, composite negative attributional style was not significantly related to GPA,  $\beta = .19$ ,  $p > .05$ . When composite negative attributional style was partialled out, perceived deprivation was not significantly related to GPA,  $\beta = -.35$ ,  $p > .05$ . Hence, although lower levels of perceived deprivation and higher composite negative attributional style together accounted for a significant portion of the variance of academic success, neither variable exerted an independent effect on GPA.

Although level of ethnic identity development was unrelated to GPA among the Caucasian sample, higher levels of ethnic identity development were significantly related to lower levels of perceived deprivation for this sample,  $r = -.44$ ,  $p < .001$ . The same relationship was not found among Native Americans. Alternatively, results for the Native American sample indicated that higher levels of ethnic identity development were significantly related to lower levels of depression,  $r = -.32$ ,  $p < .05$ . These two variables were unrelated among the Caucasian sample.

#### Discussion

The purpose of the present study was to examine the ways in which various cultural (race vs. ethnic identity) and class (SES vs. perceived deprivation) variables are associated with academic performance and the potential mediating role of attributional style in these relationships among Native American and Caucasian high school students. Results provided support for several of the predicted relationships, particularly for Native

American students. In addition, future directions for research in this area were indicated by some unexpected findings.

With regard to the examination of the associations between cultural and class variables and academic achievement, there was little support provided for the three hypotheses which were based on results previously obtained by Hernandez (1995) in a similar study. First, although it was hypothesized that higher levels of ethnic identity development would predict lower GPA among Native Americans, there was no relationship found among these variables.

It was further hypothesized that no relationship would be found between level of parent education and academic performance or between perceived deprivation and academic performance among Native American or Caucasian groups. Although both of these variables were associated with academic achievement, results indicated that these relationships were different for Native American and Caucasian students. Specifically, lower levels of SES (as measured by parent education) predicted lower levels of GPA among Caucasians; parent education was unrelated to academic achievement among Native Americans. In addition, higher levels of perceived deprivation were associated with lower levels of academic achievement among Native Americans, whereas these variables were unrelated among the Caucasian group. Hence, two hypotheses are indicated for Native American individuals. First, it appears that objective indicators of lower socioeconomic status such as parent education do not necessarily result in Native Americans subjectively perceiving that they have been deprived in some way. Second, when Native American individuals do perceive that environmental deprivation has occurred, such perceptions appear to impact their academic performance in a negative manner. In addition, these results provide support for the necessity of distinguishing

between such class variables as SES and perceived deprivation in future studies, particularly in light of the present results indicating that traditional indices of SES, such as parent education and perceived deprivation were unrelated in both the Native American and Caucasian groups.

The higher predictive value of perceived deprivation over socioeconomic indicators in the Native American group suggests that subjective experience of deprivation may be more salient for these individuals as a result of culture-specific values regarding college and job success. Specifically, results obtained by Oetting and Beauvais (1991) indicated that attitudes about school and job success are linked with Anglo identification, whereas Native American identification is more closely linked with tribal and community activities and family relations. Hence, individuals from cultural backgrounds that value college and job success to a lesser degree may also be less inclined to respond in a negative manner to their parents' lack of academic achievement.

The second area of focus involved an examination of the relationships between various cultural and class variables and attributional style. As predicted, neither ethnic identity development level nor SES (as measured by parent education) were associated with attributional style among Native American or Caucasian groups.

The third area of focus in the present study examined the relationship between attributional style and academic performance. As predicted, different patterns of achievement motivation were observed among Native American versus Caucasian students. Increased pessimistic attributional style was associated with increased academic performance among Native Americans. Although this finding was predicted, the positive direction of this relationship is contrary to results that have been consistently obtained among non-minority samples (Brown & Siegel, 1988; Metalksy, Abramson, Seligman,



Semmel, & Peterson, 1982; Peterson & Seligman, 1984; Seligman, Abramson, Semmel, & von Baeyer, 1979). For this reason, results obtained among Caucasians revealed a somewhat unexpected finding, in that a pessimistic attributional style was unrelated to academic performance for this group.

The finding obtained among Native American students indicated that a pessimistic attributional style does not serve as a good predictor of academic performance when a traditional view of learned helplessness is applied. Furthermore, the traditional conceptualization that a pessimistic attributional style is associated with helplessness and depression does not appear to have universal application across cultures. Indeed, it would seem that within certain minority groups, a “pessimistic” attributional style may serve to enhance motivation, particularly in the area of academic achievement.

