ACCULTURATIVE PROCESSES AND THEIR IMPACT ON SELF-REPORTS
OF PSYCHOLOGICAL DISTRESS IN MEXICAN-AMERICAN ADOLESCENTS

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The current study examined the effects of acculturative processes on the self-report of behavioral problems in Hispanic children ages 11-14. Acculturation was measured by the Acculturation Rating Scale for Mexican Americans-II (ARSMA-II) (© Sage Publications, Thousand Oaks, CA, www.sagepub.com) (Cuellar, Arnold, and Maldonado, 1995) and the self-report of behavioral symptoms was assessed using the Youth Self-Report (© T.M. Achenbach, Burlington, VT, www.aseba.com) (Achenbach, 1991). It was hypothesized that while both the linear and orthogonal categories of acculturation would account for a significant proportion of the variance in behavior problems in this age group, the orthogonal model would account for a larger proportion of variance due to its multidimensional nature. As well, it was hypothesized that the experimental Marginalization scales of the ARSMA-II would be predictive of behavioral problems. Multivariate analysis of variance was used to test these hypotheses and results were non-significant for the linear, orthogonal, and marginalization categories. The effects of the ethnic/cultural homogeneity of the region from which the sample was drawn, the buffering of social support, and the developmental aspects of ethnic identity are discussed as factors which may have influenced the potential impact of acculturative stress on psychological and behavioral functioning.
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CHAPTER 1
INTRODUCTION

The Hispanic Population In the United States

The United States and its classrooms are becoming increasingly ethnically diverse (Gopaul-McNicol, 1992). The United States Census Bureau predicts that increasing ethnic diversity will continue well into the 21st century. The Hispanic population is projected to add more people to the United States every year than would the non-Hispanic Caucasian population or any other race/ethnic group.

In the year 2000, 32.8 million Hispanics resided in the United States and represented 12.0% of the United States population. Of the 32.8 million, 66.0% were of Mexican origin (Therrien and Ramirez, 2000). Further, 35.7% of the Hispanic population was less than 18 years of age and of the total Hispanic population, those of Mexican descent had the highest proportion of persons younger than 18 at 38.4% (United States Bureau of Census, 2001). By 2050, it is predicted that approximately 20.9 million Hispanic school aged youths will be eligible to enter the American public school system (United States Bureau of Census, 1996).

Census data reveal Hispanics tend to be geographically concentrated, living primarily in the states of Texas, California, Florida, and New York. Half of all Hispanics in the United States reside in just two states, California and Texas. As of the year 2000, Hispanics in California and Texas accounted for 31.1% and 18.9% of the total Hispanic population in the United States, respectively (United States Census Bureau, 2001). Of all the Hispanics living within the United States 46.4% live in inner cities within major
metropolitan areas which are well known for high rates of poverty and crime (Therrien and Ramirez, 2000).

Consistent with census data highlighting the geographic distribution of ethnic minorities in the United States, research indicates many Hispanic families, particularly immigrant families, live below the poverty line. Therrien and Ramirez (2000) reported statistics revealing that approximately 22.8% of Hispanics live below the poverty line as compared to only 7.7% of non-Hispanic Caucasians. This takes on greater significance when realizing that while Hispanics only constitute 12% of the total population, as an ethnic group, they accounted for 23.1% of the population currently living in poverty. The poverty data for Hispanic children is even more disturbing. Of Hispanic children under the age of 18 years, 30.3% live in poverty as compared to 9.4% of non-Hispanic Caucasian children. As with the above reported data, although Hispanic children account for only 16.2% of all children currently living in the United States they accounted for 29% of all children living in poverty (Therrien and Ramirez, 2000).

When examining education data for the Hispanic population several disturbing facts are apparent. Among Hispanics, age 25 and older, only 57.0% have graduated from high school (Therrien and Ramirez, 2000). A study published in November 2000 by the United States Department of Education revealed that 36.6% of Hispanics, ages 18-24, failed to complete high school (Kaufman, Kwon, Klein, and Chapman, 2000). Such dropout rates are considerably higher than those reported for other ethnic groups. For example, Asians have the lowest dropout rate (6%), followed by Caucasians (8.8%), and African-Americans (16.5%) (Kaufman, Kwon, Klein, and Chapman, 2000).
The above demographic data, reported by several government agencies, speak to the multiple sources of social difficulties faced by the Hispanic population in the United States today. This is especially true for the most vulnerable groups within the Hispanic community- children and the elderly. As reported above, children are at particular risk for exposure to social conditions such as violence and poverty. Research has suggested that children who are chronically exposed to violence and poverty, more frequently report symptoms of depression, post-traumatic stress disorder, anxiety, and behavioral problems (Barbarin & Richter, 2001; Geary, 1999; Attar, Guerra, & Tolan, 1994). Such information should be of significant concern given the rapid growth rate of the Hispanic population in this country.

Despite the social and economic difficulties faced by the Hispanic population, research has shown that socio-economic factors such as poverty and exposure to violence cannot fully account for the psychological difficulties experienced by children in such conditions. Factors such as family stability, social support, and resilience, in addition to other exogenous and endogenous factors, play important determining roles in the behavioral and emotional wellness of children (Barbarin & Richter, 2001; Klimes-Dougan & Kendziora, 2000; Geary, 1999; Attar, Guerra, & Tolan, 1994). As a result, there has been a renewed research focus over the last 10-20 years on these extra-socioeconomic factors and their moderating or exacerbating effects on the psychosocial functioning of Hispanics.
The Hispanic Ethnic Experience

Recently, there has been increased interest in exploring the effects and importance that a person’s ethnic experience may have on self-esteem and the development or manifestation of behavioral and emotional problems (Vega, Zimmerman, Khoury & Gil, 1995, Montgomery, 1992a, Phinney & Kohatsu, 1997, Cuellar & Roberts, 1997). The important etiological influences that ethnicity and culture have on psychological disorders has been acknowledged in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (i.e., culture bound syndromes), the predominant diagnostic guidance tool for psychologists and psychiatrists (American Psychiatric Association, 1996). Additionally, important federal and state organizations that hold significant influence with regard to policy development and research funding have documented the impact that cultural variables have on general mental health and encourage the development of culturally relevant treatment approaches for psychological disorders (National Institute of Mental Health, 1995; National Advisory Council, 1996; American Psychological Association, 2001).

Several researchers have independently studied Mexican American children’s self-perceptions, ethnic identity, and acculturation and their impact on social, emotional, and behavioral functioning (Okagaki, Frensch, & Dodson, 1996; Phinney, 1992; Bernal & Knight, 1997). One recent study suggested acculturation and ethnic identity are negatively related revealing that as a person's level of acculturation toward the majority culture increases their sense of ethnic identity, or their ability to relate to their ethnicity of origin, decreases (Cuellar, Nyberg, Maldonado, & Roberts, 1997). More specifically,
they become more like the majority culture in terms of their likes and dislikes, behaviors, and general attitude, while becoming less like and less able to identify with their culture of origin. As a whole, this body of work generally suggests that a person’s sense of ethnic identity and their level of acculturation into a society’s mainstream, rather than their ethnicity and/or other sociodemographic factors alone, may better predict adjustment difficulties and problem behaviors within ethnic minority groups.

Statement of the Problem

A review of the current acculturation literature suggests acculturative processes and outcomes may be related to a variety of difficulties experienced by Hispanics, including increased likelihood of lifetime psychiatric disorders, poly-substance abuse, and decreased likelihood of engaging in health promoting behaviors (Alderete, Vega, Kolody, & Aguilar-Gaxiola, 2000; Epstein, Botvin, & Diaz, 2001; Ebin, Sneed, Morisky, Rotheran-Borus, Magnusson, & Malotte, 2001). As a result, ongoing research aimed at understanding the acculturative process and developing models that adequately capture the process in Hispanic children is of key importance to developing effective strategies for lessening the negative sequelae associated with the acculturation process. Additionally, such research should assist in the development of intervention strategies; which promote healthier personal and social outcomes for Hispanic children. Research of this nature, focused specifically on children, is needed because of the historical lack of attention given to child psychopathology and the generally unacceptable practice of downward extension of adult theories to the psychological functioning of children (Ammerman, Last, & Hersen, 1993). Further, children of minority ethnic origin have
traditionally been underrepresented by research professionals in the field of psychology (Kazdin, 1993). Despite this, there is evidence of increased focus on child and adolescent psychological issues. A recent article by Kazdin (2001) revealed there are currently over 500 psychotherapies directed specifically at children and there is a strong push in the literature to develop and connect theories of the process of the development of psychological disorders in children. This paper hopes to contribute to the growing body of child-focused research, more specifically ethnic minority child-focused research, and add to the understanding of the processes by which psychological problems may develop in Hispanic children.
CHAPTER 2
SURVEY OF ACCULTURATION LITERATURE

Definitions and Models of Acculturation

Acculturation is the process which occurs when groups of people of differing cultural orientation come in to continuous first hand contact with one another, resulting in changes occurring in one or both cultural groups (Cuellar et al., 1997). Cuellar (2000) further described the processes of acculturation as occurring at both a macro and a micro level. The macro level consists of acculturative processes influencing and shaping large-scale cultural phenomena such as food, architecture, music, and language. Cuellar (2000) describes the micro level of acculturative change as more cognitive or psychological in nature. At this level, acculturative processes would be expected to produce changes in perception, ideologies, beliefs, language, values, and behavior.

