PARENT AND TEACHER RATINGS OF MEXICAN AMERICAN CHILDREN'S BEHAVIOR ON THE *BASC*: INFLUENCE OF ACCULTURATION ON A TEXAS SAMPLE

A Dissertation

by

MELISSA ESCOBEDO HERNANDEZ

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

December 2005

Major Subject: School Psychology

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Approved by:

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	Douglas J. Palmer
Committee Members,	Michael J. Ash
	Jon J. Denton
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ABSTRACT

Parent and Teacher Ratings of Mexican American Children's Behavior on the *BASC* : Influence of Acculturation on a Texas Sample. (December 2005)

Melissa Escobedo Hernandez, B.S.; M.S., Texas A&M University

Co-Chairs of Advisory Committee: Dr. Richard I. Parker
Dr. Douglas J. Palmer

The purpose of this study was to explore the effects of acculturation on the parent and teacher ratings of non-clinical Mexican American children's behavior, using the *BASC Parent Rating Scale-C* (*PRS-C*) and the *Teacher Rating Scale-C* (*TRS-C*). One hundred twenty-three children of Mexican descent (ages 6-11) attending Texas public schools were rated by their parents and teachers. Parent acculturation level was measured using the *Acculturation Rating Scale for Mexican Americans-II*. Parents were assigned to High, Medium or Low acculturation groups based on a combination of linear acculturation levels (Part 1) and obtained typologies (Part 2). Parent acculturation level was then assigned to *TRS-C* data creating matched-rater pairs (*PRS-C* and *TRS-C* of same child) for use in this study.

Internal consistency reliabilities for the Total Mexican American sample's *Teacher Rating Scale-C* (*TRS-C*) were more similar to the published *BASC* general norms than the Total Mexican American sample's *Parent Rating Scale-C* (*PRS-C*) on six of the nine clinical scales investigated and on all three of the shared adaptive scales. The most striking internal consistency result emerged when the sample was subdivided by

acculturation, the High acculturation *TRS-C* Conduct Problems scale showed no cohesion of items for this sample (.00). Comparison of the Total, High, Medium, and Low groups' obtained distributions on each of the 16 selected scales of the *PRS-C* and *TRS-C* to the published *BASC* general norms revealed: 1) six significant differences of potential clinical relevance on the *PRS-C* scales, and 2) thirteen significant differences of potential clinical relevance on the *TRS-C* scales. Both parents and teachers rated the children as demonstrating less maladaptive symptoms on the Aggression, Depression, Hyperactivity, and Behavioral Symptom Index. Only parents reported lower Adaptability and Adaptive Skills scores. And only teachers of the High acculturation group reported higher Adaptability scores. No systematic influence of acculturation was present among any of the 16 selected scales. However, the parents and teachers of the High acculturation subgroup did have more moderate correlations than the Medium and Low groups combined.

DEDICATION

This dissertation is dedicated to the most incredible man in the world, Victor Hernandez. God gave me a partner who is handsome, driven, intense, loving, kind, considerate, humble and dynamic. I am proud to be the wife of a WINNER. He makes every day a blessing, regardless of the life event we have to go through. He supported and encouraged me as I traveled 180 miles round trip daily to attend classes for my coursework. He has taken care of our three daughters on several occasions without me so that I can complete my task. He always believes I am capable. I started the school psychology program as a newlywed and with no children. Now we have three beautiful daughters, Victoria Nicole, age 11, Megan Elizabeth, age 7, and Catherine Olivia, age 3. Each one has added an element of wonder to my life. The profound change in my relationship with the world around me because of such blessings has been the most unexpected benefit; I am very proud to be their mother. Moving back to South Texas has been the key to completing my dissertation. My mother, Graciela C. Escobedo, kept our second daughter while I gathered my data. She made countless trips to Portland when my last pregnancy developed serious complications. Mom, you are so strong and full of love. My mother is a wonderful role model of what a woman should be. She raised me to think for myself, love God, and value the people God puts in my life.

In memory of my father, Adan T. Escobedo, Jr. I promised I would never get too smart to believe in or submit myself to God. And in answer to his question whenever I had a challenging task to do, “M’hija, did you do your best?” “Yes!” “Then that’s all I ask of you.”

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Dr. Douglas Palmer originally brought a College of Education Hispanic Doctoral Training Grant to Texas A&M's School Psychology program. The emphasis of the grant was to train us to work with an at-risk population but it also encouraged a passion. Doug's communications were always flavored with "how can your influence make it better versus the idea of just pointing out what is different or wrong." That idea was compelling and combined well with Rich Parker's second love, cultural diversity (reading is his first). Hector Ochoa's ability to crystallize a concept for the student and share his heart for children provided a real-life example of what we were to do with our training and knowledge.

These formative influences, coupled with my own desire to help children be more than survivors when life circumstances were unkind, have provided me a stronghold to use as the foundation of my practice and research area of interest.

Carol Wagner, Graduate Student Advisor, has not only been a cheerful, encouraging, and calming voice on the phone willing to make sure I was registered each semester these several years, but she made sure all the right university paperwork was generated so that all of my work led to the completion of a degree.

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Yolanda Escobedo Sanchez, my aunt, tirelessly helped me enter data. She meticulously reviewed the print outs so that we could verify that no errors had been made. She has also been a wonderful friend. Thank you to her husband, Adolfo, for always making me feel welcome in their home and letting me work there so that I would not be interrupted.

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CHAPTER I

INTRODUCTION

Diagnostic identification is necessary for the provision of appropriate intervention for children suspected of poor social and emotional adjustment. The Behavioral Assessment System for Children (*BASC*) is one of the assessment tools often used in the comprehensive process of identifying a child's level of social/emotional adjustment. The *BASC* provides a standardized measure of the child's social/emotional and adaptive functioning. It is a multi-method, multidimensional standardized behavioral rating scale designed to aid psychologists in the assessment of psychological functioning of children and adolescents ages 4-18.

In the assessment of behavioral and emotional disorders, the clinician must consider multiple factors including the overlay of culture specific nuances and linguistic diversity. In building a framework for the child's current social/emotional adjustment level, clinicians should use technically sound assessment tools, projectives, observations and their clinical judgment. The *BASC* is often chosen as one of those tools due to its wide range of information gathering potential and technical soundness (Keith, 1996). Recent development and publishing of a Spanish version of the Parent Rating Scale component makes the *BASC* available for administration to an even larger portion of the U.S. population.

This dissertation follows the style of the *American Psychologist.*

Students who are from culturally and linguistically diverse backgrounds and manifest exceptionalities present numerous challenges for teachers, administrators and other professionals (Hoernicke, Kallam, & Tablada, 1994). The over and underrepresentation of cultural minority students and students of low socioeconomic status in special education has been long documented and remains a critical issue despite efforts to reform (Artiles & Trent, 1994). The disproportionate numbers of ethnic minority students placed in special education classes questions the efficacy of current professional practices conducted to serve the needs of this population as well as the federal mandates that provide for nondiscriminatory assessment and intervention practices.

According to Sugai and Maheady (1988), culturally diverse children are particularly susceptible to misdiagnosis during the referral and placement process. Although various factors may contribute to the misclassification of culturally diverse students as emotionally and behaviorally disordered, faulty teacher perceptions coupled with lowered expectations may place these children at greater risk of misclassification. Chinn and McCormick (1986) found that mainstream teachers tended to expect higher incidences of handicaps among ethnic minority group members. The probability of misclassification will also be heightened if teachers perceive lesser competence in children of socioeconomic and cultural backgrounds different from their own (Delgado-Gaitan, 1987). This contrasts Chinn and Hughes' (1987) review, where Hispanic students were noted as underrepresented in the classes for the Emotionally and Behaviorally disordered. Clearly, the psychological assessment of the culturally and linguistically diverse is a complex subject.

Harry (1994) considers the extent of tradition and acculturation of the family, as well as the community with which the family identifies to be of critical importance in the understanding of behavioral disorders in a culturally diverse population. Harry (1994) goes on to explain that although the literature addresses the over and underrepresentation of ethnic minorities in special education, there is little research available that addresses the influence of the student's culture on the teacher's interpretations of these children's emotional and behavioral difficulties. Research addressing ethnic minority parents' views of emotional and behavioral difficulties which considered the influences of cultural and socioeconomic factors was non-existent in 1994 (Harry, 1994), as were investigations on the congruence of culturally diverse parents' and mainstream culture teachers' interpretations of behavior.

Changing Demographics

Campbell (1994) projected that by the year 2000 ethnic minority groups would be the "majority" in many states and communities (i.e., Texas, Florida and California). In fact, it has recently been reported that in Texas Kindergartens, this is true. The demographic changes in the U.S. are reflected in the composition of the school age population, Hispanic American and African American children constitute 39.2% and 48.4% of the school age population, respectively (Campbell, 1994). Moreover, population projections for the year 2020 indicate an increase in the numbers of ethnic minorities in states that have traditionally been Euro American.

A rapidly growing Hispanic population within the U.S., due to both immigration and birth rates, has created a growing sensitivity to cultural variables that are pertinent to the

psychiatric diagnosis and treatment of this group. Diagnosis of mental disorders is an area in which sensitivity to cross-cultural behavioral norms is essential. Too often, clinicians apply diagnostic instruments developed principally with Euro American samples to other ethnic groups. They assume, of course, that these instruments are measuring the same psychological construct across ethnicities. While overlapping of diagnostic symptoms or criteria may exist across some cultures, a clinician's interpretation of an individual's behavior as being normal or abnormal requires an understanding of cultural norms specific to the culture in question. It is suspected that the higher the level of acculturation of the individual, the more comfortable the individual will be with more mainstream behavioral expectations and norms (Ramirez, 1995; Ramirez, 1977).

The study of Hispanic psychology has recently focused on the understanding of the heterogeneity within the Hispanic community (Padilla, 1995). Of the rapidly growing U.S. Hispanic population, Mexican Americans constitute 62% (Marin & Marin, 1991). Using a standard criterion for comparison purposes can assess intragroup cultural variance. Acculturation is not only a convenient but also a well-established standard criterion for measuring intracultural variance (Cuellar, Arnold, & Maldonado, 1995b; Olmedo, 1979; Padilla, 1995). Due to a scarcity of empirical work that relates acculturation to psychological processes (Cuellar, Arnold, & Gonzalez, 1995a), the current study is proposed.

Statement of the Problem

Only three *BASC* studies (James, 1995, Mayfield, 1996, and Knight, 1996) have targeted the question of ethnic membership influencing results interpretation. James (1995) and Mayfield (1996) tested Harrington's hypothesis, which asserts that the differences evident on various measures of aptitude among different ethnic groups were the result of the flawed psychometric methods used in the item selection. Gordon Harrington, a developmental psychobiologist, hypothesized that the majority ethnic group of the test construction sample would influence item selection procedures to such an extent that the ultimate product would be biased in the majority ethnicity's favor and biased against any other ethnic group (Harrington, 1988). James (1995) examined the *BASC*'s *Self-Report of Personality-Adolescent* (*SRP-A*) component for ethnic bias. James performed two experiments in which the test construction samples were comprised of 100% ethnic representation and variable ethnic representation. Analyses, including means, standard deviations, Tukey's HSD test, computation of effect sizes, reliability coefficients (Cronbach's alpha), item overlap/non-overlap, chi-square tests of independence, and ANOVAs, were undertaken in search of statistically significant and practically significant levels of differential functioning and diagnosis of ethnic groups on the Self-Report of Personality-Adolescent form. Yet none of the analyses resulted in statistically or practically significant differences in performance or diagnosis among Black, Hispanic, and non-Hispanic White groups. Mayfield (1996) examined the *BASC's Parent Rating Scale-Adolescent* (*PRS-A*) component for race differences. She developed three separate tests, for which each ethnic group completely and separately

was the population represented. Results indicated that even when a "Black form, a Hispanic form, and a White form" were created, evidence of each ethnic group scoring in the direction of less pathology on their dedicated test was not evident. Knight (1996) analyzed the *BASC* Parent Rating Scales (pre-school, child and adolescent versions) by investigating the influence of gender, race and socioeconomic status on patterns of behavior. The results indicated that there were many more similarities than differences in the behavior profiles of children, as reported by their parents, despite different gender, race and socioeconomic status group membership. Analyses of patterns of behavior by race indicated that within the Preschool group, no consistent differences were found; within the Child group, two consistent differences were found (Depression scale and Aggression scale were both higher for Whites than Blacks), and within the Adolescent group, one consistent difference was found (Atypicality scale was higher for Blacks). Only Blacks and Whites were compared in this study, as Knight considered the sample of Hispanics, 178, in the standardization sample too small to include in the analyses. Note, the *BASC* standardization sample cannot be considered representative of the present Mexican American population. Out of the national sample of respondents only 16% had a grade 11 or less education, 20% had 1-3 years of college or technical training, and 20% had 4+ years of college. This is certainly not representative of an ethnic minority population that struggles to graduate 50% of its school age members from high school.

Although the *BASC* standardization sample has been investigated for ethnic differences on the *Parent Rating Scale* (pre-school, child and adolescent forms) and the

Self-Report of Personality-Adolescent form, no studies have been conducted to determine if level of acculturation of the Hispanic parent plays a role in their responses on a widely used assessment tool. Currently, no Spanish translations of standardized behavioral rating scales have been shown to be valid for use in diagnosing emotional disturbances/distress in Mexican American children. Moreover, with the recent introduction of a Spanish version of the *BASC* Parent Rating Scale (all age levels), investigation into the similarity or dissimilarity of responses for parents' and teachers' ratings of non-referred Mexican American children's behavior is especially necessary because there is no evidence to support the assumptions that this measure is invariant between the original and translated forms and that it is invariant in its applicability to the heterogeneous Hispanic population.

Purpose of the Study

The present study will investigate the effects of acculturation on the rating of Mexican American children's behavior by parents and teachers. First, comparisons will be made between the ratings obtained from the Mexican American groups and the *BASC's* General norms for the 16 scales found on both the *Parent Rating Scale-Child* (*PRS-C*) form and the *Teacher Rating Scale-Child* (*TRS-C*) form. Second, the 16 shared scales between the *BASC Parent Rating Scale-Child* (*PRS-C*) form and the *BASC Teacher Rating Scale-Child* (*TRS-C*) form will be examined to determine the effect of rater, acculturation, and their interactions.

Research Questions

1) When grouped by Total sample and by Mexican American parent's acculturation level, how do parent ratings of Mexican American children's behavior on the 16 *PRS-C* scales compare to the *BASC's PRS-C* general norms?
2) When teacher ratings are grouped by Total sample and by parent's level of acculturation, how do teacher ratings of Mexican American children's behavior on the 16 selected *TRS-C* scales compare to the *BASC's TRS-C* general norms?
3) Does parent acculturation level systematically influence the level of agreement between Parent (*TRS-C*) and Teacher (*PRS-C*) ratings of Mexican American children on the 16 shared *BASC* scales?