Support was also provided for the hypothesis that the relationship between attributional style and GPA among minority individuals would exist even after the effects of depression were partialled out. Depression was found to be unrelated to GPA among Native Americans. However, higher levels of depression were found to be associated with decreased academic performance for Caucasians. This finding was consistent with Hernandez’s (1995) results, which indicated that depression influenced both academic performance and achievement motivation.

The final area of focus in the present study involved determining whether the relationships found between the predictor variables (i.e., cultural identification, socioeconomic impoverishment, and perceived deprivation) and academic performance were mediated by attributional style. Proposed regression analyses were not conducted, because the cultural and class variables were unrelated to attributional style. Hence, the criteria for mediation as outlined according to Baron and Kenny’s (1986) cognitive

mediational perspective were not met. As predicted, the various relationships that were observed between cultural and class variables and academic performance were independent of the influence of attributional style.

Results of various exploratory analyses indicated a number of factors which may influence the relationships between cultural and class variables and academic achievement. First, depression was found to mediate the relationship between parent education and GPA among Caucasians. This finding indicated that parent education was not related to GPA in this group when the effects of depression were partialled out. The fact that depression was unrelated to GPA or parent education among Native Americans indicates that non-minority individuals whose parents have less education may be more likely to display lower levels of academic success due to the impact of depression upon the achievement motivation of such individuals.

Level of ethnic identity development was also indicated as a variable that may indirectly influence academic and emotional functioning among both Caucasian and Native American students. Although high ethnic identity development appeared to serve as a protective factor for both groups, the manner in which ethnic identity functioned was distinct for each group. Specifically, high levels of ethnic identity development were associated with lower levels of depression among the Native American sample, whereas the same relationship was not observed among Caucasian students.

Similarly, Caucasian students with higher levels of ethnic identity development endorsed lower levels of perceived deprivation. Although the relationship between perceived deprivation and GPA only approached statistical significance among Caucasian students, support has previously been provided for the existence of a relationship between ethnic identity development and academic achievement, and a positive relationship has

been exhibited between ethnic identity development and self-esteem as well (Phinney, 1992). These findings appear to indicate that interventions specifically designed to assist minority clients in developing a sense of ethnic identity may serve to address problems related to decreased self-esteem and depression. Results may also suggest that a sense of ethnic identity among Caucasian students has direct beneficial effects on individuals' self-perceptions and indirectly on academic achievement. Certainly, future research is needed within this area.

Although an examination of the relative influence of perceived deprivation and composite negative attributional style on GPA provided further indication of the manner in which these variables are related among Native Americans, the theoretical implications of these results are somewhat unclear at this time. Specifically, although low levels of perceived deprivation and higher composite negative attributional style were both associated with higher levels of academic success, analyses in which the effects of these variables were partialled out revealed that neither variable exerted an independent effect on GPA.

Although Hernandez (1995) suggested that minority individuals may habituate to anxiety over time following exposure to chronic stressors, the relative influence of perceived deprivation on the development and reinforcement of a pessimistic attributional style was not supported by the present study. Specifically, a finding which approached significance indicated that lower levels of perceived deprivation were associated with development of a negative attributional style among Native Americans. However, perceived deprivation and negative attributional style were positively related in Hernandez's (1995) study. It is recommended that future studies attempt to identify those factors which predict development of a negative attributional style among minority group

members. In particular, it is recommended that researchers attempt to define those variables that may influence the direction and nature of the relationship between negative attributional style and perceived deprivation. It is conceivable that specific cognitive sets associated with perceived deprivation may provide some indication of the manner in which a subjective perception of deprivation will subsequently influence the development of a negative attributional style among Native Americans.

### Limitations

It is necessary to address the methodological shortcomings of the present study. First, the number of minority individuals represented in the study was somewhat small, and for this reason, generalizability of the results is limited. Related to this issue, Native American subjects who participated in the study represented a small portion of the United States Native American population, and cultural differences between various tribes prohibit unqualified generalizability of the results to Native Americans. However, the present study may serve as a starting point for future research with other minority groups as well as other Native American tribes.