Interest in the construct of acculturation has given rise to numerous instruments attempting to measure its effects on a person's cultural orientation. Additionally, this interest has given rise to multiple definitions of acculturation and theories regarding its process and function (Marin & Gamba, 1996; Norris, Ford & Bova, 1996; Cuellar, Arnold & Maldonado, 1995; Mendoza, 1989; Ramirez, Cousins, Santos & Supik, 1986; Olmedo & Padilla, 1978). A recent search of the database PsycINFO (© PsycNET, American Psychological Association, Washington, DC, www.psycinfo.com), using the key words "acculturation and measure or instrument" revealed over 38 instruments developed to measure acculturation in ethnic minority populations, revealing both its popularity as a
research topic and the substantial diversity of instruments attempting to capture acculturation quantitatively.

Through ongoing research, an evolution of understanding with regard to acculturation as a construct has occurred and consensus is beginning to center on acculturation as a complex, multidimensional construct. However, throughout the years, measures of acculturation have ranged greatly in their particular focus and their complexity. The most basic of these measures simply asks one’s language of preference (Gil, Vega, & Dimas, 1994) which attempts to assess acculturation as a linguistic process. The most complex measures of acculturation understand it as a multidimensional, multifactorial, and orthogonal construct (Cuellar et al., 1995). Such measures assess not only language preference, but also orientation toward or away from cultures of origin in terms of an individual’s or group’s cognitions, behaviors, and social environments.

Many criticisms of past research on acculturative processes have primarily focused on the tendency to present and/or use simple definitions and conceptualizations of the process of acculturation (Cuellar et al., 1995). The use of language preference as an indicator of acculturation level is one example (e.g., Gil et al., 1994; Epstein et al, 2001). Although preference for using one's language of ethnic origin versus the language of the majority culture provides an index of an individual’s acculturative movement toward the majority culture, it is seriously limited in the information it provides regarding ethnic specific behaviors, cognitions and preference for majority cultural activities versus minority cultural activities. As a result, more complete
assessments of acculturation have been sought which include cognitions and specific patterns of behavior, in order to more fully assess specific and key variables related to the acculturative process of ethnic minorities.

An example of such a conceptualization of acculturation is that which led to the development of the original version of the Acculturation Rating Scale for Mexican Americans (ARSMA) (© Sage Publications, Thousand Oaks, CA, www.sagepub.com) developed by Israel Cuellar and his colleagues (Cuellar, Harris, & Jasso 1980). This model, while taking into consideration ethnic specific cognitions, behaviors, and preferences, assumes that as a person acculturates, their orientation toward the majority culture increases while there is a corresponding decrease in their orientation toward their culture of origin. While providing a framework for more adequately understanding the complexities of acculturation, the ARSMA has some significant shortcomings, namely its reliance on a linear model of acculturation. A major weakness of the linear model is that it does not allow for a measure of bicultural orientation. This absence can lead to the faulty assumption that there must be a corresponding reduction in one of two cultural orientations for acculturation to take place (Cuellar et al., 1997; Oetting & Beauvais, 1991). More specifically, the linear model assumes that as an individual or group acculturates to a majority cultural orientation they experience a corresponding decrease in their orientation (e.g., cultural specific cognitions, behaviors, and preferences) to their culture of origin. While this outcome of acculturation is supported by research as one of many possible outcomes (e.g., Assimilation, see Berry & Kim, 1988), it does not allow for other possible acculturative pathways, such as
maintaining a strong orientation toward one’s own culture while increasing orientation toward the dominant culture (biculturalism). Therefore, the linear model is generally considered too simplistic to fully capture the complexities of the acculturative process (Oetting & Beauvais, 1991). Despite this, much of the current research still uses the linear model of acculturation in attempting to assess its impact on the functioning of ethnic minority groups.

As a correction to this model, the orthogonal model of acculturation has been offered. The orthogonal approach allows for any pattern or combination of cultural identification to exist as well as allowing for movement forward or backward along cultural dimensions (Oetting & Beauvais, 1991). For example, using this model it is possible to have bicultural individuals who have strong orientations in both the majority culture and their ethnic minority culture; persons with a uni-cultural orientation, either their own or the majority’s; persons with high orientation in one culture and moderate orientation toward another; and many other possible combinations (Oetting & Beauvais, 1991). The orthogonal model, theoretically, allows for an infinite number of acculturative outcomes. Because of this model’s ability to allow such fluidity and flexibility in assessing acculturation, it provides a conceptualization which is desirable and is likely to provide a more accurate reflection of the variety of different effects and potential outcomes acculturative processes have among ethnic minority individuals acculturating within a given majority culture. Since the development of the orthogonal model, some researchers have attempted to develop orthogonal, multidimensional acculturation measures (e.g., Marin & Gamba, 1996; Cuellar et al., 1995). For example, Israel Cuellar...
and his colleagues revised the original version of the Acculturation Rating Scale for Mexican Americans (1980) in an attempt to provide an orthogonal measure of the acculturation process. This revised scale provides a tool to demonstrate the utility and potential of the orthogonal model of acculturation.

The Acculturation Rating Scale for Mexican Americans-II (ARSMA-II) (© Sage Publications, Thousand Oaks, CA, www.sagepub.com) (Cuellar et al., 1995) is multidimensional and orthogonal in its assessment of acculturation. It uses the two-directional model to allow for an orthogonal assessment of the individual's acculturative orientation. The two-directional model places an individual's culture of origin on the X-axis and the culture to which the individual is acculturating on the Y-axis, creating four quadrants (see figure 1).

Each quadrant represents one of four basic acculturative combinations or typologies. For example, an individual scoring high in both cultural orientations would fall in quadrant I and be classified as a High Integrated Bicultural. Such a person would maintain a relatively strong orientation to both cultures and should feel comfortable with and be able to simultaneously identify with both cultures. This orientation is generally associated with the best psychological and social adjustment and is typically considered the most desirable acculturative outcome (Cuellar, Roberts, Romero, & Leka, 1999; LaFromboise, Hardin, Coleman, & Gerton, 1993).
A 1993 review of the literature on the psychological impact of acculturation by LaFromboise, Hardin, Coleman, and Gerton, examined the relationship of acculturation to the academic, social, and economic life of Hispanics. Their findings suggest that acculturation, as a process, in and of itself, is not able to adequately predict the social and psychological functioning of ethnic minority individuals within the majority culture. However, their findings suggested certain acculturative outcomes predict social
adjustment and are related to the individual’s psychological functioning. For example, the literature they reviewed provided evidence that ethnic minority individuals who are able to attain "bicural competence" (High Integrated Bicultural) are more likely to succeed both academically and socially. Rather than simply obtaining and assimilating the values and behaviors of the majority culture, those persons who have a secure and stable sense of themselves as members of their ethnic group, and at the same time have an understanding of and feel comfortable with the mores and practices of the majority culture are more likely to be more successful in society and suffer less psychological distress.

Another example might find an individual scoring low in both cultural orientations. This would place the individual in quadrant III and would classify them as Low Integrated Bicultural. Such a person would be considered “marginalized” in that they do not report identifying with either their own culture or the majority culture. Berry (1994), in describing marginalized persons reported that such a person does not find it important to keep up their relations with either their own culture or the one to which they would be compelled to acculturate, nor do they find any value in maintaining their sense of ethnic distinctiveness (Cuellar, Roberts, Romero, & Leka, 1999). As might be expected, the marginalized status is associated with poor adjustment both psychologically and socially (Cuellar, 2000; Cuellar et al., 1999, Berry & Kim, 1988; Stonequist 1937).

In addition to the quadrant III classification of a marginalized typology, Cuellar included three scales measuring a person’s feelings of marginality with respect to Mexican, Mexican American, and Anglo culture. These scales include direct questions,
which reflect a person’s difficulty accepting the “ideas, beliefs, customs and values” of
the three cultures (Cuellar et al., 1995). To date, I am unaware of research testing the
utility of these scales in measuring marginality, and subsequently, whether these scales
are related to psychological or social maladjustment. However, given previous research
supporting the construct of marginality and its relationship to adjustment problems, as
well as, recent societal examples of the impact of marginality on child and adolescent
behavior (i.e., Columbine and other school shootings) it is expected these scales should
also be related to psychological distress and behavior problems.

Individuals in quadrants II (Mexican Oriented Bicultural) and IV (Assimilated
Bicultural) represent a strong orientation in one culture and a weak or weaker
orientation in the other. Quadrant II represents an individual with a high Mexican
orientation and a low Anglo orientation classifying the individual as a Mexican Oriented
Bicultural. Quadrant IV represents an individual with a high Anglo orientation and a low
Mexican orientation and thus the person would be classified as an Assimilated
Bicultural.

In addition to assessing acculturation orthogonally, the ARSMA-II retained the
original capacity of allowing for a linear assessment of acculturation. This dual
assessment can be used to examine the relative utility of the two models (linear vs.
orthogonal) against one another with regard to their ability to account for various
adjustment problems. The strength of the ARSMA-II and other scales developed using a
multidimensional and orthogonal model is their allowance for a seemingly infinite
number of possible acculturative orientations and their greater sensitivity to the nuances of this complex construct.

Acculturative Processes and Hispanics

A review of the literature describing the effects of acculturation on Mexican American populations reveals that acculturation has been variably found to be related to a host of behavioral, social, and academic variables including alcohol abuse (Zimmerman & Sodowsky, 1993), teen pregnancy (Reynoso, Felice, Shragg, 1993, Balcazar, Peterson, Cobas, 1996), suicidal ideation (Rasmussen, Negy, Carlson, & Burns 1997), reporting of psychopathological symptomology (Montgomery & Orozco, 1985), gang involvement (Belitz & Valdez, 1997), adolescent delinquency (Fridrich & Flannery, 1995), and performance on achievement tests (Barona & Pfeiffer, 1992). Results across the current literature vary in their findings regarding the directional relationship of many of these variables to acculturation. A difficulty, and likely contributing factor, noted by a recent conference sponsored by the American Psychological Association is the differences and inconsistencies in methodologies applied in acculturation research, definitions of acculturation, and tools used to measure acculturation (Azar, 1999). Despite these difficulties, the overall findings suggest that as Hispanics become more like their Caucasian cohorts in terms of their cognitions, preferences, and behaviors and simultaneously less like their cultural cohorts, the greater the likelihood they will experience the above reported psychosocial problems. Given this, questions arise as to what aspect of the process of acculturation or its outcomes creates greater potential for experiencing life problems. Secondly, are there
ways of acculturating or are there acculturative outcomes, which do not put the individual at risk?