CHAPTER II

REVIEW OF THE LITERATURE

For several decades, researchers have maintained that culture not only influences personality development but psychopathology as well (Eaton & Weil, 1955; Draguns, 1987; Eron & Peterson, 1982; Whiting & Child, 1953; Brislin, 1983). However, remarkably few studies extend this argument to children (Krechevsky, 1993). This is not to say that children have not been the focus of numerous studies examining developmental stages, specific problem-behaviors (e.g. nail-biting, bed-wetting, temper-tantrums, etc.), and level and types of attachment (Krechevsky, 1993), however, minimal research exists exploring the differences within ethnic groups' manifestation of psychopathology and their variations within the range of behavioral normalcy for children. In addition to the minimal research-based attention given to childhood disorders prior to 1980 (Knight, 1996; Kazdin, 1989), until the last 20 years, the societal climate of the U.S. was more habituated to comparison's across cultures and races rather than exploring variations within ethnic minorities (Padilla, 1995; Cuellar & Panigua, 2000). The few studies that compare intracultural differences, generally concentrate on adults, but are characterized by some psychometric limitations (Padilla, 1995; Yamada & Marsella, 2000; Cuellar & Paniagua, 2000) or are insufficient in establishing the basal levels of observed behaviors and symptoms to effectively assist in the diagnosis of psychopathology in Mexican American children.

In order to gain an adequate perspective for the need and value of the present study, the Hispanic Psychology literature relevant to Mexican American children will be

reviewed. In addition, Mexican American Acculturation, Mexican American family functioning, and the applicability of parents and teachers as informants of children's behavior will also be addressed.

Hispanic Psychology

Hispanic psychology is the branch of ethnic psychology where the population of interest is of Latin American origin. The individual may have immigrated to the United States or may be a native-born US citizen who identifies herself as one of numerous possible national origins (e.g., Mexican American, Cuban, Puerto Rican, Honduran, etc.) or ethnic groups (e.g., Chicano, Latino, Mestizo, Hispanic) (Padilla, 1995).

Padilla (1995) distinguishes Hispanic psychology from cross-cultural psychology in that intracultural differences are focused upon more than intercultural group differences. The distinction between "cross-ethnic" and "cross-cultural" is not clearly evident in the literature of comparative studies (Tyson 2004; Van De Vijver & Leung, 1997). Tyson's definition of cross-ethnic study requires that two or more groups' differences be based on race, language, region, color, or other attribute, not country of origin.

More specifically, cross-cultural psychology concentrates on the systematic study of experience and behavior as it occurs in different cultures (e.g., India and the U.S); whereas Hispanic psychology is most concerned with understanding the influence of culture and language on people of Latin American origin. Hispanic psychology recognizes that although those that consider themselves of Latin lineage share some cultural similarities, they also differ in national origin designation (e.g., Mexican or

Guatemalan), acculturation level, generation in the United States, political orientation, etc.

The history of Hispanic psychology extends over 85 years when educational research in taken into account. Initial research efforts involving Mexican American children concentrated on IQ and/or achievement test performance and their relationship to bilingualism. Review of the early work in mental testing of Mexican Americans demonstrates that many of the psychometric issues that currently threaten validity and generalizability of current research efforts (e.g., language proficiency, valid translation of a measure, extraneous variables of SES and education level) were documented as early as the 1920s and 1930s, yet appeared to be disregarded given the phrasing and inferences drawn about the intellectual ability of Mexican Americans as a whole and the lack of further investigation without addressing the distinctly mentioned limitations (Padilla, 1988).

In 1923, Thomas Garth, of the University of Denver, published an article in *Psychological Review* asserting that his investigation supported the conclusion of genetically-based inferiority of Mexican Americans. Racist overtones (Padilla, 1988) were clearly evident in comments such as "If these groups may be taken as representative of their racial stocks, the results indicate differences between their racial stocks and intelligence measured here." Interestingly, Garth's assertions were qualified by indicating that since "social status and education have not been controlled, we may not positively state that these data indicate racial differences in intelligence." Although

a very valid limitation was noted, it was not the focus of the article, nor did subsequent research of the time attempt to control this limitation.

In 1924, William H. Sheldon contended that the average Mexican child in the first grade was 14-months below the normal mental development of white children of the same school age, irrespective of the formidable limitation of language. In his article, he detailed the great difficulty encountered when attempting to test bilingual children. Sheldon wrote:

> …here the children understood English very imperfectly. ….it was necessary that the children…be given the group [IQ] test by their respective teachers. These teachers were able to make themselves understood by the use of a sort of Spanish-English dialect… (p.140)

Two additional works published before 1932 echoed similar conclusions (Paschal & Sullivan, 1925; Garretson, 1928) regarding racial differences in the mental and physical development of Mexican children. As can be noted, valid limitations were acknowledged, but the social climate of the early 1900s was indicative of a public that was more ready to accept confirmation that genetically-based inferiority existed (Padilla, 1988; Reynolds & Ramsay, 2003).

In 1932, however, George I. Sanchez, a Mexican American graduate student at the University of California, Berkley, published one paper in the *Journal of Applied Psychology* and another in the *Journal of Genetic Psychology* where he identified and evaluated 5 factors that could have contributed to lower mean IQ scores among Mexican children. According to Sanchez, possible threats to validity in previous studies were:

"(1) heredity limitations (2) inferior home environment, (3) language handicaps, 4) unsuitability of tests, and 5) lack of parallelism of conditions under which test are given." Both 1932 papers refuted the terms "heredity limitation" and "inferior home environment" commonly used in the literature of his time. The phrase "heredity limitation" referred to racial inferiority, which Sanchez discarded because of the absence of any confirming evidence. The phrase "inferior home environment" referred to socioeconomic deprivation and educational limits. His 1932 works demonstrated significant increases in mean scores on intelligence tests and reading ability tests when alternate forms of these tests were re-administered on four occasions over a period of 16 months. Sanchez suggested that the first test score represented the influence of socio-cultural factors, and that inappropriate and incomparable test conditions comprised the most reasonable explanations for the underestimates of the first test score.

Sanchez received his doctorate in 1934, and published two additional papers that year highlighting additional psychometric issues that are being addressed today. George I. Sanchez has been called the "father of Chicano psychology" due to his published works concerned with the mental testing of Hispanic children and his enumeration of significant concerns that were only beginning to be addressed at the close of the last century (Martinez, 1977; Padilla, 1988).

More than 50 years before Cummins work in second language acquisition, Sanchez reported that the average Mexican child would be best described as limited English proficient even after a full year of schooling. Extensive language acquisition literature

now indicates that cognitive academic language proficiency on average may take up to 7-10 years of exposure to the new language (Cummins, 1984).

In a 1934 study, Sanchez documented the frequency of words that were not known by his child subjects, but appeared repeatedly on the 1920 Stanford revision of the Binet-Simon IQ tests. He also called attention to the potentially confusing use of homonyms such words as 'like,' 'write,' 'kind,' 'get,' and 'look' " which could be confusing to the Spanish-speaking child due to word usage differences in English. Sanchez stated that the use of these words, which "were commonly used with at least two different meanings…presented serious difficulties to the child just acquiring a new vocabulary." Sanchez criticized the use of Spanish translations of tests that were applied without independent validation.

Interestingly, identical concerns were voiced by Rogers, Flores, Ustad, and Sewell (1995) 70 years later, when two popular multi-scale inventories, the Minnesota Multiphasic Personality Inventory-Second Edition (MMPI-2; Butcher, J. N., Dahlstrom, W. G., Graham, J. R., Tellegen, A. & Kaemmer, B., 1989) and the Personality Assessment Inventory (PAI; Morey, 1991) "were rapidly translated into Spanish and made commercially available prior to any published validation with Hispanic populations." They argued that "the simple inclusion of [ethnic] minorities in normative data" does not warrant the conclusion that appropriate and direct interpretation can occur for all races and ethnicities (Rogers, et al., 1995). These conclusions were based on their validation studies, as well as those conducted by Green (1991), Whitworth and McBlaine (1993), and Burnam, Hough, Karno, and Escobar (1987). Although Sanchez

called attention to psychological measures' psychometric short-comings with regard to the Mexican American population in the 1930s, research-based analyses of validity was not readily considered and applied before release of widely used multi-scale personality inventories by researchers and publication companies even at the close of the 20th century.

In addition to language barriers and measure validation issues, Sanchez (1934) voiced significant concern regarding the inequitable educational attainment of Mexican American youth in comparison to other American ethnicities. Sanchez (1934) presented data indicating that in a cross-sectional review of New Mexico's public school enrollment during the 1932-1933 school year, almost 25,000 Spanish-speaking children were enrolled in the first and second grades; however, this public education population shrank dramatically to only 540 Spanish-speaking children in the final year of high school. Sanchez contended that only 2% of the Mexican American children received an education comparable to the 14% of children from all other ethnic groups in the same state during the same period. Unfortunately, this inequity of educational attainment continues to present itself (Nevarez, 2001). Nevarez (2001) reports that between 1980 and 1999, the percentage of Latinos (all Hispanic subgroups combined) age 25 and over who attained a high school diploma, increased by 12.1 percent over previous census records (bringing them to 56.1 percent), however, African Americans increased by 25.8 percent (bringing them to 77 percent); and Anglos increased by 15.5 percent (bringing them to 84.3 percent) (U.S. Census Bureau, 2000).

Psychological Testing with Mexican Americans

Test interpretation from the early 1900's through recent times assumed only individual differences existed among people of various cultural backgrounds living in the United States. This translated into an interpretation of an atypical response pattern, where "the individual is experiencing maladjustment" on whatever factor the test was proposed to measure.

Over the last three decades, identifying the conditions under which culturally different groups were similar and divergent from the dominant culture was a major concern. (McNemar, 1975). Numerous studies have been conducted to investigate cultural differences between African American and Euro American subjects utilizing intelligence tests. However, personality inventory research with Hispanic subjects is minimal. Padilla and Ruiz (1973) noted that only 14 of 18,300 entries in the *Personality Tests and Reviews* (Buros, 1970) related to personality assessment using Mexican American subjects. It was around this time that factors including language, acculturation, geographical location, membership in various Hispanic subgroups, cultural attitudes toward testing and urban/rural characteristics were also considered possible influences on response patterns.

Hispanic response pattern research can be divided into projective technique studies and personality test research. In the following sections, the use of adult non-clinical Hispanic subjects in both projective and personality inventories will be discussed because studies with child subjects are unavailable.

Projective Techniques with Non-Clinical Mexican American Subjects

As early as 1956, responses on the Rorschach were being evaluated in order to consider the influence of culture. Kaplin, Rickers-Ovsiankina and Joseph (1956) found that when Rorschach responses from four different cultural groups were analyzed, judges familiar with the groups could sort the responses into meaningful categories. Whereas, the judges not familiar with the groups but having knowledge that groups existed could not successfully sort the responses into any meaningful category. The task assigned in the study involved 12 Rorschach responses. Judges were asked to assign three responses each to the four identified cultural groups. Kaplin, et al. (1956) found that judges familiar with the cultural groups matched 8 of 12 responses to the correct group, however, when the judge was unfamiliar with the various culture groups, only 1 response of 12 was matched to the correct culture group. The authors concluded that the cultures were different enough to be sorted; however, that sorting is facilitated by knowledge of the cultures involved. The generation of this conclusion is significant in that nearly 50 years ago, social scientists recognized that to correctly interpret responses that generate a level of current psychological functioning; the person's cultural background must be taken into account.

In 1965 Johnson & Sikes matched twenty-five Black, Anglo and Mexican American subjects on age, education, and occupation. They administered the Rorschach and a Thematic Apperception Test (TAT). Mexican American subjects' responses on the Rorschach indicated a significantly lower victim hostility score and significantly higher tendencies in providing human and animal detailed responses when compared to the

other two groups. On the TAT, the Mexican American subjects presented significantly more responses indicating a more unified family unit and specific gender roles for the father and mother within the family structure. Johnson & Sikes (1965) concluded that projective could be useful in the formulation of cultural and personality theories.

In 1974, Logan conducted a study using the Thematic Apperception Test (TAT) and an autobiographical questionnaire. His TAT results indicated that Mexican American subjects tended to express a lower need–achievement. However, Logan speculated that the responses were potentially not a result of personal needs and motivation but rather a documentation of the difference in how stimuli were perceived by culturally different people. He based this conjecture on the data gathered through the autobiographical questionnaire, where the Mexican American subjects actually had higher achievement scores than the matched Anglos subjects.

In 1975, Padilla and Ruiz reviewed the literature for projective techniques; reporting evidence of specific response patterns for Mexican American subjects. Both content and style response patterns specific to Mexican Americans were found on the Rorschach Inkblot Test and the Thematic Apperception (TAT) (Kaplin, Rickers-Ovsiankina & Joseph, 1956; Johnson & Sikes, 1965; Logan, 1974). Specifically, content differences involved hostility, family and relationship dynamics between mother and son, and father and son. Style differences consisted of less verbal responses and researchers perceived the Mexican American subjects to be more aloof in attitude in comparison to Anglo subjects. Although the evidence is not conclusive, numerous experimenters using

projective personality assessments devices support the existence of a unique Hispanic response pattern.

Personality Inventories with Non-Clinical Mexican American Subjects

In the early seventies, psychological and emotional functioning research focused on self-report measures rather than observer-based behavior rating scales. Personality inventories are typically considered a help in estimating the degree of adjustment or maladjustment to society that an individual is experiencing (DeBlassie & Cowan, 1976). By responding to specific behavioral, attitudinal or value statement, a subject provides the examiner with a profile of her personality on the instrument scales. A review of the literature has uncovered few studies, which analyze the influence of culture on multi-dimensional behavior rating scales. Brown (1979) suggests that prior to asserting ethnic group membership as an explanation for response patterns, that research exploring non-clinical samples of Hispanics is necessary in order to establish whether a unique pattern is exhibited on personality measures.

In a study that matched thirty-six Mexican American males and thirty-two Mexican American females with equal numbers of non-Mexican American subjects, Reilley and Knight (1970) found that the paranoia (PA) and Lie (L) scales of the MMPI displayed significant differences for the ethnic variable. They found that Mexican Americans scored higher on the L scale and lower on the PA scale. Reilley and Knight suggested that Mexican American subjects: exhibited a stricter moral code; responded less objectively; and trusted others more than the matched Anglo respondents. Although they

had a relatively small sample, their findings prompted them to suggest the establishment of special Hispanic norms on the MMPI.