A second limitation of the study relates to the inherent problem with using ethnic labels, in that there is an ever-increasing number of individuals with mixed ethnicity (Phinney, 1992). Because such individuals often exhibit difficulty in consistently self-identifying their own ethnicity, such labels may reflect a superficial identification. As a result, it becomes difficult to distinguish between an individual's level of cultural identification with a particular ethnic group and the influence of other-group identification. Thus, it is possible for individuals of mixed ethnicities who obtain high scores on the Multi-Group Ethnic Identity Measure to identify with other groups at either high, medium, or low levels, and the relative impact of these distinctions upon academic achievement and

motivation among these individuals may be somewhat unclear. Hence, it is recommended that future research take into account the relative influence of other-group identification.

A third limitation of the study relates to the self-report nature of all data collected across the primary independent variables. This may have led to the situation in which the measures shared overlapping method variance and precluded the detection of independent relationships of key variables with the outcome. However, because several non-significant relationships were observed among the measures, it is unlikely that shared method variance posed a significant problem in the present study. Moreover, because the outcome variable in the present study (GPA) was a performance variable and was not self-report in nature, the significant relationships observed should be considered quite robust.

A final and related limitation pertains to the current nature of the predictor variables based on the cross-sectional nature of the survey instrument. However, the dependent variable, cumulative GPA, was aggregate in nature. For this reason, results obtained should be interpreted with some caution. In addition, future researchers may want to examine whether similar results may be obtained when achievement is measured by a specific test administered at the same time that predictor variables are assessed.

### Summary

The purpose of this study was to examine the manner in which cultural and class variables influence attributional style and academic achievement among Native American and Caucasian high school students.

Results demonstrated that a pessimistic attributional style predicted academic achievement among Native Americans, while these variables were unrelated among Caucasians. The results further demonstrated that perceived deprivation was associated with GPA among Native Americans, while parent education and GPA were associated among Caucasian students. Ethnic identity was found to be related to levels of depression and deprivation among the Native American and Caucasian groups, respectively. In addition, depression was associated with GPA only among Caucasian students. Class variables were unrelated to attributional style, and for this reason, proposed mediational analyses were not conducted.

Overall, results of the present study indicated that Native Americans and Caucasians may utilize different cognitive appraisal strategies in order to achieve academic success. Results further indicate that objective measures of deprivation (i.e., level of parent education) predict academic performance in a different manner than such subjective measures as perceived deprivation. This appears to indicate that socioeconomic impoverishment and perceived deprivation are distinct constructs. For this reason, it is concluded that subjective measures of deprivation should be incorporated in studies of ethnic minority individuals.

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Table I. Descriptive Statistics by Ethnic Group

For Native Americans,  $N = 35$ ; for Caucasians,  $N = 59$ .

Variables	NATIVE AMERICAN		CAUCASIAN	
	<u>M</u>	(SD)	<u>M</u>	(SD)
<b>Age</b>	16.1	(1.2)	16.2	(1.3)
<b>SES</b>	3.8	(1.4)	4.3	(1.2)
<b>GPA</b>	3.0	(.8)	3.3	(.7)
<b>Depression</b>	12.5	(2.6)	13.0	(2.8)
<b>CONEG</b>	72.3	(10.8)	74.2	(11.3)
<b>Perceived Deprivation</b>	20.3	(9.9)	20.9	(9.7)

Note. SES = Years of parent education (1 = Junior high or less to 7 = Beyond Master's Degree); CONEG = Composite Negative Attributional Style on the Attributional Style Questionnaire.

Table II. Correlation Matrix of Study Variables Among Native Americans

N = 36.

Variable	1	2	3	4	5
1. Ethnic Identity Level					
2. Parent Education	.07				
3. Perceived Deprivation	-.14	-.17			
4. CONEG	.22	.05	-.26		
5. Depression	-.32*	.05	.03	-.11	
6. GPA	-.13	.08	-.38**	.33*	-.03

\*  $p < .05$ ; \*\*  $p < .001$



Table III. Correlation Matrix of Study Variables among Caucasians

N = 59.

Variable	1	2	3	4	5	6
1. Ethnic Identity						(.18)
2. Parent Education	-.03					(.21)
3. Perceived Deprivation	-.43**	-.10				(-.09)
4. CONEG	.14	-.08	.01			(.11)
5. Depression	-.13	-.48**	.05	-.03		
6. GPA	.20	.24*	-.19	.19	-.43**	

Note: Zero-order correlations appear below the diagonal. Second-order partial correlations, controlling for gender and level of depression, are in parenthesis.