Researchers have examined the potential for significant stress mediated by the experience of acculturation (Chavez, Moran, Reid & Lopez, 1997; Montgomery, 1992a; Montgomery, 1992b, Gil et al., 1994; Curtis, 1990). It is believed the process of acculturation strains an individual's psychological resources. Acculturation is a change process, changing minority individuals coming into first hand contact with a majority culture in both qualitatively and quantitatively measurable manners, as can be attested to by the numerous research studies conducted on its effects. With regard to the impact of change, there is a long history of research suggesting life change is stressful and has a measurable impact, both physiological and psychological, on the individual undergoing the change process (e.g., Holmes and Rahe, 1967).

Cuellar (1999) suggests an individual who changes through the acculturative process is faced with different levels of change, some of which are more difficult to adapt to than others. For example, some behavioral acculturative changes such as learning a new language, eating different foods, listening to different music are integrated more easily, with less cognitive dissonance, than more distinctive activities and ideologies that involve the individual's value system. The level of dissonance between the individual's pre-existing ideologies and his attachment to them and the ones to which he/she is attempting to acculturate may determine the potential for stress.

Although some individuals successfully adapt and resolve the dissonance over time, others do not, and this lack of adaptation and resolution represent a significant
source of stress (Cuellar, 1999). Without resolution or successful adaptation, the nature of acculturation as an ongoing and long-term process could create a significant source of chronic stress. It is now well known that chronic stress has been linked to a variety of physiological, emotional, behavioral, and social maladies (Cuellar, 1999; Cuellar, Roberts, Romero, & Leka, 1999). Factoring cognitive appraisal processes into this equation (Lazarus & Folkman, 1984), the difficult social situations of many Hispanics in America, including poverty, creates a potentially significant exacerbation of the stress experience. As a result, much current research has focused on modes of acculturation and acculturative outcomes (e.g., Apodaca, 2000; Mendoza-Newman, 2000; Sanchez, 2000; Stewart, 1999; Lessenger, 1998). The current study aims to add to the growing body of research contributing to the understanding of acculturative processes in Hispanic children.
CHAPTER 3
PURPOSE OF STUDY

This paper discusses results of data collected from a population of sixth, seventh, and eighth grade Mexican American students in a South Texas school district along the border of Mexico. The purpose of this study is to further the understanding of the relationship of acculturation with psychological distress and behavior problems measured by self-report of these problems. Three points have influenced the focus, scope, depth, and objective of this research study:


2. To date there has been no direct examination of the possible differences in the utility of the linear model of acculturation versus the orthogonal model in helping understand psychological/behavioral problems in Mexican American adolescents.

3. Although there is speculation about the relationship of ethnic marginality to behavioral problems in children and adolescents in the literature there is
currently no research examining the relationship between marginality as measured by the ARSMA-II (Cuellar, Arnold & Maldonado, 1995) and the self-report of psychological symptoms by Mexican American adolescents.

Research Questions

While much has been done examining the linear model of acculturation and its relationship to adjustment difficulties in Hispanics there are still significant inconsistencies with regard to the amount of variance in psychological and behavioral difficulties for which it can account. Although consensus appears to be leaning toward its inadequacies, further research is needed before conclusions can be reached regarding its utility. Additionally, despite the relative newness of the orthogonal model, its ability to generate acculturation typologies and its potential for explaining acculturative effects on a variety of psychosocial variables is promising. As a result, further exploration of its utility should be ongoing. The question of the linear model's utility versus the orthogonal model's capabilities is compounded by the lack of acculturation research using the age group (12 years to 14 years) selected for this study.

Two primary research questions will guide the analysis.

1) Does the orthogonal, typological approach to acculturation have greater utility than the linear model of acculturation with regard to helping understand and explain self-reported psychological symptoms as measured by the YSR (Achenbach & Edelbrock, 1983; Achenbach, 1991a)?
2) Are the types of ethnic marginalization as measured by the ARSMA-II (Cuellar, Arnold & Maldonado, 1995) related to psychological symptoms as measured by the YSR (Achenbach & Edelbrock, 1983; Achenbach, 1991a)?

Hypotheses

Using the research questions discussed above, specific hypotheses were developed to guide data analysis and to provide answers addressing the questions raised. The hypotheses are as follows:

1. Self-report of behavior as measured by the Internalizing and Externalizing Behavior scales of the YSR (Achenbach & Edelbrock, 1983; Achenbach, 1991a) scales will significantly vary as a function of both the linear and orthogonal acculturation classifications. However, it is expected that the orthogonal model will account for a greater proportion of the variance in behavior problems than will the linear model.

2. Self-report of behavior as measured by the Internalizing and Externalizing Behavior scales of the YSR (Achenbach & Edelbrock, 1983; Achenbach, 1991a) will significantly vary as a function of the categorization of marginalization by the three marginality scales, including Mexican Marginality, Mexican American Marginality, and Anglo Marginality as measured by the ARSMA-II (Cuellar, Arnold & Maldonado, 1995) More specifically, it is expected that subjects identified as marginalized will have significantly more behavioral disturbance than those subjects who are not marginalized.
CHAPTER 4

METHODS

Subjects

This study is part of a larger investigation exploring thoughts, attitudes, and academic performance of rural Mexican American adolescents. Parents of sixth, seventh, and eighth grade students of a south Texas school district were notified and provided a description of the study. After receiving permission from the district superintendent and campus administrators, parental passive consent and child assent procedures were used. If parents chose not to allow their child to participate, they were instructed to sign a form requesting such and return it to the school with their child. Students were provided with an assent form requiring their signature the day of data collection and were given the option to either participate or opt out of participation. Teachers of each classroom were also given the option to participate or engage in another work activity during the data collection period.

The total number of students enrolled in grades six through eight on the two data collection days in November 1997 totaled 2,809. The month of November was chosen to help assure that a maximum number of students from migrant families had returned to school. There were 157 students absent on one or both of the two days of data collection. Partially completed surveys were not included if they were due to a student’s absence during data collection. Eight students did not participate due to their parents returning completed and signed non-participatory forms indicating the parent/s did not give permission for their child to participate in the study.
Of the 2,644 remaining students, 814 did not participate in the study. As a result, the survey information of 1830 students was entered into the database. A total of 1156 students had complete data on the measures examined in the current study and were included in the analysis.

Procedures

Data was collected over a two-day period in November 1997. Students were instructed not put their names on the surveys and were identified only by the student’s ID number. The classroom teachers read the entire survey to their students prior to administration and the teachers assisted students with questions as needed. If the child requested, or if the child was identified as an ESL (English as a Second Language) student, they were given a survey written in Spanish and it was read to the child in Spanish. However, the current data set does not include any surveys read in Spanish. If a child requested not to participate once the study was underway they were permitted to discontinue their survey. No such requests for discontinuation were noted.

School performance and demographic data for each student was obtained from the school district. The data included a student ID that allowed matching the school performance and sociodemographic data with the survey data. School data points included grades, absences, academic achievement scores, and status as at-risk for dropping out of school, limited English proficiency, migrant, and gifted and talented, among other variables.

Materials

Acculturation Rating Scale of Mexican Americans-II (ARSMA-II)
The ARSMA-II (© Sage Publications, Thousand Oaks, CA, www.sagepub.com) is a 48-item Likert type scale that measures acculturation along 3 primary factors: language, ethnic identity, and ethnic interaction. The ARSMA-II is an orthogonal, multidimensional scale that measures orientation toward the Mexican culture and the Anglo culture independently using two subscales, a Mexican Orientation Subscale (MOS) and an Anglo Orientation Subscale (AOS). The MOS has 17 items and a coefficient alpha of .88 while the AOS has 13 items and a coefficient alpha of .83. For complete reliability statistics see Table 1. ARSMA-II is able to generate both linear acculturation categories (Levels 1-5) and orthogonal acculturative categories (Traditional, Low Bicultural, High Bicultural, and Assimilated). For each subject, a mean MOS score is computed by summing the 17 items of the MOS scale and dividing by 17. Likewise, a mean AOS score is obtained by summing the 13 items of the AOS and dividing by 13. A linear acculturation score is obtained for each subject by subtracting the mean MOS score from the mean AOS. This linear acculturation score is used in computing acculturation level for each subject as well.

Orthogonal acculturation indices can be used, for example, to examine relations of modes of acculturation to psychological adjustment. Acculturation typologies generated from orthogonal indices (Traditional, High Integrated Bicultural, Low Integrated Bicultural, and Assimilated) are derived using the MOS and the AOS of ARSMA-II (see Cuéllar, Arnold & Maldonado, 1995). Examples of items on the MOS are “I speak Spanish; I enjoy Spanish language TV; My thinking is done in Spanish.” Examples of items on the AOS are “I speak English; I write letters in English; My friends are of Anglo
Response categories to all items on ARSMA-II are based on a 5 point Likert scaling format evaluating frequency and/or intensity. The criteria for including subjects into one or the other of the acculturative categories on ARSMA-II is generally based on obtained scores on the MOS and AOS using the following computational procedures:

- **Traditionals (MOS=> 3.7; AOS=< 3.24):**
- **Low Biculturals (Marginalized) (MOS <3.59; AOS <3.7):**
- **High Biculturals (MOS >3.59; AOS >3.7):**
- **Assimilated (MOS=<2.44; AOS => 4.11):**

These cutting scores are based on standard deviation units or fractions thereof about the mean of the original standardization sample of ARSMA-II (see Cuéllar et al, 1995). Subjects who did not clearly fall into one or another of the four acculturative typologies are generally excluded from analyses, but in some cases their characteristics can be examined as well.