In 1967, Mason compared thirteen and fourteen year old Mexican Americans, American Indians, and Anglos from disadvantaged backgrounds participating in a summer educational enrichment program (13 Indian males, 13 Indian females, 6 Anglo males, 7 Anglo females, 5 Mexican American males, and 5 Mexican American females). In this particular study of a self-report measure, the researcher extended the typical amount of time for administration and provided assistance with unfamiliar vocabulary. Results indicated that Mexican American males showed significantly lower scores on scales for social presence and flexibility. They were also found to score significantly higher on scales for social responsibility, tolerance, and intellectual efficiency than the Anglo males. Interestingly, the Mexican American males and Mexican American females also differed significantly on socialization, tolerance, and sense of well-being. In each case the males responded in a manner that indicated a higher level of functioning than the females. Although useful as a building block towards understanding youth's psychological make-up, large assumptions cannot be generated from such a small sample, simply because findings have a positive value in our American society. How these youths were perceived by the adult caretakers at the camp would have made the findings more powerful, had they been correlated to the youth's self-report.

In 1971, an investigation, which included Hispanic youth's responses on a self-report personality rating scale, was conducted by Mason. Mason administered the California Psychological Inventory (CPI) to a small sample of Native American, Hispanic, and

non-Hispanic White Junior High students. Mason reported results obtained found non-Hispanic Whites had the highest scale values (most adaptive scores), Hispanics had the second highest and Native American's responses yielded the lowest scale values.

Turner & Horn (1975) concluded that the users of personality tests need to validate test and norms on a Mexican American sample before Mexican Americans are judged by these tests. In their study, a non-clinical Mexican American sample was compared with the normative samples of the Guilford-Zimmerman Temperament scale. Turner and Horn reported that if the Mexican American samples were scored using the normative sample as comparison, Mexican Americans were found to be less emotionally stable, have poor personal relations and be less objective than members of the majority culture in the United States. Turner and Horn strongly cautioned against this type of interpretation, indicating that no additional data obtained by the researchers substantiated such characteristics for Mexican Americans.

Additional research in the area of situational variables' influence on test responses suggest that subject's gender and socioeconomic status, examiner's ethnicity, examiner's gender and age have all been identified as factors influencing test results (Sattler & Winget, 1970; Paretti, 1974; Turner & Horn, 1975). When Harrington (1962) coined the phrase "Culture of Poverty" a more focused look at the impact of socioeconomic status revealed that many of the variations in responses attributed by some authors to ethnicity were better explained and controlled when socioeconomic status was held constant (Komaroff, Masuda, & Holmes, 1968). In 1972, Rogers found less difference in test

responses between Hispanic and Anglo subjects when SES was controlled than when it was not.

Because early research found some similarities but consistent differences between means on personality testing, Constantino (1982) attempted to design a separate projective instrument to measure personality traits of specific ethnic groups with the TEMAS (Tell-Me-A-Story). Criticism of this measure tended to be that the responses were considered too predictable, making the TEMAS less projective, except for those children who have a more limited vocabulary.

The literature contends that American born Hispanics (Escobar, Burnam, Karno, Forsythe, & Goulding, 1987), Latin Americans (Escobar, Gomez & Tuason, 1983; Mezzich & Rabb, 1980), and Puerto Ricans tend to be more prone to depression, anxiety and somatic complaints in adults.

Whether these symptoms tend to manifest in childhood is unclear. Few studies have attempted to answer this question with non-clinical samples. Because of the issue of overlapping of various psychological constructs (i.e., depression, anxiety, aggression, hyperactivity, and conduct disorders) for children, a multitrait-multimethod approach had been the norm.

Alcala's (1991) depression study using 396 4th and 5th grade Mexican American children and 50 Anglo children study bore out the general finding in the multi-method approach: self-report measures correlated strongly with each other, but significant correlation between self-report inventories and measures from other sources (peers and teachers) was not achieved. She attempted to determine if Mexican American children

more prone toward depressive symptoms by using various measures and comparing them to normative data. Her findings were seemingly counter intuitive, given the large body of research on adults. When observers (peers and teachers) were rating the Hispanic child's behavior, Alcala (1991) found significantly lower levels of depressive symptoms were endorsed. In addition, when using the Child Depression Scale (Reynolds, 1989), a self-report measure, these same Mexican American subjects scored significantly less depressed than the normative sample. On the Children's Depression Inventory (Kovacs, 1985) however, the Mexican American subjects and their Anglo cohorts scored significantly higher than members of the normative sample. Alcala (1991) suggested that perhaps the children in the study were more forthcoming with their feelings than those in the normative sample, because the results of the other three concurrently administered depression measures did not support a conclusion of higher depressive symptomatology in these students.

In summary, researchers have identified response patterns that are significantly different for non-clinical Hispanic subjects using personality measures, some with positive coping interpretations and some with deficit coping interpretations. This leads to a challenge of the null hypothesis regarding cultural differences between EuroAmericans and Hispanics, but does not make it any clearer as to which direction to expect results for Mexican American children. This suggests that examiners should display caution when analyzing the results of a Hispanic subject. It also suggests an exploration of the need for development of separate norms for Hispanics, especially

when such critical treatment or intervention choices must be made based on an aggregation of test results.

Mexican American Acculturation

Over the last 75 years, theoretical models of acculturation have become increasingly complex and sophisticated. Early works in cross-cultural studies posited poor prognosis for individuals living in the "margins" of two cultures (Stonequist, 1935). Stonequist (1935) contended that a person attempting to live in two cultures would lack roots in both, breeding poor adjustment.

The Redfield, Linton, and Herskovits (1936) classic definition documented an awareness of the influence of the less dominant culture on the dominant culture:

> Acculturation comprehends those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original culture patterns of either or both groups…acculturation is to be distinguished from culture change, of which it is but one aspect, and assimilation, which is at times a phase of acculturation. It is also to be differentiated from diffusion which while occurring in all instances of acculturation, is not only a phenomenon which frequently takes place without the occurrence of the types of contact between peoples specified in the definition above, but also constitutes only one aspect of the process of acculturation. (pp.142-152)

The 1954 Social Science Research council further developed the definition:

> …culture change that is initiated by the conjunction of two or more autonomous cultural systems. Acculturative change may be the consequence of direct cultural transmission; it may be derived from noncultural causes, such as ecological or demographic modification induced by an impinging culture; it may be delayed as with internal adjustments following upon the acceptance of alien traits and patterns; or it may be a reactive adaptation of traditional modes of life. Its dynamics can be seen as the selective adaptation of value systems, the process of integration and differentiation, the generation of developmental sequences, and the operation of role determinants and personality factors (p.974).

These early works focused on the group level of acculturation and specified that the change that an individual undergoes during acculturation of their group is "psychological acculturation".

By the 1970s and 1980s, work conducted by Manuel Ramirez (1983) and colleagues, (Ramirez & Castaneda, 1974; Ramirez, Castaneda, & Herold, 1974; Ramirez, Garza, & Cox, 1980) provided important evidence that directly contradicted earlier contentions of the monocultural alternative. Their work indicated that participating in more than one culture did not necessarily produce negative outcomes, but instead higher levels of multi-culturalism was associated with higher levels of adjustment, positive capabilities, and leadership skills.

In various seminal writings, Berry (1980a, 1980b, 1988) attempted to aggregate human nature with the varied histories of multiple culture groups deriving what has come to be a widely respected conceptual framework for investigating acculturation and

evaluating acculturation research. The conceptual framework suggests four varieties of acculturation (assimilation, separation, integration, and marginalization).

About the same time, Padilla (1980) published works referring to the constructs of ethnic loyalty and cultural awareness based on his work with Hispanic Americans. He found that "ethnic loyalty" was comprised of four factors (language preference and use, cultural pride and affiliation, cultural identification and preference and social behavioral orientation) and four factors emerged as elements of "cultural awareness" (respondent cultural heritage, spouse's cultural heritage, parent's cultural heritage, and perceived discrimination). Cuellar, Harris and Jasso (1980) published a unidimensional instrument to measure acculturation, the Acculturation Rating Scale for Mexican Americans (*ARSMA*). However, it and other contemporary acculturation scales were criticized because the linear measures, by nature, only quantified a loss of original culture as the dominant culture was adapted to by the individual (Marin, Gamba, & Marin 1992; Rogler, Cortes, and Malgady, 1991).

Early research typically clustered samples by surname or phenotype, ethnic orientation or levels of acculturation were not addressed (Trimble, 1990-91). Trimble (1990-91) criticized the use of "ethnic glosses" or use of general labels (e.g., Hispanics) without acknowledging heuristically important differences among respondents. To more adequately understand the psychological make-up and behavior of ethnic groups, Trimble suggests collecting data on generational history; national background; poverty level; educational attainment; migration history; and other demographic characteristics with relevance to a given study.

It is the change in these components of ethnicity that the psychological literature has considered part of the acculturative process of ethnic-racial minorities or cultural groups (Gordon, 1964). The acculturation process can affect values, norms, and constructs that frame a person's world view and interaction pattern. These changes can be expected to be more permanent and reflective of cultural adoption (Marin, 1992).

To encompass the multidimensionality of human acculturation experiences of the Berry model and the increasing literature base, Cuellar, Arnold, & Maldonado (1995b) introduced the Acculturation Rating Scale for Mexican Americans-Revised (ARSMA-II). Used in over 144 research publications, the ARSMA-II recognizes the independent development of one's own culture (enculturation), as well as the learning and accepting of various customs, mores, and interpersonal relationships of the dominant culture.

Involuntary Minority

An additional strand of Hispanic psychology that has bearing on the current study focuses on the understanding of how experiences with oppression and racism influence the behavior of Latinos. Franz Fanon (1967) keenly illuminated the importance of the impact of colonization and oppression on the psychology of people of color. He cautioned that Western European theories of Freud and Jung were based on oppression. According to Ogbu (1987), Mexican Americans fall into a "castelike" or involuntary minority group that is associated with poor school performance, low income, discrimination, depreciation, and exploitation. Ogbu defines castelike minorities as groups that were incorporated into the United States involuntarily through slavery, conquest, or colonization. The African American, Native American, Mexican American,

and Puerto Rican groups qualify as castelike or involuntary minorities. They are distinct from immigrant minorities, such as Japanese, Vietnamese, or Nicaraguans, because they did not originally come to the U.S. voluntarily. He considers primary cultural differences to exist upon initial contact between the Euro American and castelike minority group members based on the contents of the different cultures. However, it is the secondary cultural differences that Ogbu identifies as occurring between two cultures as contact is prolonged. This creates problematic results for the minority children. Ogbu suggests that these secondary adaptations of the involuntary minority group impact interaction styles, create stronger ethnic ties, as well as rejection and distrust of the culture of the dominant or host group. Cultural inversion is the tendency of the minority group to see behaviors, events, symbols, meanings of the dominant group as inappropriate for them and as a means for repudiating the derogatory images placed on them by the Euro American majority. Although overt discriminatory practices are now prohibited in the United States, a long and powerful socio-historical experience of discrimination, denigration, and the realization of the economic worthlessness of education (Ogbu, 1978) has led involuntary minorities to reject the typical pattern of assimilation that the European immigrants participated in. Involuntary minority groups such as Mexican Americans have held language ties and intrafamilial relationships intact despite increasing levels of acculturation or biculturalism (Keefe & Casas, 1980; Keefe, Padilla & Carlos, 1978) and multiple American-born generations. Garza & Gallegos (1985) point out that why one person adapts positively to the environment while another is completely overwhelmed and defeated by the environment is still not conclusively

answered. However, work by researchers (e.g., Padilla, 2000; Szapocznik & Kurtines, 1980) have suggested that personality types greatly influence how the contingencies or obstacles of the culture environment are processed and organized.

Garza & Gallegos (1985) note that the environment scatters its effects differentially rather than impacting individuals uniformly. Given the vast research in social psychology, the study of the human repertoire of potential social behaviors is quite vast, even when acculturation is not considered within the respective probabilities associated with each specific stimulus and response. These works suggest that these multicultural individuals could develop adaptive strengths and flexibility resulting in positive adjustment and functioning.

Garza & Gallegos (1985) contend that if Hispanic psychology is to avoid the pitfall of restricting itself to simplistic models and recognize the irregularities inherent in humans and their interaction with the environment, it is important to concentrate research efforts on describing individuals and relationships to the world from a probabilistic stance. An example of oversimplification is the classifying of Mexican Americans simply according to generation. For example, it would be inaccurate and simplistic to assume that a third- or a fourth-generation Mexican American is more acculturated than a first- or second-generation Mexican American.

Although Gallegos and Garza consider generational status as highly relevant, they consider the interplay of personal choice and environmental milieu, to vary across individuals, ultimately impacting the development of each individual differently. Work in these areas by Israel Cuellar and colleagues has lead to the development of a multi-

dimensional acculturation model that allows for an individual's acclimation to a majority culture, without mandatory rejection or loss of the individual's culture of origin (Cuellar, Arnold, & Maldonado, 1995b).

Although the cross-cultural approach to behavioral research with Hispanics has produced information that is both interesting and important, Padilla (1995) notes that a paradigm shift has occurred over the last 30 years that has moved away from comparisons of Hispanics with non-Hispanics and focuses more on understanding the heterogeneity that differentiates sub-groups of Hispanics. This means that rather than comparing and contrasting Hispanics with other cultural groups, they focus attention on a comparison of third- or fourth-generation Mexican American children's educational achievement compares to Mexican immigrant student's achievement. This has resulted in the incorporation of acculturation (or ethnic identity) as a moderator variable in published research.

In summary, lead scholars of Hispanic psychology also recognize that previously accepted principles of behavior are not always universal when applied to societal structures as historical dominance and oppression which influence a person's experience and interaction with majority group members and institutions. Eurocentric paradigms are frequently inappropriate when applied to the study of Hispanics. A new scholarship has emerged which makes use of Latino culture, role, and linguistic information to development new instruments to assess culture and interpret results that take into account the social context in which Hispanics live (Padilla, 1995).

The range of intracultural variances for the Hispanic culture is broad. As a population, many Hispanics hold unskilled and semi-skilled jobs, occupy the lower echelons of the socio-economic scale and posses limited educational backgrounds. Yet, there are also Hispanics who are members of the middle and upper-middle class, some are professionals and continue to strongly identify themselves as Hispanic or Latino. Despite the existence of a large proportion of Hispanics who speak (primarily or only) Spanish, there are also many third- and later generation Hispanics who possess minimal or no linguistic skills in Spanish. Only when variables such as Hispanic sub-group, generational status, employment and occupational status of spouses, attained educational level of spouses, preferred language, self-attributed ethnicity, and other demographic variables are controlled for can a higher level of certainty be attained when comparing Hispanics with other ethnic groups (Padilla, 1995). This echoed Berry, Trimble & Olmedo's (1986) caution that unless a researcher can gauge acculturative influence and its impact on the individual, inappropriate deductions would be made about the sources of cross-cultural variation in behavior.

Due to the unreliable report of acculturation level by children under the age of 12 (Cuellar, 1999), the acculturation level of the caretaker involved in this study was measured instead. Hence the impact of acculturation on family functioning must be broached.