\*  $p < .05$ ; \*\*  $p < .001$

APPENDICES

APPENDIX A  
QUESTIONS ABOUT YOURSELF

## QUESTIONS ABOUT YOURSELF

### RESPONDENT INFORMATION

- 1.) Date of birth \_\_\_\_ / \_\_\_\_ (month/year)
- 2.) \_\_\_\_ Male or \_\_\_\_ Female
- 3.) Were you born in the USA? \_\_\_\_ Yes \_\_\_\_ No
- 4.) Were you raised primarily in the USA? \_\_\_\_ Yes \_\_\_\_ No
- 5.) How many years have you lived in Oklahoma? \_\_\_\_\_
- 6.) What is the length of time you have lived in your current area? \_\_\_\_\_
- 7.) If you are presently employed, please list your occupation. \_\_\_\_\_
- 8.) Please describe briefly your plans for the near future.

- 
- 9.) My current GPA (grade point average) is: \_\_\_\_\_
  - 10.) Use the numbers given below to indicate how much you agree or disagree with the following statement.  
**4: Strongly agree    3: Somewhat agree    2: Somewhat disagree    1: Strongly disagree**

I have a large amount of control over my academic success. \_\_\_\_\_

### HOUSEHOLD INFORMATION

- 1.) What does your dad do for a living? \_\_\_\_\_
- 2.) What does your mom do for a living? \_\_\_\_\_
- 3.) Use the numbers given below to indicate the educational level of your parents  
**1: Junior high or less    2: Some high school    3: Completed high school    4: Some College**  
**5: Completed College (Bachelor's Degree)    6: Master's Degree    7: Beyond Master's Degree**

4.) Have your parents ever been divorced? \_\_\_\_ Yes \_\_\_\_ No

5.) Please place an "X" in front of the boxes below for all individuals who are living in your household:

\_\_\_ Mom    \_\_\_ Dad    \_\_\_ Brothers: (How Many?) \_\_\_    \_\_\_ Sisters: (How Many?) \_\_\_

\_\_\_ Other (Please List): \_\_\_\_\_

APPENDIX B  
PARENTAL CONSENT FORM

Your consent is requested for your child's participation in a study designed to investigate the ways in which cultural and individual experiences influence academic achievement. \_\_\_\_\_ High School has provided written permission for Dr. Chaney and his research assistant, Jennifer Schied-Robertson to conduct the study at the school. Your child will be asked to answer a number of questions about his/her school, culture, family, thoughts, and feelings by completing a questionnaire. The questionnaire will take approximately 50 minutes to complete. Your child's participation is voluntary, and your child's identity and confidentiality will be protected at all times. Names will never be used in reporting data, and no individual data will be reported. All data collected will be accessible only to the investigators of the study. Your child may choose to skip questions that are uncomfortable, or he/she may terminate participation at any time without penalty. If your child chooses to participate in the survey, his/her name will be entered into a raffle for a chance to win \$50.00. If you would like to receive a copy of the results of the study when completed, please call (405) 744-5703, or send your name and address to Dr. Chaney and his staff at the following address: Dr. John Chaney, Dept. of Psychology, 215 North Murray, Oklahoma State University, Stillwater, OK 74078. Thank you for your consideration of this matter.

**Please place an "X" next to the response indicating your decision:**

\_\_\_\_\_ I agree to provide consent for my child to participate in the study described above.

\_\_\_\_\_ I do not wish to provide consent for my child to participate in the study described above.

NAME \_\_\_\_\_

NAME(S) OF CHILD OR CHILDREN \_\_\_\_\_

Should you have further questions regarding the study, contact Gay Clarkson, IRB, 305 Whitehurst, Stillwater, OK 74078; (405) 744-5700.

I certify that I have personally explained all elements of this form to the subject of his/her representative before requesting the subject or his/her representative to sign it.