Three marginality scales are included to obtain a Marginality score, which reflects the individual’s difficulties with Anglo, Mexican, and Mexican American beliefs, customs, and ideas. As with the other acculturation categories, the criteria for determining which subjects were classified as marginalized was based on cut-off scores using standard deviations from the mean of the original ARSMA-II sample (Cuellar et al, 1995). The parameters for each category are as follows: Mexican Marginalized (MEXMAR => 16.82) Mexican American Marginalized (MAMARG => 14.98) and Anglo Marginalized (ANGMAR => 17.34). When a subject met or exceeded the cut-off criteria on all three marginality subscales they received the classification of marginalized. This reflected a lack of identification with any of the three major ethnic/cultural orientations in their environment.
Table 1

Reliability Data for ARSMA-II Scales and Subscales (adapted from Cuellar, Arnold, & Maldonado, 1995) (Used with permission)

<table>
<thead>
<tr>
<th>N = 364</th>
<th>AOS</th>
<th>MOS</th>
<th>MARG</th>
<th>ANGMAR</th>
<th>MEXMAR</th>
<th>MAMARG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Split-half</td>
<td>.77</td>
<td>.84</td>
<td>.82</td>
<td>.87</td>
<td>.60</td>
<td>.90</td>
</tr>
<tr>
<td>Spearman-Brown</td>
<td>.87</td>
<td>.91</td>
<td>.90</td>
<td>.93</td>
<td>.75</td>
<td>.94</td>
</tr>
<tr>
<td>Guttman (Rulon)</td>
<td>.87</td>
<td>.91</td>
<td>.90</td>
<td>.92</td>
<td>.73</td>
<td>.94</td>
</tr>
<tr>
<td>Coefficient alpha (all items)</td>
<td>.83</td>
<td>.88</td>
<td>.87</td>
<td>.90</td>
<td>.68</td>
<td>.91</td>
</tr>
<tr>
<td>Test-Retest (1-week interval, n=31)</td>
<td>.94</td>
<td>.96</td>
<td>.78</td>
<td>.72</td>
<td>.80</td>
<td>.81</td>
</tr>
</tbody>
</table>

AOS = Anglo Orientation Scale; MOS = Mexican Orientation Scale; MARG = Marginality Scale; ANGMAR = Anglo Marginality Subscale; MEXMAR = Mexican Marginality Subscale; MAMARG = Mexican American Marginality Subscale.

Youth Self Report (YSR)

The Youth Self-Report (YSR), (© T.M. Achenbach, Burlington, VT, www.aseba.com), (Achenbach & Edelbrock, 1983; Achenbach, 1991a) is a 112 item self-report measure designed to obtain information regarding the feelings and behavior of adolescents 11 to 18 years of age. Subjects read a short statement, then circle the number (0 = not true, 1 = somewhat or sometimes true, or 2 = very true or often true) that most closely reflected their view for each item. These items group to compose eight subscales each relating a different aspect of the child’s psychological and behavioral functioning, two summary scales measuring tendencies to either internalize or externalize their emotional distress,
and a total YSR Composite score is calculated as a global measure of overall emotional and behavior distress.

Standardized scoring of the YSR yielded raw scores and T scores for eight subscales and included: Withdrawn, Somatic Complaints, Anxious/Depressed, Social Problems, Thought Problems, Attention Problems, Delinquent Behavior, and Aggressive Behavior. In addition, the Externalizing Behavior Composite T-scores and Internalizing Behavior Composite T-scores were generated for inclusion as the dependent variables in these analyses.
CHAPTER 5
STATISTICAL ANALYSIS

General Description of the Study Sample

The major socio-demographic characteristics were assessed via frequency analyses (see Table 2). The sample’s distribution for age was as expected given that the sample was taken from junior high students, with the majority of students falling in the 11-14 years of age range. A small percentage of the sample was 15 years of age and likely represents a group of children who have been held back due to academic difficulties. The sample was equally distributed with respect to gender and grade in school. However, in terms of the sample’s ethnic make up the vast majority of children were of Hispanic origin (95.8%) while the remaining portion of the sample was mostly Anglo in origin (4.1%). Despite the large majority of Hispanics in the sample, when language spoken at home was examined only a small majority of the sample’s home language was Spanish (56.6%) while most of the remaining children spoke English at home (42.6%). A much smaller portion spoke Chinese or another language at home (0.10%).
Table 2
Student Opinions and Attitudes Survey Demographics

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>571</td>
<td>49.4</td>
</tr>
<tr>
<td>Females</td>
<td>585</td>
<td>50.6</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anglo American</td>
<td>47</td>
<td>4.1</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>2</td>
<td>.2</td>
</tr>
<tr>
<td>Latino/Hispanic</td>
<td>1107</td>
<td>95.8</td>
</tr>
<tr>
<td>Grade In School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6th</td>
<td>414</td>
<td>35.8</td>
</tr>
<tr>
<td>7th</td>
<td>365</td>
<td>31.6</td>
</tr>
<tr>
<td>8th</td>
<td>377</td>
<td>32.6</td>
</tr>
</tbody>
</table>

Evaluation of the Reliability and Validity of Measures

Cronbach alpha coefficients were computed for each measure employed in order to establish their respective reliabilities for the current study sample (see table 3). Using the standard cut-off of .70 for acceptable alpha coefficient scores each of the measures and their individual scales for this sample were acceptable or better. The lowest Cronbach alpha coefficient was obtained for the Anglo orientation subscale of the Acculturation Rating Scale for Mexican Americans-II (ARSMA-II) (© Sage Publications, Thousand Oaks, CA, www.sagepub.com) (.77). The additional subscales of the
ARSMA-II had coefficients no lower than .80. The Youth Self-Report (YSR), (© T.M. Achenbach, Burlington, VT, www.aseba.com), Internalizing and Externalizing composite scales had excellent alpha coefficients (.91 and .90, respectively). As a result, both the ARSMA-II and the YSR and their subscales have sufficient internal consistency reliability with this sample to continue with further analysis.

Table 3

<table>
<thead>
<tr>
<th>Measures</th>
<th>Number of Items</th>
<th>Coefficient Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anglo Orientation Scale (AOS)</td>
<td>13</td>
<td>.77</td>
</tr>
<tr>
<td>Mexican Orientation Scale (MOS)</td>
<td>17</td>
<td>.89</td>
</tr>
<tr>
<td>Mexican Marginality Subscale</td>
<td>6</td>
<td>.88</td>
</tr>
<tr>
<td>Mexican Am. Marginality Subscale</td>
<td>6</td>
<td>.91</td>
</tr>
<tr>
<td>Anglo Marginality Subscale</td>
<td>6</td>
<td>.82</td>
</tr>
<tr>
<td>YSR Internalizing Behavior Scale</td>
<td>32</td>
<td>.91</td>
</tr>
<tr>
<td>YSR Externalizing Behavior Scale</td>
<td>30</td>
<td>.90</td>
</tr>
</tbody>
</table>

With respect to the validity of the ARSMA-II a Pearson product moment correlation of .89 was obtained between the acculturation scores of the original ARSMA and that of the ARSMA-II supporting the concurrent validity (Cuellar, Arnold, and Maldonado, 1995). Additionally, a Pearson product moment correlation of .61 (p<. 001) was found between acculturation indicators as measured by the ARSMA-II and generational status. The relationship was as expected with individuals becoming more acculturated as a function of having been in the United States for more generations.
With each successive generation individuals become significantly more Anglo oriented and less Mexican oriented supporting the construct validity of the ARMSA-II.

The YSR has been widely used in social and behavioral sciences (Song, Singh, & Singer, 1994), and has well established reliability and validity, particularly among the Internalizing (Test-Retest One Week: .80) and Externalizing (Test-Retest One Week: .81) composite items (Achenbach, 1991a; Achenbach, 1991b; McConaughy, 1993; Pumariega, Glover, Holzer, & Nguyen, 1998; Song, Singh, & Singer, 1994).

Description of the Acculturation Characteristics of the Study Sample

Only students who self-identified as either Mexican American, Mexican National, or of Hispanic origin (N = 1107) are included in the acculturation analysis since acculturation in Latinos is the focus of this study. The acculturation characteristics of the study sample are depicted in Table 4.

The distribution of linear acculturation categories in the sample was generally normally distributed however; there was a slight positive skewness. Only 20.0% of the sample was classified within the more acculturated categories, Levels 4 and 5, while approximately 36% of the sample was classified within the less acculturated categories, Levels 1 and 2. In general, the tendency with respect to linear acculturation, was for the sample to be more Mexican oriented.
Table 4

Acculturation Characteristics of the Sample

<table>
<thead>
<tr>
<th>Acculturative Types</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acculturation Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1</td>
<td>44</td>
<td>4.0</td>
</tr>
<tr>
<td>Very Mexican Oriented</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 2</td>
<td>358</td>
<td>32.3</td>
</tr>
<tr>
<td>Mexican Oriented to Approximately Bicultural</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 3</td>
<td>485</td>
<td>43.8</td>
</tr>
<tr>
<td>Slightly Anglo Oriented Bicultural</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 4</td>
<td>207</td>
<td>18.7</td>
</tr>
<tr>
<td>Strongly Anglo Oriented Bicultural</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 5</td>
<td>13</td>
<td>1.2</td>
</tr>
<tr>
<td>Very Assimilated; Anglicized</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acculturation Typology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional</td>
<td>88</td>
<td>7.9</td>
</tr>
<tr>
<td>Low Biculturalans</td>
<td>473</td>
<td>42.7</td>
</tr>
<tr>
<td>High Biculturalans</td>
<td>146</td>
<td>13.2</td>
</tr>
<tr>
<td>Assimilated</td>
<td>30</td>
<td>2.7</td>
</tr>
<tr>
<td>Could Not Classify</td>
<td>370</td>
<td>33.4</td>
</tr>
<tr>
<td>Marginalized</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marginalized</td>
<td>74</td>
<td>6.4</td>
</tr>
<tr>
<td>Not Marginalized</td>
<td>965</td>
<td>83.5</td>
</tr>
</tbody>
</table>

Frequency data for the orthogonal acculturation types are depicted in Table 4, (Traditional, Low Integrated Bicultural, High Integrated Bicultural, and Assimilated).
The orthogonal acculturation categories were not equal in their distribution among the different categories. The majority of subjects (42.7%) fell in the Low Integrated Bicultural classification, while the remaining sample was classified as Traditional Mexican (7.9%), High Integrated Bicultural (13.2%), and Assimilated (2.7%).