Mexican American Family Functioning and Acculturation

Family functioning is defined as the pattern of interactions among family members and the family member's interactions with social systems outside the home

(Rueschenberg & Buriel, 1995). This is a departure from the majority of the literature in that the family rather than the individual must constitute the main unit of analysis (Rueschenberg & Buriel, 1995). There is a history of the impact of social-environmental variables on family functioning (Parsons, 1951), however, research specifically on the Mexican American family has not considered the complex interaction of familial relationships, political, social, and cultural variables. The work of Sabogal and colleagues (1987) points to a systems perspective where the Mexican American family can be viewed as capable of adapting to U.S. social systems while retaining many of its internal characteristics that are cultural in nature, suggesting a "differential" pattern of acculturation within Latino families. The Mexican American family can be considered an open system with both internal and external aspects of functioning. The term "internal aspect" (Hartzler & Franco, 1985; Rueschenberg & Buriel, 1995) includes both the family members' patterns of relationships and interactions, as well as the structure of the family system. The term "external aspect" refers to the family's interactions with outside social systems, namely social institutions, and the larger context of U.S. society. Because the family unit undergoes its own development which transcends the development of its individual members, Hartzler & Franco (1985) contends that the family needs to be viewed as an adapting entity with its own developmental process.

Rueschenberg & Buriel (1995) consider the behavior of an individual family member to be influenced by the total family system. The possibility that Hispanic families are in different stages of acculturation as well as the fluidity (Marin, 1992) of acculturation must be taken into account when attempting to understand behaviors and activities

engaged in by children of Mexican descent. Due to the high European immigration experience at the turn of the century, acculturation was primarily viewed from an assimilationist's perspective (Seña-Rivera, 1976). Meaning that European families most typically were absorbed into the dominant U.S. society, which was phenotypically similar and itself a product of early European immigration (Rueschenberg & Buriel, 1995).

Because the circumstances surrounding the immigration of Mexican families are socially, historically, and culturally different; alternative models that more adequately describe acculturative processes for Mexican Americans (Berry, 1980a) were needed. Due to the unique acculturation experiences of Mexican Americans, Ramirez (1983) argued that a bi-cultural adaptation to U.S. society can be attained.

As a result to the different socio-historical context of the southwest from the turn of the century European immigration experience, it is highly likely that acculturation of Mexican American families, living in the same country, will follow a different course than that of European descent families. Rueschenberg & Buriel (1995) projected that in the Southwest United States, the pressure to retain Mexican values stemmed from the following: "a) was once a part of Mexico b) is geographically connected to Mexico, and c) is heavily populated by persons of Mexican descent." They also considered the highly influential, dominant Euro American influence in U.S. institutions as necessitating Mexican American adaptation to Euro American behavior while maintaining a different behavior when engaging in immediate and family community activities.

In a study where Rueschenberg & Buriel (1995) divided family groups into three different levels of acculturation, they expected to find evidence of a form of bi-culturalism, with family functioning in the home reflecting a more Mexican orientation, and activities outside of the home and in the community, reflecting a more Euro American orientation. They took into account several dimensions of acculturation such as: language preference, language proficiency, generational status, and recency of migration. They hypothesized that the higher levels of acculturation of a family would be positively related to increased family involvement with external social systems such as school, work, community and other U.S. institutions. Conversely, they also hypothesized that no significant relationship would manifest between acculturation level and family functioning related to internal family systems and operations. Results supported their stated hypotheses. Rueschenberg & Buriel found that as the level of acculturation increased for a family, the more likely the family was involved with U.S. social systems and institutions. Their findings supported previously and found that patterns of intrafamilial relationships and interactions (Keefe & Casas, 1980; Keefe, Padilla & Carlos, 1978). Where intrafamilial relationships and interactions did not appear to differ substantially from one generation to the next, despite the fact that English had become the primary source of communication and family members had become increasingly participatory in the larger U.S. society. In fact, Keefe, Padilla & Carlos (1978) found that Mexican American extended family support did not decline despite decreasing ethnic awareness and ethnic loyalty. Similarly, Sabogal, et al. (1987) reported that perceived extended family support did not decrease with increasing levels

of acculturation. The pattern noted in these studies seems to indicate that an assimilationist's perspective is not supported for families of Mexican descent. The assimilationist's perspective would have predicted that families adapt to American life in the direction of Euro American culture along both internal and external aspects of family functioning. Although the assimilationist's model seems to account for the experience of European decent families and their adaptation to life in the United States, it is suggested that for families of Mexican descent, acculturation to U.S. society may be better explained by a bi-cultural model (Ramirez, 1983; Rueschenberg & Buriel, 1995). Given that the adjustment to U.S. society can take place with the basic integrity of the family functioning remaining intact, an acculturation model that takes into account a complex interaction between environmental influences and personal choices (Garza & Gallegos, 1985) appears to be a very applicable view of family functioning for Mexican Americans (Ramirez, 1983; Rueschenberg & Buriel, 1995, Sabogal, et al., 1987; Keefe, Padilla & Carlos, 1978; Hartzler & Franco, 1985).

Current Trends in Psychological Testing Applied to Children

Formal assessment refers to the use of standardized instruments to evaluate a child's cognitive processing, achievement level, behavioral display, and emotional well-being. Formal evaluation is typically initiated when a child's or adolescent's behavior deviates from normative expectations to such an extent that day to day functioning is impacted.

A more concerted effort towards identifying disorders of infancy, childhood and adolescents was noted with the publication of the *Diagnostic and Statistical Manual of Mental Disorders.* (*DSM-III*) (American Psychiatric Association, 1980) (Kazdin,1989).

Given the increase in recognition of childhood disorders more specialized formal evaluation instruments and methods have been created to assess a child's functioning both dimensionally and objectively.

In view of the fact that psychological characteristics are internal, they cannot be observed or measured directly, instead they must be inferred from an individual's external behavior (Reynolds & Ramsey, 2003). Moreover, a viable intervention can only be generated if appropriate assessment methods yielding valid and reliable results are applied to prevent maladaptive behavior's inevitable outcome. (Lowe & Reynolds,1999). This diagnostic process is complicated further when culture or language proficiency of the child being tested differs from those of the normative sample (Cervantes & Arroyo, 1995).

Tyson's (2004) extensive review of the literature reminds the reader that the major criticisms of the categorical diagnostic (*DSM*, 1952 to *DSM-IV TR*, 2000) approach are: 1) it is heavily based on the subjective process that relied on a panel of experts who came to consensus after extensive negotiations to determine the criteria of each disorder; and 2) this approach assumes that "diagnostic entities are qualitative and discrete and that there are distinct boundaries between them." The *DSM* is the "primary reference manual for reimbursement purposes among all mental health professionals," and considers the 11 validity studies conducted in order to justify the most recent revisions (*DSM-IV TR*) (American Psychiatric Association, 2000) to have improved the integrity of the *DSM*, substantially (Tyson, 2004). He also points out, that the *DSM*'s long-standing multi-axial classification scheme has always provided help to clinicians making

comprehensive diagnoses. In addition, the most recent *DSM-III* (American Psychiatric Association, 1980), *DSM-IV* (American Psychiatric Association, 1994), and *DSM-IVTR* (American Psychiatric Association, 2000) have taken consistent literature trends into account.

In an attempt to recognize the growing research base of the influence of acculturation on psychological adjustment and recovery, the American Psychiatric Association (1993) suggested that Acculturation Problem be included as a sub-category in Other Conditions That May be a Focus of Clinical Attention in the *DSM-IV*. In addition, because numerous factor analytic studies of parent and teacher rating scales distinguished between two core dimensions of ADHD: inattention and hyperactivity/impulsivity now form the foundation of the *DSM-IV* diagnostic criteria for the disorder (Lahey et al., 1994).

Tyson plainly prefers the dimensional approach (a broad or narrow band rating scale) for making classification distinctions, largely because behavior rating scales are fully rooted in empirical methods, can statistically identify clusters of highly inter-correlated behaviors, and have the potential for stronger empirical support. The benefit of behavior rating scales is for researchers to engage in cluster analytic investigations of child behavior problems. Thus enabling behaviors to be grouped by constructs, as opposed to discrete diagnosis (Meehl, 1995). Although all children who are rated with a behavior rating scale do not receive diagnosis, rating scales do allow clinicians to evaluate the child on several dimensions of behavior and tend to capture comorbidity (Caron & Rutter, 1991). According to Cantwell (1996), broad-band rating scales are also more

likely to find sub-syndromal conditions that can produce functional impairment despite the lack of categorical diagnoses. Broad-Band behavior rating scales also include an adaptive skills component that allows a child's functioning in the social arena to be evaluated. The functional impairment reported by parents or teachers would most likely be noted on the broad-band's adaptive skills component, allowing the clinician or researcher to determine the level of impact on day to day functioning.

Behavior checklists are not only commonly used in schools, child guidance clinics, and behavioral hospitals, but are also frequently used in sample selection for research on emotional and behavioral disturbances. According to Kavale, Forness, & Alper (1986) behavior rating scales are used with such high frequency in the fields of education, psychology and medicine that only the use of previous classification exceeds their use in establishing criteria for sample selection. Behavior rating scales are also practical because of their low cost, and have been found to yield more reliable and objective data than projective techniques or clinical interviews. (Achenbach & Edelbrock 1983; Martin, Hooper, & Snow, 1986; Witt, Heffer, & Pfeiffer, 1990).

As early as 1986, DeMers (Knight, 1996) noted that in addition to interviews, observations, and projective techniques, millions of standardized tests of intelligence, achievement, and personality were administered to children each year. The vast number of psychological functioning measures has not diminished over the last 20 years, but instead has remained steady. According to Kamphaus, et al. (2000), "Millions of U.S. school children receive psychological and related testing on an annual basis." is a conservative estimate because it is based only on the information available from the

National Center for Educational Statistics (1997). As of 1995, approximately 12% of the U.S. public school population was enrolled in federally funded special education programs. Indicating that at minimum, 5,125,000 children participated in multi-disciplinary psychoeducational diagnostic or annual evaluation processes. According to Kamphaus et al. (2000), these figures do not indicate the number of children who received outside evaluations from private practitioners, hospitals, clinics, or mental health agencies. Nor does this number include those children who were tested but found ineligible for special education services.1004

In a paper presented at the 106th convention of the American Psychological Association, Reschly (1998) reported that when comparing the assessment practices of school psychologists from the years 1986, 1992, and 1997, three behavior rating scales were among the top 15 instruments used in evaluations across the country. The most commonly used behavior rating scales were Conner's Parent/Teacher Rating Scales (Conners, 1989), *Child Behavior Checklist* (*CBCL*; Achenbach & Edelbrock, 1983), and the *Behavior Assessment System for Children* (*BASC* ; Reynolds & Kamphaus, 1992). Kamphaus et al. (2000) point out that the "*CBCL* was the only child behavior rating scale to be included in all three surveys and was not among the top 25 most commonly used instrument in 1986." Hosp & Reschly (2002) reported that surveying 1056 practicing school psychologists across the U.S. revealed that behavior rating scales had become the most commonly used instruments, closely followed by personality/projectives, and IQ/ability measures.

Behavior rating scales completed by caregivers and teachers offer child clinicians a reliable source of information that does not rely on the child's reading ability, oral or written expression skills, allows a broad coverage of numerous problem behavior areas and is cost efficient (Kamphaus & Frick, 1996). Knight (1996) indicates that behavior ratings completed by adults are an important component of a comprehensive assessment because the adults are more likely to have the cognitive and conceptual abilities needed to appropriately complete the behavior rating scale. Especially since parents and teachers are constantly observing the personality and emotional functioning of children and adolescents they are exposed to. The daily evaluations are immediate and are based on the adult's perception of appropriate or typical behavior given a developmental, cultural, religious, societal, or legal perspective. Meaning that despite being able to read, children and adolescents may lack relevant skills necessary to self-monitor their behavior and provide a summative behavior history response.

Researchers have found that parent/child behavior ratings correlated significantly for normal populations, although parents tended to give lower ratings than the child (Reynolds, Anderson & Bartell, 1985; Wierzbicki, 1987). Generally, however, parent reports tend to correlate with more overt, observable behaviors (Kazdin, Esveld-Dawson, Sherick & Colbus, 1985). Merrell (1993) and van der Ende (1999) consider each informant to deliver a unique contribution in adding to the reliability of a clinical assessment. Historically, differences between various informants were interpreted as reflecting an unreliability of measurement, however, scholars have come to report that low to moderate degree of agreement between multiple informants has lead clinicians

and researchers to conclude that information that is obtained about a child is not interchangeable (Stanger & Lewis, 1993) because the child's behavioral patterns can vary according to different situations, settings, and contexts (Achenbach, et al, 1987; Fergusson & Horwood, 1993; Frauenglass & Routh, 1999; Kazdin, 1989; Verhulst & Akkerhuis, 1989).

Verhulst & Akkerhuis (1989) suggest that the differences between multiple informants display: 1) true, specific interactional impact on the child's behavior; 2) true behavioral specificity; 3) distortions in individual perception. Meaning that, in response to a particular adult's manner of communication, level of structure of the environment set by the adult, and ability to compare across numerous children of similar age, the child's interaction pattern for a particular setting may differ. Differences can also indicate the range of a child's behavioral repertoire. Differences can also give insight to the level of distress that is being caused to the rater by the child's behavior.

Teachers too play a major role in children's referral for behavioral and emotional disorders. They are most often the first to consider a child for referral. Teachers are readily able to compare the student's behavior across same-aged peers as they constantly challenge the child to increase his knowledge base. The information gained through both parent and teacher ratings scales, provides an assessment by comparison of the child's symptoms and functioning to a normative sample of peers in order to facilitate the development of treatment recommendations. Draguns (1987) and Persons (1986) consider the use of multi-scaled instruments to be more sensitive to socio-cultural influence than the diagnostic categories provided in the *DSM*. Given the need for

objective assessment of a child's emotional and psychological functioning, multi-dimensional scales provide a swift manner of capturing a wide range of data that allows for the study of characteristic patterns of behavior systems of psychological distress exhibited by: gender, race/ethnicity, and socioeconomic status groups.

Numerous studies have documented that teachers tend to have modified reactions, expectations, and interactions toward Hispanic students when compared to Anglo students. Given that the behavior rating scales have become the most frequent measure administered in a psychological battery, it is important to briefly summarize the applicable research. Research has shown that teacher's reactions and expectations towards students differs on the basis of numerous variables: gender; race; and social class background (Cohen, 1994; So, 1987; Guskin, Pang, & Simon, 1992; Jensen & Rosenfeld, 1974; Yee, 1968), ethnicity (Clifton, Perry, Parsonson, & Hryniuk, 1986; High & Udall, 1983; Jensen & Roesenfeld, 1974; Matute-Bianchi, 1986; McCombs & Gay, 1988; Zucker & Prieto, 1977), and language proficiency (Buriel, 1983). Scholars have also found that teachers perceive Hispanic students behavior less favorably than they perceive Anglo students behavior (Bahr, Fuchs, Stecker & Fuchs, 1991; Prieto & Zucker, 1981; Roberts, Hutton, & Plata, 1985; So, 1987; Zimmerman, Khoury, & Vega, 1995). Teachers have been noted to perceive Hispanics as having lower academic potential than Anglos (Buriel, 1982; McCombs & Gay, 1988; Olague, 1993). And in studies conducted in the 1970s and 1980s, teachers were found to interact less affirmatively with Hispanic students than with Anglo students (Buriel, 1983). Zimmermann, et al. (1995) found that Anglo teachers and Hispanic teachers did not rate

children of their own ethnicity as less problematic. Landers Potts (1998) considers the racial composition of a school or community to possibly mediate teacher's perceptions of children regardless of the teacher's own ethnicity.