Signed: \_\_\_\_\_  
Project Director of his authorized representative

APPENDIX C  
STUDENT ASSENT FORM

Dr. Chaney and his research assistant, Jennifer Schied-Robertson, request your involvement in the following study. The study is designed to look at how cultural and individual experiences influence academic achievement. If you choose to participate, you will be asked to answer a number of questions about how you would describe specific events. You will also be asked to answer questions about how you feel about your, culture. You will be asked to describe how your needs have been met in a number of different areas, and you will be asked about the feelings you experience. If you agree to participate in the survey, your current grade point average will also be obtained from official school records. The survey will take approximately 50 minutes to complete. Your involvement in the study is completely voluntary, without penalty. You may also choose not to answer questions that make you feel uncomfortable. If you begin the survey and wish to stop, you may do so at any time with no negative results. Your identity will be protected at all times, and all responses will be held confidential. If you chooses to participate in the survey, your name will be entered into a raffle for a chance to win \$50.00. Please be as honest as possible when you are answering the questions on the survey. Thank you for your help. If you would like to receive a copy of the results of the study when completed, please call (405) 744-5703, or send your name and address to Dr. Chaney and his staff at the following address: Dr. John Chaney, Dept. of Psychology, 215 North Murray, Oklahoma State University, Stillwater, OK 74078. Thank you for your consideration of this matter.

**If you agree to participate in the study by completing the following survey, please sign below:**

NAME \_\_\_\_\_

**PLEASE NOTE: If you do not wish to participate in the study, or if you choose to end your participation after you have begun, please turn in your blank or partially completed survey form.**

Should you have further questions regarding the study, contact Gay Clarkson, IRB, 305 Whitehurst, Stillwater, OK 74078; (405) 744-5700.

I certify that I have personally explained all elements of this form to the subject or his/her representative before requesting the subject or his/her representative to sign it.

Signed: \_\_\_\_\_  
Project Director of his authorized representative



APPENDIX D  
INSTITUTIONAL REVIEW BOARD FORM

OKLAHOMA STATE UNIVERSITY  
INSTITUTIONAL REVIEW BOARD  
HUMAN SUBJECTS REVIEW

Attributional Style  
59

Date: 03-19-97

IRB#: AS-97-046

Proposal Title: ATTRIBUTIONAL STYLE AND ACADEMIC  
PERFORMANCE AMONG NATIVE AMERICANS

Principal Investigator(s): John M. Chaney, Jennifer L. Robertson

Reviewed and Processed as: Full Board

Approval Status Recommended by Reviewer(s): Approved

ALL APPROVALS MAY BE SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD  
AT NEXT MEETING, AS WELL AS ARE SUBJECT TO MONITORING AT ANY TIME DURING  
THE APPROVAL PERIOD.

APPROVAL STATUS PERIOD VALID FOR DATA COLLECTION FOR A ONE CALENDAR YEAR  
PERIOD AFTER WHICH A CONTINUATION OR RENEWAL REQUEST IS REQUIRED TO BE  
SUBMITTED FOR BOARD APPROVAL.

ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR  
APPROVAL.

---

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

Signature:



Chair of Institutional Review Board

cc: Jennifer L. Robertson

Date: April 3, 1997

VITA

Jennifer Robertson

Candidate for the Degree of

Master of Science

Thesis: THE RELATIONSHIP OF CULTURAL AND CLASS VARIABLES TO  
ATTRIBUTIONAL STYLE AND ACADEMIC PERFORMANCE AMONG  
NATIVE AMERICAN AND CAUCASIAN HIGH SCHOOL STUDENTS

Major Field: Psychology

Biographical:

Personal Data: Born in Paramount, California, May 2, 1972, the daughter of  
Ronald and Chryl Schied.

Education: Graduated from Bennington High School in Bennington, Oklahoma in  
May of 1990; received Bachelor of Arts in Psychology and English from  
Southeastern Oklahoma State University at Durant, Durant, Oklahoma in  
December of 1993; completed requirements for the Master of Science degree at  
Oklahoma State University in May, 1998.

Professional Experience: Psychological Associate, Psychological Services Center,  
Oklahoma State University, Stillwater, Oklahoma, August 1995 to June 1997;  
Graduate Instructor in the Department of Psychology, Oklahoma State  
University, Stillwater, Oklahoma, August 1996 to May 1997; Staff  
Psychotherapist, Griffin Memorial Hospital, Norman, Oklahoma, June 1997 to  
May 1998; Graduate Research Assistant in the Department of Psychology,  
Oklahoma State University, Stillwater, Oklahoma, August 1995 to May 1998.

Professional Memberships: Association for the Advancement of Behavior  
Therapy, American Psychological Association.

Awards and Scholarships: Full Parsons Scholarship (3 consecutive years 1990-  
1993); Choctaw Nation of Oklahoma Tuition Scholarship (1995-1996);  
American Indian Graduate Center Fellowship (1995-1996)