Comparison of the Linear Acculturation and the Orthogonal classifications of the sample show the two models reflect similar results, each with a slightly more Mexican oriented sample. Such a finding is not surprising given the ethnic homogeneity of the geographic area in which the data was collected. This trend is especially apparent when examining the two classification schemes' most acculturated or most Anglo-like categories. Level 5 from the linear model and Assimilated from the orthogonal model account for only 1% to 2% of the sample, respectively.

One problem became apparent with the orthogonal classification scheme as developed by Cuellar et al, (1995). Approximately, 33% of the sample could not be classified using the inclusion criteria developed by the authors. Although Cuellar suggests simply not including the unclassified subjects in further analysis, such a percentage seems high.

The groupings among the levels of the acculturation classifications reveal that, by far, majority of students in the sample fall within one to two of the possible categories. This suggests that, as a whole, the sample is quite homogeneous with respect to their acculturation characteristics. Again, such homogeneity of acculturative processes is not surprising given the homogeneity in general of the area, in terms of ethnicity, language, and cultural practices.
The categorization of marginalized subjects was based on the scores on the three individual ARSMA-II marginalization subscales (Mexican Marginalization, Mexican American Marginalization, Anglo Marginalization).

The percentage of the sample, which could be classified as marginalized was 6.4%. This suggests the vast majority of the sample cannot be classified as marginalized on the experimental marginalization scales of the ARSMA-II.

Statistical Procedures and Results

There are three demographic variables, which have well-known effects on the expression of behavior problems in children and adolescents included in this study. These variables are gender, socioeconomic status (SES), and age. The YSR provides built in controls for both age and gender. The YSR was designed for and normed on children ages 11-18 and so should provide an accurate reflection of self-reported behavior problems with the ages of the subjects represented in this sample. As well, the YSR controls for the effects of gender on behavior by using adjusted T-scores for males and females. With respect to socio-economic status (SES), the measure of SES included in the Youth Attitudes and Opinions Survey was self-report in nature, making it of suspect validity with such a young sample. The “standard of living” question was a five level categorical variable ranging from “very-well off” to “poor”. Upon examining the sample’s responses to the question a large percentage of the sample did not respond to the question. Although it is unknown why so many subjects did not respond to this question it suggests this is likely an unreliable measure of the sample’s actual SES. As a result, there is no specific control for the sample’s SES in further analysis. However, it
is generally known that the southern-most geographic region of Texas from which the sample was collected is economically impoverished and the majority of individual's living there fall below the poverty line. More specifically, approximately 95% of the school population meets socio-economic criteria qualifying them for the school lunch program suggesting their families are at or near federal guidelines defining poverty levels. A study by Juarez, Saenz, Lopez, Garza, Fossom, and Gonzalez-Lopez (1994) revealed the average per capita income of the area from which the sample was drawn is $5,000 per year. This further confirms that most of the sample, as with their ethnicity, is quite homogeneous with respect to SES and likely falls within the lower socio-economic brackets.

Prior to analysis, the data included in this study was screened for univariate and multivariate outliers. As well, the data was screened for compliance with the assumptions required for multivariate analysis. To determine if univariate outliers were present standardized scores were generated for age, Anglo Orientation Subscale, Mexican Orientation Subscale, Acculturation Score, Internalizing Behavior Scale, and Externalizing Behavior Scale. Three low scores on the Anglo Orientation Scale and one low score on the Acculturation Score were identified as univariate outliers. However, given the size of the sample some univariate outliers are to be expected and in each case the percentage of the distribution the outliers represented was less than one-half of one percent. Thus none of the univariate outliers were deleted from the sample included for analysis. The possibility of multivariate outliers was examined using the Cook’s Distance statistic. The Cook’s Distance statistic measures the influence of
individual multivariate cases within the sample. Tabachnick and Fidell (1996) recommend cases with influence scores exceeding 1.0 be considered outliers and thus deleted from the sample prior to further analysis. No multivariate outliers were detected and thus no further concern regarding outliers was warranted.

The assumptions required for MANOVA were examined for the current study sample including normality, homogeneity of variance-covariance matrices, linearity, and multicollinearity/singularity. Upon examining the assumption of normality, no problem was noted with respect to either dependent variable. According to Tabachnick and Fidell (1996), MANOVA is robust to modest violations of normality and this is especially true of large samples. Additionally, robustness to violations of multivariate normality can generally be ensured with a sample size that produces degrees of freedom for error of greater than 20. This is easily met given the size of the sample included in this analysis.

MANOVA assumes a linear relationship between all pairs of dependent variables. This assumption is important in that a lack of linearity among the dependent variables fails to maximize the separation between the groups for the independent variables. To test this assumption for the current sample a bivariate scatterplot was computed with the internalizing behavior scale on the X-axis and the externalizing behavior scales on the Y-axis in order to determine whether or not their relationship was linear. An examination of this bivariate scatterplot reveals a strong linear trend between the two dependent variables. To confirm this, a bivariate correlation was calculated between the Internalizing and Externalizing Behavior Scales. A correlation coefficient of .61 was
obtained further suggesting a strong linear relationship and revealing the assumption of linearity is met for the following analysis.

The assumption of multicollinearity and singularity in MANOVA assesses whether the correlation between dependent variables is so strong that they provide information which is redundant and as a result, whether one or more of the dependent variables should be excluded from the analysis. To examine this assumption for the current sample a Pearson’s Product Moment bivariate correlation coefficient was calculated for the two dependent variables. Tabachnick and Fidell (1996), suggest using a correlation coefficient of .90 or above as the statistical criterion for determining whether dependent variables violate the muticollinearity and singularity assumption. The correlation coefficient obtained for the two dependent variables in the current study was .61, suggesting the dependent variables are not redundant and therefore the assumption of multicollinearity and singularity is met.

The last assumption to be tested for the current sample’s data was the assumption of homogeneity of variance-covariance matrices. For MANOVA, “the assumption is that variance-covariance matrices within each cell of the design are sampled from the same population variance-covariance matrix and can reasonably be pooled to create a single estimate of error” (Tabachnick and Fidell, 1996). The traditional test of this assumption is the Box’s M Test. Tabachnick and Fidell (1996), suggest that for unequal sample sizes among the levels of the independent variables, as is the case for the current sample, a Box’s M test with a $p< .001$ should be used as the criteria for determining whether this assumption is met. A Box's M statistic which was significant at $p< .001$
would be considered a violation of the assumption. Three MANOVAs were conducted for this study and, as a result three Box’s M tests were generated. In each case the Box’s M statistic was nonsignificant and suggested the assumption of variance-covariance matrices was met (see table 5).

Table 5

<table>
<thead>
<tr>
<th></th>
<th>Linear Acculturation</th>
<th>Orthogonal Acculturation</th>
<th>Marginalization Scales</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>F-Value</strong></td>
<td>0.990</td>
<td>0.689</td>
<td>1.474</td>
</tr>
<tr>
<td><strong>p-value</strong></td>
<td>0.525</td>
<td>0.720</td>
<td>0.271</td>
</tr>
</tbody>
</table>

By analysis of the assumptions for MANOVA, it was determined that each assumption was met and therefore proposed MANOVA procedures can be calculated.

A multivariate analysis of variance (MANOVA) was conducted using acculturation level (Levels 1-5) as the independent variable and the two behavior composite scales (Internalizing and Externalizing) of the Youth Self-Report were entered as the dependent variables. Means and standard deviations were calculated for the dependent variables across all levels of the independent variable (see Table 6). The results of the MANOVA suggest that there is no significant main effect for the independent variable of Linear Acculturation categories on the dependent variables of internalizing behavior and externalizing behavior as measured by the YSR (F(8, 2204) = 1.50, p < .151, η² = .005, 1-β = .68 ).
Table 6

Means and Standard Deviations for Linear Acculturation Categories

<table>
<thead>
<tr>
<th>Linear Acc.</th>
<th>Internalizing Behavior</th>
<th>Externalizing Behavior Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Level 1</td>
<td>54.46</td>
<td>11.27</td>
</tr>
<tr>
<td>Level 2</td>
<td>52.34</td>
<td>11.21</td>
</tr>
<tr>
<td>Level 3</td>
<td>53.56</td>
<td>12.23</td>
</tr>
<tr>
<td>Level 4</td>
<td>51.57</td>
<td>11.91</td>
</tr>
<tr>
<td>Level 5</td>
<td>47.85</td>
<td>10.73</td>
</tr>
</tbody>
</table>

A multivariate analysis of variance was conducted using the orthogonal acculturation typologies (Traditional, Low Bicultural, High Bicultural, and Assimilated) as the independent variable and the two behavior composite scales (Internalizing and Externalizing) of the Youth Self-Report were entered as the dependent variables. See Table 7 for the obtained means and standard deviations of the orthogonal categories on the dependent variables. The results of the MANOVA suggested that there is no significant main effect for the independent variable of Orthogonal Acculturation categories on the dependent variables of internalizing behavior and externalizing behavior as measured by the YSR ($F(6, 1296) = 1.125, p < .345, \eta^2 = .005, 1-\beta = .45$).