In a recent review of the Behavior Assessment System for Children (*BASC* ; Reynolds & Kamphaus, 1992), by Gladman & Lancaster (2003) both the *BASC Parent Rating Scale* (*PRS*) and *Teacher Rating Scale*(*TRS*), were reported as having more than adequate sensitivity when discriminating between children with clinical disorders and those without. Gladman & Lancaster consider the *PRS* and *TRS* components of the *BASC* to make meaningful comparisons to one another. Gladman & Lancaster (2003) also noted the ability of the *BASC PRS* and *TRS* to distinguish between subtypes of Attention Deficit Hyperactivity Disorder. They consider its ability to tease Anxiety and Depression symptoms apart to be of great benefit to a child clinician's efforts to select intervention strategies. The separate scales are a contrast to the *CBCL*'s combination scales. Gladman & Lancaster also consider the provision of information on range or degree of psychopathology, identification of sub-syndromal groups and better predictive validity to be distinct advantages of the dimensional approach over categorical methods in diagnosing children.

Due to the large non-clinical sample and its sound psychometric properties, the *BASC* is considered to be widely applicable in a variety of settings. Given the well respected status of the *BASC*, it is important to investigate its applicability to a growing U.S. Hispanic population. Especially since the research literature places this ethnic group in an underrepresentation of behavioral difficulties category.

Rationale for Study

Although differential symptom content for particular pathological conditions is more commonly asserted, research is needed to illuminate the relationship between culture and psychopathology. However, before empirical evidence is collected to demonstrate systematic differences in the patterns of behavioral symptoms exhibited by various cultural groups to express specific psychological distress or syndromes, non-identified or non-clinical children's behavior should be studied in order to establish a baseline of behavior symptomatology.

James (1995) contended that deviancy from the majority culture norm is highly likely to lead to maladjustment. Brown (1979) points out that not only is it important to realize the differences between two culture's definitions of maladjustment but also to identify the differences between the "normal" people of each group.

It is important to study differences between and within cultural groups because differences provide the context for understanding, which then allows accurate response to each group's needs as well as appreciation of each group's strengths. Knight (1996) recognized that differential group profiles must not be confused with characteristics of individuals within the group who may or may not exhibit the general profile. It is not a question of seeking to prove equivalence or judge groups as more or less superior. Knight (1996) contends that to refuse to look for or acknowledge group differences is to deny ourselves the potential to increase our understanding and appreciation for each other.

The results of this study should have merit in that they are building blocks in the body of knowledge regarding how non-clinical Mexican American children's behavior on a multi-scaled instrument is reported by parents and teachers. Knowing what a particular ethnicity typically finds more adaptive is useful because clinicians will not be attempting to impose their belief/value system on clients, but rather will be helping clients reach a point of healing, self-recognition, or identify areas of bi-cultural adaptation that could reduce the amount of psychological distress that lead them to seek help initially. This will help practitioners interpret test results and deliver effective services for a rapidly growing target group.

CHAPTER III

METHODOLOGY

The present study was exploratory in nature. It was conducted in order to determine if cultural influences, such as acculturation level, should be taken into account when a researcher or clinician interprets the *BASC Parent Rating Scale-C* or Teacher Rating Scale-C results for a Mexican American child. Only two studies have previously considered the possible influence of Hispanic ethnicity on the final (published) version of a *BASC* component. However, neither study differentiated the type of Hispanic Americans used (Cuban, Puerto Rican, Mexican American, Honduran, etc.) and no consideration to acculturation level was given. Due to the large Mexican American population in Texas and several southwest states, the multi-symptom behavior measure's frequency of use in clinical and research settings, and the long documented underrepresentation of Hispanics in behaviorally disordered classrooms, the examiner endeavored to investigate the possible influence of Mexican American acculturation on a children's behavior rating scale, which had not been previously pursued in the literature. This chapter will describe the context, participants, instrumentation, procedures, research questions, and data analyses relating to the method of this study.

Context

The study was conducted in the southwest United States, specifically Texas. The state's population growth has been substantial in the 1990s due natural increase, 56.7%, domestic migration, 19.7%, and international immigration, 23.6%. Combined, these population change factors are responsible for the 2.8 million persons added from 1990 to

1998. At the time of the study, 1999-2000 overall Hispanic representation was estimated to be 39.6 percent of the public school population (TEA, AEIMS, 1999-2000). Based on the most current Texas-wide public school statistics available (TEA, AEIMS, 2003-2004), Hispanics represent now represent 43.8% percent of the public school population in Texas. Due to Texas' historical ties to Mexico, the vast majority of the Hispanics in Texas are of Mexican descent.

The Coastal Bend region of Texas, which reports at least a 50% Hispanic population largely of Mexican descent, was selected for this study. Stability of the population sample is similar to any suburban city outside of a major industrialized city. Non-agricultural job markets and lack of local crops that require hand-labor tend to limit the number of migrant or seasonal farm workers available for inclusion in the study, hence efforts to include a substantial representation of seasonal farm workers were not made.

Five semi-rural Texas public school districts with enough of a student population to necessitate bilingual education programs participated in the study. It was the examiner's perception that those districts actively providing ESL or Bilingual Education classes would be more likely to have parents of a broader range of acculturation levels available for participation in the study. Table 1 displays district-wide percentages of Hispanic student make-up, total student population classified as economically disadvantaged and Limited English Proficient students of the participating districts as well as Texas-wide statistics for ready comparison. The participating district's student populations ranged from 274 to 4461. Hispanics, largely of Mexican descent, comprised 36.6% to 97.3% of the student populations in these five school districts. Four of the participating districts

had majority-minority populations with Hispanics as the dominant ethnicity. These same four districts also had an unusually large number of students from economically disadvantage households (66.7% to 85.4%) as compared to the state average of 13.9%.

Table 1

Percentage of District- and Texas-wide Hispanic Student Populations, Economically Disadvantaged Population, and Limited English Proficient Student Population

	Total Population	Hispanic Student Population	Economically Disadvantaged	Limited English Proficient
District 1	4422	97.3 %	85.4 %	6.9 %
District 2	274	88.3 %	84 %	5.1 %
District 3	2198	76.3 %	66.7%	3.4%
District 4	1452	86.3 %	76%	14.4%
District 5	4461	36.6 %	32.7 %	1.8 %
State: Texas	3,991,783	39.6 %	13.9 %	49%

Participants

Parents

The parent raters in this study consisted of 113 mothers and one father of Mexican American children: ages 6-11, educated in a public school setting, and who met non-clinical criteria. Non-Clinical criteria was communicated to Parents as children who were: not currently or in the past served by an outside mental health agency, not

receiving special education interventions, not undergoing the referral process for special education eligibility, and not taking any psychotropic medication. Psychotropic medication was explained as any medication that was prescribed to address Attention Deficit Hyperactivity Disorder, Anxiety, Depression, Obsessive-Compulsive tendencies or anger/rage control problems. Ethnicity and acculturation level of parent were established through self-identification on the *Acculturation Rating Scale for Mexican Americans-II* (*ARSMA-II*). All data was obtained on a volunteer basis, and is therefore considered a sample of convenience.

A total of 114 parent participants, Americans of Mexican descent, varied in connection to Mexican citizenship from first generation to multiple generations removed. The Parent sample was divided into three levels due to small sample size. High, Medium and Low acculturation subsample assignment was based on the results of the *Acculturation Rating Scale for Mexican Americans-II* (*ARSMA-II*) scores calculated for each Parent participant. More specifically, this study took into consideration the linear acculturation scores obtained (Part 1 results) and the typologies obtained (Part 2 results). Because the obtained *ARSMA-II* typology "Traditional Mexican" was observed in both 1st and 2nd linear acculturation levels for this sample but not beyond, they were brought together to form the Low acculturation group. Similarly, only the highest two linear acculturation levels, 4th and 5th, contained the "Assimilated" typology, leading to the determination that these two levels could be collapsed into the High acculturation group for the purposes of this study. Those respondents who constitute the largest subsample of this study, the Medium acculturation group, obtained a linear acculturation

rating of 3, and 90% of this group obtained the "Bicultural" typology. Interestingly, the "High Integrated Bicultural" typology was found from the 2nd to 5th levels of linear acculturation.

The following tables, Table 2 through Table 5, present the Total, High, Medium, and Low Mexican American Parent sample's proportion of: 1) generational status, 2) highest level of educational attainment, and Parents' reports of 3) thinking in English and 4) thinking in Spanish. The information for the following tables was obtained by analyzing individual items of the *ARSMA-II*.

In Table 2, Parent sample sizes can be found along the left side listed beneath the Total, High, Medium, and Low sample groupings. As can be noted, there are nine fewer parent participants than there were children rated in the study. Those parents who rated two children were only included once for this presentation of Parent characteristics.

In Table 2, generational status refers to the varying degrees of exposure a person has to the U.S.: 1st generation is a person born in Mexico, 2nd generation has either parent born in Mexico, 3rd generation has parents born in U.S. and all grandparents born in Mexico, 4th generation has at least one grandparent born in Mexico, and 5th generation has all parents and grandparents born in the United States (Cuellar, et al., 1995b). Expectedly, the 1st generation Mexican Americans were concentrated in the Low acculturation subsample; however, the 2nd generation was almost equally represented in the Medium and Low acculturation subsamples. For this Mexican American sample, those of the 3rd generation were either in the Medium or Low acculturation subsamples. The largest number of Mexican American Parent participants in the study were of the 4th

and 5th generations, yet they were not exclusively in the High and Medium acculturation subsamples.

Table 2

Generational Status for Total Mexican American Sample and Each Level of Acculturation

	1st Generation	2nd Generation	3rd Generation	4th Generation	5th Generation
Total (n=114)	7	13	14	34	47
High (n=21)	-	-	-	6	15
Medium (n=63)	-	6	10	21	26
Low (n=30)	8	5	4	7	6

Additional defining characteristics of this Mexican American Parent sample include the highest level of education attained. In this Mexican American Parent sample, 67% of the Total sample did not exceed a high school education. Because of the manner in which the *ARSMA-II* is worded, rate of high school completion achieved by these parents is unclear; therefore limitations and suggestions for additional items of educational attainment history will be discussed in Chapter V. As can be noted in Table 3 , with each decreasing level of acculturation, the percentage of parents who did not exceed a high school education increases (High=33%; Medium= 62%; Low=76%). Yet

the complexity of ethnic identification noted by scholars of the Mexican American is hinted at in this sample of convenience, where none of the parents of the Medium acculturation group were college graduates and yet, the one parent outside of the High acculturation group who had completed a college education was a member of the Low acculturation group.

Table 3

Highest Level of Educational Achievement for Total Mexican American Sample and Each Level of Acculturation

	Up to 6th Grade	7th to 8th Grade	9th-12th Grade	1-2 Years of College	3-4 Years of College	College Graduate
Total (n=114)	2	5	69	25	6	7
High (n=21)	-	-	7	5	3	6
Medium (n=63)	-	4	39	17	3	-
Low (n=30)	2	1	23	3	-	1

The two factors (generational status and educational attainment) do not sufficiently communicate the complexity of the Mexican American and thus, Cuellar's *ARSMA-II* (1995) items regarding the language of thought or internal problem solving are presented for both English (Table 4) and Spanish (Table 5). Cuellar's acculturation measure allows the respondent to answer each item separately, and the response on one item is not exclusionary to another, allowing for a respondent to communicate cultural espousal

to the majority culture as well as their Mexican American culture. The following two tables (Tables 4 and 5) are presented in order to demonstrate that even at the upper levels of acculturation, the influence of the Hispanic culture is sufficiently present. It is not a question of whether the person prefers one language for processing or problem solving, but what language is it actually occurring in. As will be readily noted, the results for the three acculturation divisions implemented in this study show a pattern.

Noticeably, the results in Table 4 are not complimentary matches for results in Table 5. The *ARSMA-II* uses a 5-point Likert format with short written descriptors for responses; these descriptors are listed across the top rows of Tables 4 and 5.

Table 4

Parent Report of Thinking in English for Total Mexican American Sample and Each Level of Acculturation

	Not At All	Very Little or Not Very Often	Moderately	Much or Very Often	Extremely Often or Almost Always
Total (n=114)	3	1	17	21	72
High (n=21)	-	-	-	1	20
Medium (n=63)	-	1	6	11	45
Low (n=30)	3	-	11	9	7

In Table 4 , 95% of the High acculturation Parent respondents reported that they thought in English “almost always”. In Table 5, 28% of the High acculturation Parent group reported thinking in Spanish “moderately” or “very often”. Although the declining amounts of Spanish Language processing is expected for a High acculturation respondent group, the reporting of thinking in Spanish by more than a fourth of the respondents indicates that the influence of the Mexican American culture is not easily quantified. From the remainder of Tables 4 and 5, 71% of the Medium acculturation Parent group reported thinking in English “almost always” and 48% of the Medium acculturation Parent respondents reported thinking in Spanish from “moderately” to

Table 5

Parent Report of Thinking in Spanish for Total Mexican American Sample and Each Level of Acculturation

	Not At All	Very Little or Not Very Often	Moderately	Much or Very Often	Extremely Often or Almost Always
Total (n=114)	28	24	29	18	15
High (n=21)	10	5	4	2	-
Medium (n=63)	16	17	18	8	4
Low (n=30)	2	2	7	8	11

“almost always”. Of the Low acculturation Parent group 23% of the respondents reported thinking in English “almost always” while 86% reported thinking in Spanish

"moderately" to "almost always". The most interesting responses for the Low acculturation Parent group, however, were the 2 individuals (6%) who reported not thinking in Spanish at all, yet responses to other items yielded a Low acculturation (2nd level linear acculturation) score. In Chapter V, the need for further work in the area of measuring acculturation will be addressed. Because the acculturation level of the home the child was being reared in was of interest to the examiner, only the parent's acculturation was measured.

Teachers

Participation was voluntarily obtained of 102 teachers of 123 elementary-aged, Mexican American children, ages 6-11. Only teachers of students whose parent had filled out an acculturation measure (*ARSMA-II*) and completed a *BASC Parent Rating Scale-Child* form were asked to fill out a *BASC Teacher Rating Scale-Child* form. Only matched-pairs of raters (*PRS-C* and *TRS-C* on same child) were included in the study. The average years of experience for the certified teachers of the five participating districts ranged from 8.7 to 13.8.