A further analysis was conducted with the unclassified individuals included in the model as a level of the independent variable to determine if they differed as a group on the dependent variables. Results indicate that adding the unclassified subjects as a level of the independent variable does not significantly change the outcome of no main effect of
the independent variable on the dependent variables \( F (8, 2202): 1.04, p < .405, \eta^2=.004, 1-\beta=.49 \). This suggests that the unclassified subjects do not differ in their scores on the Internalizing and Externalizing Behavior Scales of the YSR from subjects who fell into one of the four orthogonal acculturation categories.

Table 7

<table>
<thead>
<tr>
<th>Orth. Acc.</th>
<th>Internalizing Behavior</th>
<th>Externalizing Behavior Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( M )</td>
<td>( SD )</td>
</tr>
<tr>
<td>Category 1</td>
<td>53.53</td>
<td>10.55</td>
</tr>
<tr>
<td>Category 2</td>
<td>52.58</td>
<td>12.00</td>
</tr>
<tr>
<td>Category 3</td>
<td>54.04</td>
<td>12.14</td>
</tr>
<tr>
<td>Category 4</td>
<td>49.37</td>
<td>11.11</td>
</tr>
</tbody>
</table>

Multivariate analyses of variance were conducted using the Marginalization Subscale of the ARSMA-II as an independent variable and the two behavior composite scales (Internalizing and Externalizing) of the Youth Self-Report were entered as the dependent variables. See Table 8 for means and standard deviations. The results of the MANOVA suggested that, although the trend was for those subjects classified as marginalized to have higher scores on both the internalizing and externalizing scales of the YSR, there is no significant main effect of the independent variables of Marginalization scales on the dependent variables of internalizing behavior and externalizing behavior as measured by the YSR \( F (2, 990) = 1.11, p < .329, \eta^2=.002, 1-\beta=.25 \).
Table 8

<table>
<thead>
<tr>
<th>Marginalization</th>
<th>Internalizing Behavior</th>
<th>Externalizing Behavior Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marginal</td>
<td>$M = 54.72$, $SD = 13.35$</td>
<td>$M = 55.18$, $SD = 12.43$</td>
</tr>
<tr>
<td>Not Marginal</td>
<td>$M = 52.74$, $SD = 11.64$</td>
<td>$M = 53.20$, $SD = 12.40$</td>
</tr>
</tbody>
</table>

It was noted the power ($1-\beta$) of each of the MANOVA result was below the recommended criteria of .80 (Cohen, 1992). The size of the current sample is likely not contributing to this problem nor is error variance as the Levene’s Test of Homogeneity of Error Variance on each MANOVA was non-significant. However, an examination of the effect size of each MANOVA reveals the most likely cause of reduced power. In each case, the proportion of variance accounted for by the model is less than 1%. Given the sample size, even had significant results been found the practical significance of such results would have been of virtually no value. Although the power of each MANOVA was not sufficient to confidently reject the null hypothesis an examination of the effect sizes obtained reveal that very likely, in each case, the null hypothesis was correctly retained.
CHAPTER 6
DISCUSSION

The results of this study do not appear to support much of the current findings in the literature on acculturation, which suggests that acculturative processes and particular acculturative states impact psychological functioning (Cuellar, Roberts, Romero, & Leka, 1999; LaFromboise, Hardin, Coleman, & Gerton, 1993). Neither hypothesis put forth was supported; suggesting that for this particular sample there appears to be no significant effect of acculturation and its processes on Hispanic pre-adolescents' self-report of behavioral distress. Additionally, this finding is true for both the linear and orthogonal models of acculturation, as well as, the experimental marginalization scales. Since neither the linear nor orthogonal model of acculturation provided by the Acculturation Rating Scale for Mexican Americans (ARSMA-II) (© Sage Publications, Thousand Oaks, CA, www.sagepub.com) significantly predicted self-report of behavioral symptoms, one of the major questions posed by this study will remain unanswered: Does the orthogonal model have more utility than the linear model of acculturation in predicting behavioral symptoms in children?

Despite the findings of this study and its inconsistency to some of the acculturation literature, it does not disagree with the total body of literature on acculturative effects in ethnic minority populations. Several studies of acculturation have found no significant effect of acculturation on various socioemotional variables. For example, a 1999 study by Joiner using the ARSMA-II found that acculturation and cultural values were not significantly related to bulimic symptoms in Hispanics. Another
study by Gasco (2000) found no significant difference between Latino drug abusers and non-drug abusers on acculturation. Perhaps most salient to the findings of the current study, Casares (2000) found no relationship between psychiatric symptoms and the degree of acculturation in Dominican-American children, ages 11-14. Although the sample was drawn from a different population, the results appear to be consistent with the findings of the current study. So certainly, the present study’s results do not completely stand alone in finding no relationship between acculturation and socioemotional variables.

Additionally, it should be noted that this study is unique in many ways. It is the only study to date, of which the author is aware, examining the impact of acculturation on the self-report of behavioral distress in Hispanic children. Maria and Casares (2000) used parent and teacher reports of the children’s behavior. Additionally, the current study applies Cuellar’s (1995) orthogonal model of acculturation to the acculturative processes of children, which to date has not been done. Given this, there is little if any research to which the results of this study can be directly compared, making generalizations from this sample to Hispanic children as a whole difficult and likely not responsible at this time. There is little to compare it to except studies with older adolescents and adults, the results of which may or may not apply to this sample. Further research will be required to develop a body of findings with this age group in order to have a context within which to make more meaningful comparisons and assumptions.
It is interesting to note that within the orthogonal acculturative typologies the largest proportion of the sample fell within the Low Integrated Bicultural category (42.7%). This means a large portion of the sample’s identification with both the Mexican orientation and the Anglo orientation was relatively low. This finding is interesting as well, when examining the percentage of the sample classified as marginalized by the experimental marginalization scales of the ARSMA-II, which was only 6.4%. The difference in classification as marginalized by approximately 35% suggests they may not be measuring the same qualities of marginalization. In fact, this assumption makes sense when examining differences in how they determine marginalization. Whereas the orthogonal model makes the classification through the subject’s lack of identification with Hispanic and Anglo beliefs and cultural practices, the marginalization scales specifically ask subjects if they have difficulty identifying with particular aspects of Hispanic and Anglo social, cultural, and ideological domains. Despite their differences, the lack of a significant finding for either measure of marginalization is surprising given the support in the literature for the potentially negative impact of a marginalized state on psychosocial functioning (e.g., Cuellar, 1999; Cuellar et al., 1999, Berry, 1994; Berry & Kim, 1988; Stonequist 1937).

One hypothesis, which may account for this finding has to do with the homogeneity of the sample and the population from which it was drawn. The general premise for why acculturative processes impact socioemotional and behavioral functioning is that acculturation causes psychological stress (Chavez, Moran, Reid & Lopez, 1997; Montgomery, 1992a; Montgomery, 1992b, Gil et al., 1994; Curtis, 1990).
Given that the children in this sample appear to show no effect of acculturation on behavioral or emotional disturbance, it is possible some environmental factor is moderating the stress associated with acculturation and thereby blunting it's negative consequences. The population from which this sample was drawn was extremely homogeneous in terms of ethnicity (96% Latino/Hispanic) and socio-economic status. As a result, these children who are a part of the overwhelming ethnic majority, experience an implicit level of social support, which would likely not be present in any other environment where they were the minority. Based on Cohen and Wills’ (1985) “social support buffering hypothesis”, which suggests that social support can serve as a buffer to the impact of stress and indirectly have an impact on the emotional well-being of a person, this social support could be serving as a buffer against the stress of acculturation, thereby moderating it’s negative effect on behavioral and emotional functioning.

There continues to be strong empirical support for Cohen and Wills’ (1985) buffering hypothesis in recent research. For example, a 1999 study by Landow and Glenwich found that social support moderated the relationship between stressful life events in children, such as being homeless, and behavior problems. Additionally, Koopman, Hermanson, Diamond, Angell, and Speigel (1998) found support for the buffering hypothesis in women with breast cancer. Their research suggested that the more people a person had in their social support system the less likely they were to experience mood disturbance secondary to their cancer. Results such as these suggest
that ethnic and cultural homogeneity might provide a buffer against the stress of acculturative processes.

A review of the literature examining the effects of ethnic and cultural homogeneity and its impact on psychological variables appears to support the concept that implicit social support through being surrounded by persons who are ethnically and culturally similar can buffer stress and subsequently decrease the potential for negative emotional and cognitive states. A 1995 study by Louden examined the epidemiology of schizophrenia among Caribbean born and first and second-generation migrants in Britain. Louden found that migrants experience higher rates of mental illness than individuals who do not migrate and stay at home. His research suggested that incongruities between the migrant's home and the place to which they migrated potentiated stressful experiences, which contributed to poor mental health status. However, he further reported the degree of stress the migrant experiences and his/her subsequent expression of mental health problems are in part dependent on the cultural homogeneity of the new environment to which they migrate. In addition, research has suggested ethnic homogeneity positively impacts the equity of interpersonal relationships (Christian & Green, 1976). It is possible that high levels of ethnic and cultural homogeneity in a given environment buffer the stress, which is believed inherent to the acculturation process, through positively affecting the quality of interpersonal relationships. In the case of the children examined in the current study, it is feasible that because of the buffer of the social support created by the homogeneity
of their environment the process of acculturation is a great deal less stressful and therefore not predictive of self-reported behavioral problems.

Another interesting possibility is raised by the demographic findings of this research, not discounting the buffering of homogeneity hypothesis, that relates to the concept of ethnic identity. Erickson (1968) saw the development of the individual’s identity as being the key task or conflict facing the developing adolescent (Meeus, 1996). Ethnic identity, as a crucial sub-component, of a person’s over all identity or self-conception has received increasing attention in the scientific literature since the late 70’s. Finding its conceptual roots in the identity work of Erickson (1968) and Marcia (1966, 1983) the conceptualization of ethnic identity has been further developed and strengthened by researchers such as Phinney (1989) and Knight, Cota, and Bernal (1993).

As with acculturation, definitions of ethnic identity, in the research literature, have ranged from simple self-identification of ethnicity (e.g., Montgomery, 1992a) to more complex behavioral and cognitive measures such as Phinney's Multiethnic Identity Measure (1992) and Okagaki et al’s (1996) adaptation of the Harter scales (1985). Ethnic identity encompasses more than the ethnic label an individual applies to himself/herself. It also includes such important components as attitudes, values, and behaviors related to an individual’s ethnic group of origin. It is a crucial part of the individual that allows distinction between a sense of belonging to one’s own ethnic group versus another, generally majority, ethnic group (Bernal, Knight, Garza, Ocampo & Cota, 1990). The importance of understanding the process of identity development, in
general, and ethnic identity development, as a sub-component of identity development, cannot be underestimated.

Although believed to be different, one can see the conceptual similarities between acculturation and ethnic identity. Both concepts seek to obtain a measure of a person’s attitudes, values, and behaviors with respect to their ethnic and cultural origins. Given these similarities it is interesting to note research on the developmental trends in ethnic identity formation. Phinney (1992) found that younger ethnic minority adolescents, such as the ones in the current sample, tend to be more diffused in their ethnic identity and that the greatest amount of progress in developing an ethnic identity occurs during late adolescence and early adulthood (Branch, 2001; Phinney & Chavira, 1995; Phinney & Alipura, 1990). This finding of a more diffused ethnic sense in younger adolescents appears to fit well with the findings of this study in that the majority of subjects found it difficult to identify strongly with either the Hispanic or Anglo cultural orientations. So, what might be more accurately termed “marginalized” in the older adolescent or young adult, in this sample of pre-adolescents and early adolescents identifies a developmental stage of ethnic diffusion. It could be that the appropriate developmental stage for this group is difficulty with or simply a lack of cultural identification. As a result, it is possible acculturative processes, which include the development of ethnic identity, do not affect children emotionally or behaviorally in the way they might be expected to affect older adolescents or adults. It is possible they do not perceive themselves as marginalized but rather, the majority of the sample is in an identifiable, developmentally appropriate stage of ethnic/cultural diffusion. Because of
this and the highly homogeneous ethnic and cultural environment, they are likely not consciously aware of the acculturative forces at work upon them and therefore are not responding to acculturation as a stressor.

This highlights an issue, which has received little to no attention in the acculturation literature beyond discussions of ethnic identity. Because acculturation and ethnic identity are conceptually related and there has been an identified developmental sequence to identity development, it is not unreasonable to assume cognitive developmental processes may impact acculturation. It may be beneficial for future research to examine the nature of biological maturation, moral development (e.g., Kohlberg and Gilligan), and cognitive development (e.g., Piaget and Vygotsky) and their potential impact on a child’s experience of acculturation. This could be fruitful with respect to informing the construction of an acculturation scale sensitive to the developmental processes children and adolescents undergo.

There are several weaknesses in the current study, which are in need of discussion. The most pressing of which is the self-report nature of the data. Although some data points such as age, gender, grade in school among other demographic variables were provided from school databases much of the data included in the current study relied on the self-report of pre-adolescents and early adolescents. Although much research has supported the use of self-report data, even with populations such as criminals with psychiatric problems whose responses might seem of suspect reliability (Nieves, Draine, & Solomon, 2000), the current study’s data was the self-report of children and thus may be somewhat less reliable than that of adults. As a correction to
this problem, future research should seek to provide confirmatory data points to test the reliability of the self-report information collected. Such data could include parent reports of behavior, teacher reports of behavior, disciplinary referrals, and so on. This confirmatory data could then be used as a check on the validity and reliability of the children’s self-reports.

Evidence in support of using other sources of data to confirm children’s self-report comes from a recent study examining acculturation and teacher ratings of Anglo and Hispanic students. Masten and Plata (2000) found that teacher’s ratings of Hispanic children’s academic aptitude vary as a function of the acculturation level of the child. Whereas the current study finds no relation between acculturation and self-report of behavioral problems, it is possible acculturative factors could impact a teacher or parent’s assessment of behavioral difficulties in children and thus provide valuable information to be included in statistical analysis.

Relatedly, it is possible that the YSR, as a measure of behavior problems, is simply not the best outcome measure of the psychological impact of acculturation. As a result, it may be beneficial to explore other measures of psychological distress and their relationship to acculturation. Such measures could include, as mentioned above, teacher and parent reports of behavior, disciplinary referrals, as well as, more targeted measures of anxiety and depressive symptoms. This may lead to the detection of acculturation effects not apparent in the current study.

Another particular weakness of the study is the homogeneity of the sample. Although such a sample may have provided valuable information about the benefits of
social support in averting the stress and subsequent behavioral, social and emotional problems associated with acculturation, it will be difficult to place the current study in context until similar research is conducted on Hispanic children in much more heterogeneous academic environments. This will help determine whether the homogeneity or heterogeneity of the ethnic and cultural environments do in fact impact the stress of acculturative processes.

Lastly, the lack of the orthogonal acculturative model's ability to account for 33% of the children in the sample may be considered by some to be problematic. Because of this concern, the Israel Cuellar was contacted to discuss his views on the orthogonal model's classification rate. He reported that the model is not designed to be inclusive but rather capture the groups of subjects who fall at the more extreme ranges of the acculturative spectrum such as the assimilated or traditional categories (I. Cuellar, personal communication, October 24, 2002). He recommended if one was concerned about the unclassified subjects, they could be included in the analysis to see if they differed in any substantial way from the other classified subjects. This was done and no significant difference was observed between those subjects who were classified and those who the model did not fit.

The need for future research is apparent and pressing. Much of what needs to be done has been discussed in previous paragraphs but bears readdressing here. The need for acculturation research with younger populations is maybe the most apparent. More research on the utility of the ARSMA-II, with sampling from child populations, is needed not only to continue developing a bank of research on acculturation and
children but also to verify the utility of the ARSMA-II with younger populations. Two problems, in particular, with the ARSMA-II should be addressed. The nature of the relationship between the orthogonal classification of marginalized and the marginalization classification coming from the experimental scales should be clarified. Research applying similar designs with Hispanic children in more heterogeneous populations should be conducted, with a focus on correcting the some of the weaknesses of the current study. Such research should be beneficial in furthering our understanding of acculturative processes in children.

In conclusion, this study highlights how much remains to be done with respect to acculturation research and children. We are unable at this time to compare the utility of the linear model of acculturation against the orthogonal model because with this sample neither revealed a significant effect on the self-reported behavioral problems of children, nor did the experimental marginalization scales. It is possible the question should not be addressed to the utility of the different models but rather to the utility of acculturation measures in general and their ability to predict socioemotional and behavioral problems in children such as the ones in this study. Acculturation is only one aspect of the overall ethnic and cultural experience. It is possible a clearer understanding of ethnic/cultural processes and their effects on Hispanic adolescents lies in a complex interaction of acculturation, ethnic identity, ethnic self-concept, and biological maturation. Future research may want to consider this and include other dimensions of ethnic experience when exploring ethnic/cultural effects on psychological functioning.
APPENDIX A

English and Spanish Version Parental Consent Forms
Dear Parents,

In this country, people come from many different cultures and ethnic backgrounds. We are interested in learning more about the cultural background, opinions, and well-being of all students. Our study is called “Student Opinions and Attitudes.” The University of North Texas Department of Psychology is conducting this study with the cooperation and approval of the Weslaco Independent School District.

We will be asking your student to complete a brief questionnaire about their attitudes, experiences, and behaviors related to health, well-being, and ethnicity. The questionnaire will take approximately two periods to complete. Participation by your student is voluntary, but their participation will be very helpful. This is not a test and will not be graded. No one will know your student’s responses to any of the questions. Their name will not be used. Information from the study will be presented only as a summary of many students’ answers.

There are several benefits to being involved in our study. Your student’s participation will help improve our knowledge about young people. This knowledge can be used to improve school programs and services for students like yours.

If you want your child to participate, do not return the form below.
If you DO NOT want your child to participate, please fill out the form below and return it to the school.

If you have any questions or concerns, you may contact Dr. Vincent Ramos, Principal Investigator, at the University of North Texas, Department of Psychology, P.O. Box 311280, Denton, TX 76203-1280 (940) 565-2671.

Thank you,

Vincent Ramos, Ph.D.
Department of Psychology
University of North Texas

************************************************************************

I DO NOT want my child, ________________________________ to participate in the (name of child) study “Student Opinions and Attitudes”.

__________________________
Signature of Parent or Guardian   Date

Queridos Padres,
En este país, la gente viene de varias diferentes culturas, nacionalidades y fondos étnicos. Estamos interesados en aprender más de los distintos fondos culturales, opiniones, y el bienestar de todos los estudiantes. Nuestra investigación se llama “Opiniones y Actitudes.” La Universidad de North Texas, Departamento de Psicología, está dirigiendo esta investigación con la cooperación y el apoyo de las escuelas independientes del distrito de Weslaco.