Instrumentation

Acculturation Rating Scale for Mexican Americans-II (*ARSMA-II*) is an instrument developed to assess acculturation processes through an orthogonal, multidimensional approach by "measuring the cultural orientation toward the Mexican culture and the Anglo culture independently" (Cuellar, Arnold, & Maldonado, 1995b). It is composed of two subscales, Mexican Orientation Subscale (MOS) and the Anglo Orientation Subscale (AOS), which together contain a total of 48 items. Items are presented in a 5-

point Likert format. Scores are not restricted to a linear model of acculturation and biculturals can be identified with characteristics of both cultures. The linear model of acculturation is based on a faulty assumption, namely that a corresponding reduction in one of two cultures must occur in order for the person to acculturate (Cuellar et al, 1995). However, Berry's (1980b) four modes of acculturation (assimilation, integration, separation, and marginalization) are the basis for the *ARSMA-II's* 17 generated typologies. The *ARSMA-II* allows for five acculturation levels to be determined, ranging from Very Mexican Oriented to Very Assimilated/Anglicized. The *ARSMA-II's* test-retest reliability coefficients for the multidimensional scale were reported to range from .72 to .81. The acculturation scores obtained for the unidimensional scale yielded a test-retest reliability of .96 over a one-week period. The internal consistency coefficients for the *ARSMA-II's* marginality scale ranged from .83 to .91, for all subscales except Mexican Marginality. The criterion-related validity was reported at .61, $p<.001$, using the correlation of acculturation level and generational status.

The *Behavior Assessment System for Children* (*BASC*) (Reynolds & Kamphaus, 1992) was designed to evaluate, diagnose and assist in the treatment of developmental, learning, and emotional/behavioral disorders. Any of the 5 *BASC* components can be used singularly or in combination. It consists of a) a structured developmental history; b) a form for recording directly observed classroom behavior; c) a self-report scale on which children, ages 8-11, and 12-18, can describe emotions and self-perceptions; d) a set of teacher rating scales to report observable behaviors, ages 4-5, 6-11, and 12-18; e) and a set of parent rating scales to report observable behaviors, ages 4-5, 6-11, and 12-

18. For the purposes of this study only the *Parent Rating Scale-Child* and the *Teacher Rating Scale-Child* were used.

The *Parent Rating Scale-Child* (*PRS-C*) provides a measure of clinical, adaptive and overall behavioral problems for children ages 6-11. It has a 4-point Likert format so as to rate children on frequency of behaviors from "never" to "almost always". The *PRS-C* provides 9 clinical scales (Aggression, Anxiety, Attention Problems, Atypicality, Conduct Problems, Depression, Hyperactivity, Somatization, and Withdrawal), 3 adaptive scales (Adaptability, Leadership, and Social Skills), and 4 composite scales (Adaptive Skills, Behavioral Symptoms Index, Externalizing, and Internalizing). It also includes an "F" index to detect a "fake bad" response set on the part of the Parent. It takes approximately 10-20 minutes to complete the assessment. All but three of the *Parent Rating Scale-C* protocols used in the study were in English.

The Spanish version of the *Parent Rating Scale-C* (1995) was developed as a response to a perceived need to use an instrument that would allow monolingual Spanish speaking parents to describe the observable behaviors of their children. Item translations were sent to bilingual psychologists and educational diagnosticians across the country for careful review of wording. The reviewers first concentrated on whether the Spanish translation preserved the psychological meaning of the original English version and then considered if the Spanish wording was appropriate for the populations for which each worked. The final revisions were made by International and Ethnic Communications, a translating company with experience in translating psychological instruments.

The *Teacher Rating Scale-Child* (*TRS-C*) provides a measure of clinical, adaptive and

learning problems, as well as an overall measure of behavioral problems for children ages 6-11. It has a 4-point Likert format so as to rate children on frequency of behaviors from "never" to "almost always". The *Teacher Rating Scale-Child* provides 10 scales (Aggression, Anxiety, Attention Problems, Atypicality, Conduct Problems, Depression, Hyperactivity, Learning Problems, Somatization, and Withdrawal), 4 adaptive scales (Adaptability, Social Skills, Leadership, and Study Skills) and 5 composite scale scores (Externalizing, Internalizing, School Problems, Adaptive Skills, and the Behavioral Symptoms Index). It also includes an "F" index to detect a "fake bad" response set on the part of the teacher. It takes approximately 10-20 minutes to complete the assessment.

For each of the *PRS-C* (English and Spanish) and *TRS-C* scales, standardized T-scores with a mean of 50 and a standard deviation of 10 are provided in the administration manual. The high internal consistency and test-retest reliability (>.80) indicate that each scale consists of items that largely comprise the same construct. Median internal consistency reliabilities for the individual scales of the Parent Rating Scale range from .72 to .80, and the internal consistency reliabilities for the composite scores, which include the Behavioral Symptoms Index, range from .84 to .94. The *BASC's Teacher Rating Scale* form's interrater reliability was noted to yield results that indicated different teachers tend to interpret *Teacher Rating Scale-C* items similarly and that results from one teacher are reasonable indicators of what would be obtained from a set of teachers (Reynolds & Kamphaus, 1992) rating the same student. Construct validity was established when moderate to high correlations were obtained with each of the

following instruments: the *Child Behavior Checklist* (Achenbach, 1991), the *Personality Inventory for Children-Revised* (Lachar, 1982), the *Conners' Parent Rating Scales* (Conners, 1989), and the *Behavior Rating Profile* (Brown & Hammill, 1983).

Procedure

Initially, central district offices were contacted by telephone to verify that the examiner's preliminary criterion of providing bilingual education programs was met by the district. Then a 15 minute meeting with the district's superintendent would be requested. Generally, the secretary to the superintendent would set the appointment. Presentation of an overview of the study and the offering of a copy of the proposal was always provided. Presentation of information included conversations regarding the implications of such research, how this information will be harmless and of direct benefit to the district in the future, regardless of the outcome. Reassurance that minimal effort on the part of the superintendent or assistant superintendent was needed. Specifically, only their approval and a phone call to the elementary campus principals, to give them permission to allow me on their campus.

Subsequent meetings with each elementary campus principal typically occurred later the same day. Again, presentation of goal and overview of study was given. Reassurance to the principal that the examiner would need only their permission to approach parents and teachers on their campus, no further efforts on the principal's part was necessary. The researcher explained that the study would not interfere with direct instruction time, it was completely voluntary, and that the researcher, not office staff, would keep track of the forms needing to be distributed and collected. Requesting that

the superintendents' make an introductory call to each principal's campus was most likely influential in encouraging each principal approached to agree with participation of their campus in the study.

Flyers were made and sent home with the appropriate aged children. Posters with meeting information were posted at school entrances, in the cafeteria, and entrances most frequented by parents. The researcher also greeted parents and handed out flyers and told parents to look for meeting information in their children's take home folders. Researcher would print time and dates available per appropriate campus. One district had parent involvement liaisons, these individuals were employed by the district. As projected, they were the most successful at encouraging attendance to parent meetings. Parents in attendance at these meetings ranged from 1 to 12.

At each parent meeting, parents were told of the study's purpose and the examiner then read the entire consent form aloud. Parents were informed that participation was voluntary, could be withdrawn at any time, and that subject data would be assigned alphanumeric codes to maintain anonymity. Teachers' participation will determine ultimate inclusion in the study because of the parent/teacher pairing needed for the analyses. The examiner announced at each meeting that both the acculturation and behavior rating scale was available in Spanish, only three out of the 114 parents requested the Spanish versions. The examiner asked parents to initially complete the *ARSMA-II*, as these acculturation measures were picked up, the examiner scanned each page to make sure no items had been overlooked by the respondent. If any item had been omitted it was brought to the attention of the respondent, and the protocol was

returned to the parent. Upon completion of the omitted items, the examiner handed out the *BASC Parent Rating Scale-C*. Same procedure was followed for omitted items. Parents were reminded that these responses are not considered right or wrong but an indication of how Mexican American children behave. On occasion, parents asked for clarification of a question on the behavior rating scale, however, rather than interpret, the researcher would note the gender being rated and read the item aloud, using gender appropriate pronoun (he/she) with the various response options, "never", "sometimes", "often" and "almost always" at the end of the behavioral statement. Then the parent was asked to mark the answer that best fits her son or daughter in the last 6 months, which is consistent with the *BASC* instructions printed on the protocol. To ease identification of students' homeroom teacher for the examiner, parents, were asked to write the child's homeroom teacher's name on the upper right corner of the protocol.

Once all parent protocols were collected, teacher/student lists were prepared by campus. Prospective teachers at participating elementary campuses were generally informed of the study but were not approached individually unless a student(s) in his/her homeroom had already been rated by a parent participating in the study. Teachers were then given a verbal overview of the study. Teachers were told no penalty would be imposed if they chose not to participate, but that only those students whose parents had filled out parent forms were eligible for teacher ratings. Teachers were also informed that their name would be entered into a drawing for a VCR for every *BASC* form that was turned in. They were then given a consent form at the end of this face-to-face encounter. *BASC* forms were distributed to their boxes in manila envelopes and turned

into a designated box in the campus office. Only two teachers asked if their ratings would be shared with the respective parent, they were told that all information is the property of the researcher and that the parents were explicitly told that all results are confidential, meaning that neither the parent nor the teacher would be aware of the individual results of any behavior rating scale.

The potential 140 child subjects were whittled down to 123 final subjects for various reasons: 2 parent rating scales were turned in on children that were beyond the 6-11 year age range; 5 potential subjects were not included in the study because the correct teacher had mistakenly filled out the *Teacher Rating Scale-C* protocol on the wrong child; and 10 potential subjects had no matching *Teacher Rating Scale-C* forms because either the teacher indicated that the child was on ADHD medication, undergoing special education referral or currently served by Section 504 during the face-to-face contact with the examiner. Since the focus of the study was to explore non-clinical Mexican-American children's behavior and compare results to the *BASC* general norms, any child receiving treatment/intervention through an outside agency or special education program was excluded.

Analyses

All protocols were scored using their respective computer scoring programs (*ARSMA-II* and *BASC*). All protocol item responses were verified against the printed item responses obtained from each respective program printout, immediately after entering each respondent's data. All respondents were assigned an alphanumeric code that identified matched-pair *PRS-C* and *TRS-C* results. All *ARSMA-II* data was entered into

an Excel spreadsheet and then transferred into SPSS. All *BASC PRS-C* and *TRS-C* raw data and T-scores per results were transferred to an SPSS spreadsheet Printouts of the data were screened for inconsistencies and missing values. Once data was verified, internal-consistency reliability (Cronbach's alpha) for all *BASC PRS-C* and *TRS-C* scales and respondent subgroups were calculated to permit judgments of profile interpretability. Because the non-clinical criteria were previously met, internal-consistency reliability results for the Mexican American sample were compared to the *BASC PRS-C* and *TRS-C* general norms. Results are tabled and presented in Chapter IV.

With the data grouped as a Total sample and subdivided by Mexican American parent's acculturation (3 levels) descriptive statistics such as the resulting distribution, mean, standard deviation, standard errors of the mean, and test of normality of the 16 selected scales (9 clinical: Aggression, Anxiety, Attention Problems, Atypicality, Conduct Problems, Depression, Hyperactivity, Somatization, Withdrawal; 3 adaptive: Adaptability, Leadership, Social Skills; and 4 composite: Adaptive Skills, Behavioral Symptom Index, Externalizing, Internalizing) were calculated for the *Parent Rating Scale-Child* (*PRS-C*) and the *Teacher Rating Scale-Child* (*TRS-C*) using the SPSS program. Results for the Total Mexican American sample are tabled and interpreted in Chapter IV; descriptives for the three acculturation levels are also interpreted in Chapter IV but tabled in Appendices A (*PRS-C*) and B (*TRS-C*).

Effect size calculations were conducted using the standardized mean differences between the Mexican American sample results and the published general norms of each of the16 scales of the *BASC PRS-C* and *TRS-C*. Because of the exploratory nature of the

study, a total of 64 *PRS-C* effect sizes and 64 *TRS-C* effect sizes were calculated for the 16 scales by Total, High, Medium, and Low groupings. The effect size is intended to quantify the magnitude of difference between populations. Effect sizes can also be used to communicate the magnitude of standardized differences between sample means. More specifically, the standardized differences between the Mexican American means and those in the published general norms of the *BASC PRS-C* and *TRS-C* are the results of subtracting each sample scale's mean from the applicable published *PRS-C* or *TRS-C* general norms mean of 50 and dividing this difference by the pooled standard deviation of the Mexican American sample and the applicable published *PRS-C* and *TRS-C* general norms standard deviation of 10. The results are tabled and presented in Chapter IV. However, after the lack of normality of the majority of the Mexican American sample's *PRS-C* and *TRS-C* data was verified, it was determined that effect sizes should be interpreted with caution and non-parametric analyses were the most suitable method for the study's research questions.

The first research question asked: When considered as one Total group and when grouped by Mexican American Parent's acculturation level, how do Parent ratings of Mexican American children's behavior on the 16 scales of the *PRS-C* compare to the *BASC's PRS-C* general norms? According to Darlington and Carlson (1987) parametric procedures are not adequate for comparing mean values of non-normal distributions. Hence, The Wilcoxon Signed-Ranks Test for independent samples was selected because it is a highly valid test for showing that the center of a distribution differs in some way from a specified value w_o, even if a distribution is extremely skewed (Daniel, 1990;

Darlington & Carlson, 1987). The Wilcoxon Signed-Ranks Test requires that all sample median values equaling the comparison median value be eliminated and a redefined N be used in the calculations of the test statistic. The independent sample's median score is subtracted from each obtained score and the difference is recorded. The absolute values of the obtained differences are then ranked from smallest to largest. Tied ranks are addressed by giving the ties the mean value of the tied ranks. More specifically if 3 numbers were equal and they happened to be the 1^{st}, 2^{nd}, 3^{rd} ranks, then their mean rank is 2. Then the number 2 is listed in the place of the original 1^{st}, 2^{nd}, 3^{rd} rank spots, only then can the rankings be assigned the sign (positive or negative) of the originally obtained difference. Those resulting differences that were above the independent sample's median value are to be classified as T+ values and those below independent sample's median value will be classified as T- values. The absolute values of these T_+ or T_- are then summed. If the majority of the Mexican American sample's data were below the median value of the comparison group, then because there are more negative numbers, the T_+ is selected as the Lowest Rank Total. Conversely, if the absolute value of T_- is less than T_+, then there were more data values in the sample that exceeded the comparison group's median value. The Lowest Rank Total is used in calculating the Wilcoxon Signed-Ranks test statistic. When n>30 and the Lowest Rank Total can function as a quick reference to determine if the majority of the mathematical differences between the samples being compared are negative or positive. The Lowest Rank Total (T) is then used in the numerator of the T* test statistic and the redefined N is used in both the numerator and denominator.

Importantly, the Wilcoxon Signed-Rank Test is valid even when comparing sample sizes as small as 6; however, it is only when the sample has less than 5 observations that significance is found regardless of the comparisons made (Darlington & Carlson, 1987), rendering the test powerless. The smallest N compared in this study was 18. The results of the Wilcoxon Signed-Ranks Test used to compare the 16 *Parent Rating Scale-Child* (*PRS-C*) scale medians obtained from the Mexican American parent group to the published *PRS-C* general norms (per Total Parent sample and 3 acculturation levels, 64 in all) are tabled and presented in Chapter IV. Due to the exploratory nature of this study, level of significance (p) was set at .05, for a two-tailed test.

The second research question asked: When Teacher ratings are grouped by Total sample and by Parent's level of acculturation, how do Teacher ratings of Mexican American children's behavior on the 16 selected *TRS-C* scales compare to the *BASC's TRS-C* general norms? The Wilcoxon Signed-Ranks Test for independent samples was again applied because of its ability to show that the center of a distribution differs in some way from a specified value w_o, even if a distribution is extremely skewed (Daniel, 1990; Darlington & Carlson, 1987). According to Daniel (1990) when applying a Wilcoxon Signed-Ranks Test, if H_o is true, then the expected absolute values of T_+ and T_- are equal or sufficiently similar. However, if the obtained scores have a significantly greater number of T- (scores below the *BASC's* published T-score of 50), then the Lowest Rank Total would be noted as T_+. The *Teacher Rating Scale-Child* form actually consists of 10 clinical scales, 4 adaptive scales, and 5 composite scales, for the purposes of this investigation, only the 16 scales that are nominally shared with the *PRS-*

C were analyzed. Because of the exploratory nature of this study, a total of 64 analyses were performed: 16 *TRS-C* scales per Total, High, Medium, and Low Mexican American sample groupings to identify trends in the data, level of significance (p) was set at .05, for a two-tailed test. Results are tabled and presented in Chapter IV.

The third research question asked: Does Parent acculturation level systematically influence the level of agreement between Parent (*PRS-C*) and Teacher (*TRS-C*) ratings of Mexican American children on the 16 selected *BASC* scales? The ill-behaved data (non-normal and non-constant variances) prevented the straightforward interpretation of the intended Two-Way Repeated Measures ANOVA where acculturation level was used as the grouping factor and Parent versus Teacher was the repeated measure for each of the 16 shared scales. Instead, emphases on the eta-square effect sizes of the results were considered more appropriate than p values. Thus, level of agreement between raters was sought through two different analytic approaches: The first analytic approach investigated the impact of acculturation level using mean differences between the Parent and Teacher ratings on the same students. Eta-squared effect size calculations on the two main effects and one main interaction effect, then allowed for the amount of variance between the raters attributable to acculturation level membership to be obtained. Main effect eta-squared effect size calculations examined the differences between the acculturation levels when 1) raters were collapsed into one group per acculturation level and 2) when the difference among Parent ratings were compared to the difference among Teacher ratings within each acculturation level. The main interaction's eta-squared effect size yielded the variance predicted from the differences

between means of Parents to Parents and Teachers to Teachers when compared across the three acculturation levels. Sixteen line graphs of these interaction relationships are included in Appendix D. Means tables underlying the graphs are also available in Appendix E. Results are tabled and interpreted in Chapter IV. At this point, the second analytic approach was employed to add to the exploring of question three. This perspective directly sought the levels of agreement (or sameness) between the Parent-Teacher ratings of the Total sample, as well as the level of agreement of the Parent-Teacher ratings at each acculturation level (High, Medium, and Low) with the use of rank (Spearman Rho) and mean (Pearson "r") correlations. Then to test the largest tabled Pearson r differences across acculturation levels within each of the 16 selected scales, Fisher z coefficients were calculated in order to compare the obtained levels of agreement, level of significance (p) was set at .05. Results are tabled and interpreted in Chapter IV.

CHAPTER IV

RESULTS

The present study investigated the effects of acculturation on the rating of Mexican American children's behavior by parents and teachers. At the outset, the reliability of the *BASC Parent Rating Scale-Child* (*PRS-C*) and the *BASC Teacher Rating Scale-Child* (*TRS-C*) for this sample were examined. Secondly, to determine the influence of acculturation, comparisons were made between the ratings obtained from the sample and the published *BASC* general norms for the 16 scales found on both the *Parent Rating Scale-Child* (*PRS-C*) and the *Teacher Rating Scale-Child* (*TRS-C*).

Sample Statistics

Five South Texas, public school districts participated in the study. Total districts' student populations ranged from 291 to 4422. Hispanics, largely of Mexican decent, comprised 37.9% to 98% of the student populations in these 5 school districts. Four of the participating districts had majority-minority populations with Hispanics as the predominant ethnicity.

A total of 102 Teachers participated in the study. The average teacher experience level for the 5 participating districts ranged from 8.7 years to 13.8 years.

A total of 114 parents participated in the study. Out of the 114 Parent participants, 113 were female. All parents ranged in age from 23 to 59, with an average age of 34. All parents were asked to fill out an acculturation measure (the *ARSMA-II*) and a behavior rating scale (*BASC*: *Parent Rating Scale-Child*). Parental level of acculturation was determined by the *ARSMA-II*. According to Cuellar (2000), children under the age

of 12 are not reliable reporters of acculturation level; thus, the investigator resolved to assess the level of cultural influence in the child's home environment by assessing the parent's acculturation level. Due to the small sample size, the original 5 levels of acculturation were collapsed into 3: High, Medium, and Low. This yielded a High Acculturation group of 23, a Medium Acculturation group of 68, and a Low Acculturation of 32. Refer to Chapter III Methodology in order to gain further details regarding the categorization and cut-off scores of the acculturation levels.

Behavior rating scales for a total of 123 non-clinical children of Mexican American descent were included in the study. Fifty-five boys and 68 girls between the ages of 6 and 11 were rated by both Parent and Teacher. Out of 140 children who were originally rated by parents, only 123 children had valid, matching parent-Teacher pairs. Seventeen children were not eligible for inclusion in the study because they did not meet one or several of the "non-clinical" criteria.

For the purposes of this study, the term non-clinical was defined as: not served by an outside mental health agency; not receiving special education interventions, not undergoing the referral process for special education eligibility, and not taking any psychotropic medication.

Valid, matching Parent-Teacher pairs were required. A valid, matching Parent-Teacher pair was defined as: a completed *ARSMA-II* by the parent, a *BASC Parent Rating Scale-Child* and a *BASC Teacher Rating Scale-Child* for a non-clinical child between the ages of 6 to 11 years. Only behavior ratings for children who met the non-clinical criteria were included in this study.

Internal Consistency

Initially, Cronbach's alpha was calculated to test the internal-consistency of the 9 clinical and 3 adaptive scales of the *Parent Rating Scale-Child* (*PRS-C*) when used to rate the behavior of a non-clinical sample of Mexican American children. This would allow the investigator to determine whether the scale scores were consistent enough for the planned analyses (Wilkinson & APA Task Force, 1999). Similarly, Cronbach's alpha was calculated for the total study's Teacher responses on 9 clinical scales and the 3 adaptive scales on the *BASC Teacher Rating Scale-Child* (*TRS-C*).

Finally, coefficient alphas were also calculated for each of the three respective acculturation levels the Mexican American sample was subdivided into on each selected scale of the *BASC PRS-C* and *TRS-C*.

Results of *Parent Rating Scale-Child* Reliability Calculations

The responses on the *BASC Parent Rating Scale-Child* (*PRS-C*) were analyzed so as to check the internal-consistency of its 9 clinical scales and 3 adaptive scales when used on a non-clinical Mexican American sample. Table 6 includes alphas of the Parent group (*PRS-C*) and those of the standardization sample for comparison. Cronbach alpha reliabilities were calculated for each scale using the Mexican American sample as a whole and again by subdividing the sample according to acculturation level.

In Table 6, the *Parent Rating Scale-Child* (*PRS-C*) clinical and adaptive scales are clustered into two separate groups with their respective subscales listed in alphabetical order on the far left side of the table. The clinical scales measure maladaptive behavior and the adaptive scales measure advantageous behavior. The *BASC* published alpha

reliabilities are presented as they are listed in the administration manual, with the child group (ages 6-11) separated into two categories, ages 6-7 and ages 8-11. The alpha

Table 6

BASC Parent Rating Scale-Child: Published Coefficient Alpha Reliabilities Compared to Coefficient Alpha Reliabilities of Clinical & Adaptive Scales for Mexican American Sample

Clinical Scales	Published		Mexican American Sample			
	Age 6-7*	Age 8-11*	Total	HiAcc[a]	MedAcc[b]	LoAcc[c]
	n=267	n=1817	n=123	n=23	n=68	n=32
Aggression	0.81	0.83	0.79	0.70	0.84	0.69
Anxiety	0.81	0.80	0.81	0.85	0.81	0.74
Attention Problems	0.81	0.82	0.78	0.81	0.79	0.70
Atypicality	0.51	0.58	0.65	0.65	0.65	0.68
Conduct Problems	0.71	0.71	0.68	0.81	0.66	0.67
Depression	0.84	0.83	0.78	0.71	0.82	0.71
Hyperactivity	0.74	0.74	0.77	0.78	0.80	0.72
Somatization	0.67	0.75	0.86	0.86	0.87	0.88
Withdrawal	0.78	0.73	0.67	0.73	0.69	0.59
Adaptive Scales	Published		Mexican American Sample			
	Age 6-7*	Age 8-11*	Total	HiAcc[a]	MedAcc[b]	LoAcc[c]
	n=267	n=1817	n=123	n=23	n=68	n=32
Adaptability	0.74	0.77	0.61	0.57	0.58	0.65
Leadership	0.85	0.83	0.82	0.80	0.83	0.83
Social Skills	0.89	0.89	0.86	0.83	0.87	0.83

*Taken from Behavior Assessment System for Children (*BASC*) Manual, 1992, AGS. Pg 130.
a =Parent ratings of Mexican American children raised in High Acculturation homes
b =Parent ratings of Mexican American children raised in Medium Acculturation homes
c =Parent ratings of Mexican American children raised in Low Acculturation homes

reliabilities for the Total Mexican American sample, ages 6-11, are initially listed as a total group and then separated by descending level of acculturation for each of the 16 scales.

PRS-C Clinical Scales for Total Mexican American Sample. In Table 5, it can be noted that the alpha reliabilities of the Parent ratings for the Total Mexican American sample either exceeded or paralleled the published norms on 7 out of the 9 *PRS-C* clinical scales.

Those scales which exceeded published norms were the *PRS-C* Atypicality, Somatization, and Hyperactivity scales. The *PRS-C* Atypicality scale's coefficient alpha of .65 for the Total Mexican American sample exceeded the standardization sample's alpha reliabilities of .51 for 6-7 year olds and .58 for 8-11 year olds. Similarly, the *PRS-C* Somatization scale yielded an internal consistency result of .86 for the Total Mexican American sample, whereas the published norms reported .67 for 6-7 year olds and .75 for 8-11 year olds.

Alpha reliability for the Parent ratings of the Total Mexican American sample on the *PRS-C* Hyperactivity scale was measured at .77, which was slightly higher, but comparable to the published alpha of .74 for both the 6-7 and 8-11 year olds.

Only 2 *PRS-C* clinical scales for the Total Mexican American sample were slightly under an alpha reliability of .70. More specifically, for the Total Mexican American sample, the *PRS-C* Conduct Problems scale (.68) and the *PRS-C* Withdrawal scale (.67) hovered just below the .70 mark.

PRS-C Clinical Scales by Level of Acculturation. In Table 5, when comparing the published norms and the Mexican American sub-samples, similarities in levels of internal consistency can be noted on 7 of the 9 *PRS-C* clinical scales. The alpha results of the Mexican American sample on the *PRS-C* Aggression, Anxiety, Attention Problems, Atypicality, Depression, Hyperactivity and Somatization scales, were not only comparable to the published norms but were comparable across levels of acculturation for each scale.

Discussion of the differences noted between the levels of internal consistency among the 2 remaining *PRS-C* scales by various levels of acculturation will follow.

The internal consistency of the *PRS-C* Conduct Problems scale for the Parent ratings of the Medium acculturation and the Low acculturation groups were slightly below the published .71, with alpha reliabilities of .66 and .67 respectively; however, as can be noted, they remained at encouraging levels. The Parent ratings of the High acculturation group on the *PRS-C* Conduct Problems scale, however, exceeded the published alpha reliability of .71 with an alpha of .81. Further investigation reveals that Question 53 of the *PRS-C* negatively influenced both the Low acculturation and Medium acculturation groups' coefficient alphas. Had that question, which refers to attending to the emotional state of others, been deleted, the coefficient alphas for the Parent ratings of the Medium acculturation group would have raised it to .70 and the Low acculturation alphas would have risen to .78, placing them in more acceptable ranges of reliability.

The only clinical scale of concern for the Mexican American Parent's *PRS-C* results is the Withdrawal scale with an alpha reliability of .59 for the Low acculturation group.

This alpha level is inconsistent with the published .78 for 6-7 year olds and .73 for 8-11 year olds.

Additional analysis of the *PRS-C* Withdrawal scale for the Low acculturation group indicates that deletion of Question 128 (using parent as shield in uncomfortable surroundings) would have increased the reliability coefficient to only .63. Analysis of response patterns reveals the influence of two of the eight items on the scale. The Low acculturation group responded with a zero-point response 75% of the time on Question 24, and a zero-point response 81.3% of the time on Question 116. Both of these questions refer to actively avoiding others. Together, Question 24 and Question 116 pulled the coefficient alpha lower for the Low acculturation group.

PRS-C Adaptive Scales for Total Mexican American Sample. Table 6 shows that the internal consistency results for the Total Mexican American sample on both the Leadership and Social Skills scales of *PRS-C* adaptive scales echoed the published norms. It is the results noted on the *PRS-C* Adaptability scale that suggest perhaps that it may not be a valid construct for this Mexican American sample.

The coefficient alpha for the Parent ratings of the Total Mexican American group on the *PRS-C* Adaptability scale of .61 is lower than the published norms of .74 for 6-7 year olds and .77 for 8-11 year olds. Of the seven items that constitute the *PRS-C* Adaptability scale, no particular item appeared more representative of the scale than another given that the squared multiple correlation (r^2) coefficients for each of the contributing items revealed a range of r^2 spanning from .11 to .24.