Les vamos a pedir a los estudiantes que contesten un breve cuestionario sobre sus actitudes, experiencias, y comportamiento asociado con su salud, bienestar, y su nacionalidad. Este cuestionario se tardará una hora para completar. La participación del estudiante es voluntario, pero su participación nos ayudará mucho. Este cuestionario no es un examen y no lo van a calificar. Nadie sabrá las respuestas del estudiante en las preguntas. No vamos a usar los nombres de los estudiantes. La información de la investigación se convertirá en un resumen de todas las respuestas de los estudiantes.

Hay varios beneficios si uno participa en esta investigación. La participación del estudiante ayudará a mejorar nuestro conocimiento de los adolescentes. Con este conocimiento podemos mejorar los programas y los servicios de las escuelas.

Si quiere que su niño participe, no regrese el formulario de abajo.
Si quiere que su niño NO participe, favor de llenar el formulario de abajo y regresarlo a la escuela.

Si tiene algunas preguntas o preocupaciones, puede llamar al Dr. Vincent Ramos, el investigador principal, en la University of North Texas, Department of Psychology, P. O. Box 311280, Denton, TX 76203-1280 (940)565-2671.

Gracias,

Vincent Ramos, Ph.D.
Department of Psychology
University of North Texas

******************************************************************************

NO quiero que mi niño, __________________________________________________
participe en la (nombre del niño) investigación “Opiniones y Actitudes”

__________________________________________
Firma del padre                                                                  Fecha
APPENDIX B

Student Assent Form
STUDENT OPINIONS AND ATTITUDES SURVEY

TO ALL STUDENTS:

You are being asked to participate in a study called the Student Opinions and Attitudes Survey. We are asking students from different schools and communities about their lives and experiences, including their health and well-being. We are asking about things in their lives that both help and work against them.

Your responses will be kept SECRET. There are NO RIGHT OR WRONG ANSWERS. Your completed questionnaire will be placed in a sealed box. The answers on your questionnaire will be coded into a computer. NO ONE will know YOUR answers. Please feel free to answer exactly how you feel.

When you are answering the questions, you may skip questions you don't want to answer, but please answer as many as you can. If you do not wish to continue, you may stop at any time.

Your help is VERY IMPORTANT to us. All of your answers are important.

THANKS, we really appreciate your help.

For further information about this project, you may contact Dr. Vincent Ramos at the University of North Texas (940-565-2671).

________________________________________
AUThORIZATION: I have read the above and understand that there are no personal risks from this study. I understand that I can refuse to participate or withdraw at any time from this study.

SIGNED: ________________________________________

DATE OF BIRTH: _______ / _______ / _______
Month      Day      Year

TODAY'S DATE: _______ / _______ / _______
Month      Day      Year

Mark here if you do not want to participate: ___
We would like to be able to contact you again--even if you leave this school. You can help by giving us the name(s) of people we could contact who would know where to find you when we do the next survey (like a grandparent, an aunt, or a good friend of your family). It is okay to list people even if you do not know all the information, even a telephone number would be helpful.

**Remember, we will not discuss the survey with these people. We just want to ask him or her where you are, so you can have the chance to continue to participate in this important study.**

Your Name ___________________________________________________

Name of Person: _______________________________________________

(please print)

Address:  _____________________________________________________

(please print)

City: ____________________State: __________Zip Code: _______________

Telephone #: (_______) __________ - _______________

Area  Code   Telephone Number

**Thank you for your participation**

(there are two more questionnaires left to complete, please ask your teacher)
APPENDIX C

Instructions for the Student Opinions and Attitudes Survey
Instructions for the Student Opinions and Attitudes Survey

1. Please take note of those students whose parents denied consent to participate and do not let them complete the survey. Please suggest a quiet assignment or activity that these students can work on while the survey is being administered to the rest of the class.

2. If possible, assure that students are spaced evenly apart for maximum privacy during the survey. Write today's date on the blackboard, along with the campus ID.

3. There are three parts to this survey: "Student Opinions and Attitudes," "Youth Self Report," and "Self-Description Questionnaire." Each part must have student and campus ID. The questionnaire labeled "Student Opinions and Attitudes" will be completed first. "Youth Self Report" and "Self-Description Questionnaire" will follow, in that order.

4. Distribute a blank "Student Opinions and Attitudes" questionnaire to each student.

5. Before students begin to complete the questionnaires, we want to have their written consent. This survey is completely voluntary. Students not wishing to participate may quietly do other school work. Ask students who are not completing the questionnaires to leave the questionnaire face-down on their desks, and collect them at the end of the period with the other completed questionnaires. Please read the following aloud to the students:

   "There are three parts to the Student Opinions and Attitudes Survey. The survey includes questionnaires labeled "Student Opinions and Attitudes," "Youth Self Report," and "Self-Description Questionnaire."

Then continue reading aloud from the first page of the survey, which is the consent form. Students sign their name and complete the date-of-birth and current date information. (Remind them of the current date.)

6. Remind the students that their answers are private. Upon completion of the questionnaires, they will be sealed in envelopes. The first and last pages from the "Student Opinions and Attitudes" questionnaire will be removed as soon as they are received at the University of North Texas. After that, their names will appear nowhere on the surveys, and all of their responses will remain confidential.

7. Turn to the first page of the "Student Opinions and Attitudes" questionnaire. Instruct the students to write in their student number (which appears on the attached label) and campus ID. The campus ID for your school is __________.
8. Students may begin the questionnaire. Please read all of the questions aloud to the students as they complete the questionnaire. Read all of the questions and response categories to the students.

9. Some of the questions on "Student Opinions and Attitudes" are lengthy, and it will increase students' motivation and understanding to repeat the instructions for these questions several times if necessary.

10. If students arrive late to class, and the class has completed the consent page and the first page of "Student Opinions and Attitudes," do not give them the questionnaire as it will hold up the rest of the class. Ask them to work quietly on school work as you finish reading the questionnaire to the rest of the class.

11. We estimate that it will take about an hour and ten minutes to complete "Student Opinions and Attitudes." You can check your progress by the number of pages you have finished reading. You should be able to complete nine pages midway through the testing period.

12. On the last page of "Student Opinions and Attitudes," we ask students to print their name and then to provide us with one contact person whom we would call to find the student to participate in optional future surveys. We will not discuss the survey in any way with the contacts provided. This page will be removed from the survey and stored in a separate place once the survey is over. All of their responses to all questionnaires are confidential. Please urge students to complete this information.

13. After you have finished reading "Student Opinions and Attitudes," have students check that they filled in all of their answers completely. If there is time, have students go back and check for missed responses, and instruct them to complete any missing items.

14. After all students have finished "Student Opinions and Attitudes," collect the questionnaires in the envelope provided and so labeled, and seal the envelope.

15. The next questionnaire to be completed is "Youth Self Report." Please have the students fill in the campus ID number in the box labeled "FOR OFFICE USE ONLY--ID #" in the top right-hand corner of Page 1. Have them fill in their student ID number in the section marked "YOUR FULL NAME," from the attached label. Then, please instruct the students to remove the label.

16. Students may begin the questionnaire. Please read all of the questions aloud to the students as they complete the questionnaire. Read all of the questions and response categories to the students.

17. We estimate that it will take about twenty minutes to complete "Youth Self Report."
18. After you have finished reading "Youth Self Report," have students check that they filled in all of their answers completely. If there is time, have students go back and check for missed responses, and instruct them to complete any missing items.

19. After all students have finished "Youth Self Report," collect the questionnaires in the envelope provided and so labeled, and seal the envelope.

20. The final questionnaire to be completed is the "Self-Description Questionnaire." Please have the students fill in the student ID number in the section marked "YOUR NAME," and their campus ID number in the section marked "SCHOOL," from the attached label. Then please instruct the students to remove the label.

21. Students may begin the questionnaire. Please read all of the questions aloud to the students as they complete the questionnaire. Read all of the questions and response categories to the students.

22. We estimate that it will take about twenty minutes to complete "Self-Description Questionnaire."

23. After you have finished reading "Self-Description Questionnaire," have students check that they filled in all of their answers completely. If there is time, have students go back and check for missed responses, and instruct them to complete any missing items.

24. After all students have finished "Self-Description Questionnaire," collect the questionnaires in the envelope provided and so labeled, and seal the envelope.

25. Your school's site coordinator will arrange for the questionnaires to be delivered to his/her office.

Thank you for all of your help.
The Student Opinions and Attitudes Survey

**Purpose:**
The main goal of this project is to investigate the relationship between ethnic identity and mental health in early-to-middle adolescence. We want to understand better how teens from different ethnocultural groups change as they get older. We are asking teens from different schools and communities about their lives and the experiences they have, about their physical and mental health, and how their lives change over time. We want to learn about things in their lives that both help and hinder the successful development of adolescents.

**What is the survey about?**
The questionnaire asks students about the demographics, attitudes about school, cultural background, behavior, and life experiences. However, many of these questions are of a personal nature and we want to create a confidential atmosphere where students feel that they can answer honestly. Today's brief training will briefly outline the procedures we would like to use to maintain a comfortable and confidential testing environment.

**Benefits:**
Your cooperation in this survey will help improve our scientific knowledge about young people, and help us to understand the risk factors for behavior problems, stress, and related disorders in today's youth. This information may be useful to both your school and your district, and will allow them to create programs and services that can better help your students. We will provide summary statistics of the results by school soon after the survey is completed.

**Further Information:**
Should you have questions or concerns about this research project, feel free to call the research team directly at the University of North Texas Psychology Department at 940-565-4715. Thank you again for your participation in the Student Opinions and Attitudes Survey.
REFERENCES


Cuellar, I., Harris, L. C., & Jasso, R. (1980). An acculturation scale for