PRS-C Adaptive Scales by Level of Acculturation. All three acculturation level groups parallel the published norms' alpha reliabilities on the *PRS-C* Leadership and *PRS-C* Social Skills scales. It is the *PRS-C* Adaptability scale that appears to have been pervasively affected by either ethnic membership or small sample size. The coefficient alphas only ranged from .57 to .65 for the Parent ratings of the smaller Mexican American sub-samples in comparison to the published alphas of .74 (for ages 6-7) and .77 (for ages 8-11). These scores would suggest that the underlying construct of the *PRS-C* Adaptability is may not be as valid not as cohesive for this sample as may have been expected given that the same Mexican American Parent sample yielded alpha reliabilities that were very similar or slightly more cohesive than the Parent responses used to establish published norms on 9 of the 12 *PRS-C* scales.

Results of *Teacher Rating Scale-Child* Reliability Calculations

The responses on the *BASC* Teacher Rating Scale (*TRS-C*) were also analyzed so as to check the internal-consistency of nine clinical and three adaptive scales when used to rate non-clinical Mexican American children's behavior. In Table 7, the *Teacher Rating Scale-Child* (*TRS-C*) clinical and adaptive scales are presented separately with their respective subscales listed in alphabetical order on the far left side of the table. The clinical scales are listed first: they measure maladaptive behavior. The adaptive scales are listed second: they measure advantageous behaviors.

The *BASC* published alpha reliabilities are presented as they are listed in the administration manual, with the child group (ages 6-11) separated into two categories, ages 6-7 and ages 8-11. The alpha reliabilities of each scale for the Mexican American

sample, ages 6-11, are initially listed as a total group and then separated by descending level of acculturation.

Table 7

BASC TRS-C Form: Published Coefficient Alpha Reliabilities Compared to Coefficient Alpha Reliabilities of Clinical & Adaptive Scales for Mexican American Sample

	Published		Mexican American Sample			
Clinical Scales	Age 6-7*	Age 8-11*	Total	HiAcc[d]	MedAcc[e]	LoAcc[f]
	n=383	n=876	n=123	n=23	n=68	n=32
Aggression	0.93	0.95	0.89	0.86	0.90	0.90
Anxiety	0.76	0.79	0.71	0.60	0.74	0.70
Attention Problems	0.89	0.93	0.92	0.88	0.92	0.92
Atypicality	0.84	0.84	0.74	0.41	0.74	0.78
Conduct Problems	0.62	0.77	0.63	0.00	0.64	0.70
Depression	0.83	0.87	0.85	0.83	0.84	0.87
Hyperactivity	0.92	0.93	0.92	0.89	0.93	0.91
Somatization	0.78	0.77	0.77	0.65	0.77	0.80
Withdrawal	0.80	0.79	0.81	0.12	0.84	0.84
	Published		Mexican American Sample			
Adaptive Scales	Age 6-7*	Age 8-11*	Total	HiAcc[d]	MedAcc[e]	LoAcc[f]
	n=383	n=876	n=123	n=23	n=68	n=32
Adaptability	0.74	0.83	0.79	0.49	0.82	0.81
Leadership	0.90	0.89	0.89	0.91	0.90	0.90
Social Skills	0.93	0.92	0.92	0.91	0.93	0.91

*Taken from Behavior Assessment System for Children (*BASC*) Manual, 1992, AGS. Pg 102.
d =Teacher ratings of Mexican American children raised in High Acculturation homes
e =Teacher ratings of Mexican American children raised in Medium Acculturation homes
f =Teacher ratings of Mexican American children raised in Low Acculturation homes

TRS-C Clinical Scales for Total Mexican American Sample. When comparing the Teacher ratings of the Total Mexican American sample to the published norms, alpha reliabilities were commensurate. Table 7 reveals that the overall alpha values for the Total Mexican American sample (n=123) on each of the nine *TRS-C* clinical scales did not significantly differ from the standardization sample's data. However, this was not the case when the alpha reliabilities of the Mexican American sample were explored by level of acculturation.

TRS-C Clinical Scales by Level of Acculturation. When comparing the teacher ratings of the Mexican American sample by three acculturation levels on the nine clinical scales, 3 of the possible 27 coefficient alphas were not parallel to the published norms. However, the *TRS-C* Withdrawal, Conduct Problems, Atypicality, and Anxiety scales for the Teacher ratings of the High Acculturation group revealed large discrepancies when compared to the Teacher ratings used to establish the published norms.

The largest discrepancy between the Teacher ratings of the High, Medium, and Low acculturation groups can be noted on the *TRS-C* Conduct Problems scale. Analysis of the Teachers' ratings of the High acculturation group on the 10 items that constitute the *TRS-C* Conduct Problems scale revealed that six of the items had no variance (all respondents rated the same) so the alpha analysis was based on only four items, guaranteeing a low alpha (.00). On the other hand, the Teachers' ratings of the Medium acculturation group and Low acculturation group on the *TRS-C* Conduct Problems scale

were such that the underlying construct remained intact with alpha values of .64 and .70, respectively.

The second largest alpha discrepancy noted among the *TRS-C* clinical scales based on comparisons across levels of acculturation was found on the *TRS-C* Withdrawal scale. Although the Teacher ratings of both the Medium acculturation and Low acculturation groups on the *TRS-C* Withdrawal scale resulted in an alpha of .84, which exceeds the published alpha of .80 for the 6-7 year olds and the published .79 for 8-11 year olds, the Teacher ratings of the High acculturation group resulted in only an alpha of .12. Further investigation revealed that 91.3% of the responses on Questions 88 (peer's view of child's low social status) and 139 (self-excluding behavior) were zero-point responses. In addition, the Teachers of the High acculturation group also gave the highest percentage of zero-point responses on five of the six items on the *TRS-C* Withdrawal scale, generating a low alpha.

Similarly, the 14 items of the *TRS-C* Atypicality scale were reduced to eight due to the lack of variance reported on six of the items by the Teachers of the High acculturation group. The zero variance on those six items resulted in a coefficient alpha of only .41 for the High acculturation group. This directly contrasted the Teachers' ratings for both the Medium acculturation and the Low acculturation groups on the *TRS-C* Atypicality scale; their scores demonstrated acceptable levels of internal consistency with coefficient alpha at .74 and .78, respectively. It is suspected that because this study's sample was non-clinical, many of the behaviors that define the

Withdrawal, Conduct Problems and Atypicality scales were not noted at all by the Teachers of the children in the High acculturation group.

With regard to the *TRS-C* Anxiety scale's resulting coefficient alpha of .60 for Teacher ratings of the High acculturation group, all eight questions were included in the analysis, but the cohesiveness of the scale was poor for this group. Analyzing the squared multiple correlation (r^2) coefficients for each of the contributing items of the *TRS-C* Anxiety scale revealed a range of r^2 spanning from .19 to .53. These results coupled with the small sample size suggest that the most representative item on the *TRS-C* Anxiety scale for the High acculturation group was Question 40, which asks for the Teacher's evaluation of the child's level of nervousness. In contrast, Teacher ratings of the Medium acculturation and Low acculturation groups' anxiety related behavior yielded acceptable alpha levels of .74 and .70.

In summary, the Teacher ratings of the High acculturation group's behavior resulted in an alpha of .00 on the *TRS-C* Conduct Problems scale, .12 on the *TRS-C* Withdrawal scale, .41 on the *TRS-C* Atypicality scale, and .60 on the *TRS-C* Anxiety scale. However, it is suggested that due to a small sample size (n=23), there is insufficient evidence to conclude that four of the nine clinical *TRS-C* scales lack cohesion for the Mexican American children from High acculturation level homes.

TRS-C Adaptive Scales for Total Mexican American Sample. Table 7 displays comparable levels of internal consistency between the published norms and the Total Mexican American sample on the four *TRS-C* adaptive scales. As can be noted, the coefficient alpha for the Teacher ratings of the Total Mexican American sample on the

Adaptability, Leadership, and Social Skills scales of the *TRS-C* Adaptive scales were either equal to or within the narrow range of the published alpha reliabilities for the 6-7 and 8-11 year old groups.

TRS-C Adaptive Scales by Level of Acculturation. The Mexican American sample's coefficient alpha for two out of three *TRS-C* adaptive scales (Leadership and Social Skills) were consistent with the alpha reliabilities reported for the published norms, regardless of acculturation level membership. However, an incongruity between published norms of internal consistency and one of the subgroups of the Mexican American sample on the *TRS-C* Adaptability scales was found.

On the Teacher ratings of the High acculturation group, the alpha reliability on the Adaptability scale was noted to be low, .49. Further examination revealed that all six items of the *TRS-C* Adaptability scale were included in the analysis, but the cohesiveness of the scale was poor for this group. Analyzing the squared multiple correlation (r^2) coefficients for each of the contributing items of the *TRS-C* Adaptability scale revealed a range of r^2 spanning from .12 to .37. These results coupled with the small sample size suggest that the most representative item on the *TRS-C* Adaptability scale for the High acculturation group was Question 75, which addresses how well the child copes with changes to the daily regime. This was a sharp contrast to the alpha coefficient, .82, of the Medium acculturation group and the .81 of the Low acculturation group on the same scale. In fact, on the *TRS-C* Adaptability scale, the Medium acculturation (.82) and Low acculturation (.81) groups exceed the published alpha results for the 6-7 year olds (.74) and almost reproduce the reliability for the Teacher ratings of

the 8-11 olds (.83) of the normative sample. Indicating that for the Teachers of the Medium acculturation and Low acculturation groups, all six items of the *TRS-C* Adaptability scale did reflect the proposed construct of adaptability.

Comparison of Alpha Reliabilities of *Parent Rating Scale-Child* versus *Teacher Rating Scale-Child* for Total Mexican American Sample

There are nine shared clinical scales and three shared adaptive scales, on the *BASC PRS-C* and *TRS-C*. The reader is cautioned that although these scales bear similar names, the items on each scale are not identical. These scales are used in a clinical setting to aid in the determination of consistency of like behavior across settings and are not intended to be exact images of one another. However, the first assumption is that the underlying construct for these scales should remain intact regardless of the rater. And the second assumption is that if a tabled discrepancy does exist, the Teacher group would have the higher level of internal consistency for each scale regardless of acculturation group.

Comparison of Like Clinical Scales on *TRS-C* and *PRS-C* for Total Mexican American Sample. Based on the results available in Tables 6 and 7, the alpha reliabilities ranged from tolerable levels to excellent levels when considering the ratings of the Total Mexican American sample on either *Teacher Rating Scale-Child* (*TRS-C*) or *Parent Rating Scale-Child* (*PRS-C*).

When comparing alpha coefficients of the nine clinical scales shared by the *TRS-C* and the *PRS-C* for the Total Mexican American sample, sufficient similarities are noted on eight of the scales. The only construct that appeared less cohesive for one rater group

of the Total Mexican American sample versus another was the Withdrawal scale. The coefficient alpha of .67 for the Parent group demonstrated a weaker level of cohesiveness for the *PRS-C* Withdrawal scale than the .81 achieved by the Teacher group on the *TRS-C* Withdrawal scale.

Additional consideration of the clinical scales on the *PRS-C* and the *TRS-C* reveals that the ratings of the Mexican American sample exhibited more closely related levels of internal consistency for the Teacher (.74 for Total sample) and Parent (.65 for Total sample) groups on their respective Atypicality scales, compared to the sharp contrast between the published alpha reliabilities of the Teacher's Atypicality scale (.84 for 6-11 year olds) and the published parent's Atypicality scale (.51 and .58).

Comparison of Like Adaptive Scales on *TRS-C* and *PRS-C* for Total Mexican American Sample. Two of the three shared adaptive scales appear to remain cohesive regardless of the rater for the Total Mexican American sample. Comparable alpha reliabilities were yielded for the Leadership (.89 for *TRS-C* and .82 for *PRS-C*) and Social Skills (.92 for *TRS-C* and .86 for *PRS-C*) scales. It was the Parent ratings of the Total Mexican American samples on the *PRS-C* Adaptability scale that seemed to be slightly lacking with an alpha level of .61 when compared to the alpha reliability of .79 for the Teacher ratings of the Total Mexican American sample on the *TRS-C* Adaptability.

Comparison of Mexican American Sample by Level of Acculturation on Like Clinical Scales on *TRS-C* and *PRS-C*. For exploratory purposes, a comparison of the 27 tabled differences of the alpha reliabilities for the like clinical scales on the *TRS-C* and

PRS-C by level of acculturation were made. For example, the level of internal consistency achieved by the Parent ratings of the Medium acculturation group on the Aggression scale (.84) was compared to the level of internal consistency achieved by the Teacher ratings of the same Medium acculturation group (.90) on their Aggression scale. This type of comparison between rater groups for each acculturation level was made for the nine shared clinical scales.

Encouraging levels of internal consistency (.70 to .93) were achieved for 56% of the 27 *PRS-C* /*TRS-C* pairs. Promising coefficient alphas (.60 to .69) were achieved on 30% of the 27 *PRS-C* /*TRS-C* pairs. And 4 of the 27 comparisons revealed unexpected imbalances in the levels of internal consistency on three of the nine shared clinical scales.

More specifically, the 3 clinical scales that statistically demonstrated a lack of cohesion for the subdivided Mexican American sample in this study were: Conduct Problems, Withdrawal, and Atypicality. The *PRS-C* /*TRS-C* alpha reliability contrasts will be addressed from smallest to largest.

The Atypicality scale contrast (*PRS-C* High=.65; *TRS-C* High=.41) demonstrates that when rating these 23 children, the group of items were not as cohesive as would have been anticipated for the Teacher group. This lack of cohesion draws attention to itself because the Teachers of the Medium and Low acculturation groups achieved alpha coefficients of .74 and .78 respectively, on the same scale.

As for the Withdrawal scale, the *PRS-C*/*TRS-C* alpha comparisons revealed the Parent ratings of the Low, Medium, and High acculturation groups begin poorly, but

increase to promising and acceptable levels of internal consistency as the level of acculturation increases (*PRS-C* Low= .59, Medium= .69, High=.73). However, the *TRS-C* Withdrawal scale's alpha coefficients do not follow a similar patter. In fact, for the Teacher group, the lowest level of internal consistency is achieved by the Teacher ratings of the High acculturation group (.12). This was unexpected given the alpha coefficient achieved by both the Medium and Low acculturation groups were .84.

The largest contrast between *PRS-C*/*TRS-C* alpha reliability comparisons was found on the Conduct Problems scale. The *PRS-C*/*TRS-C* alpha coefficients were relatively similar for the parents and Teachers of the Medium (*PRS-C*= .66; *TRS-C*= .64) and Low (*PRS-C*= .67; *TRS-C*= .70) acculturation groups. However, the internal consistency of the *PRS-C* Conduct Problems scale was surprisingly greater than the *TRS-C* Conduct Problems scale of the High acculturation group (*PRS-C* = .81; *TRS-C* = .00). Because the alpha coefficients of the *PRS-C* and *TRS-C* scales for the Mexican American sample as a whole were not alarmingly low on any clinical scale, the alpha coefficient of .00 for the Teacher ratings of the High acculturation group was clearly unexpected. The lack of variance on several items of the *TRS-C* Conduct Problems scale was previously addressed and comparison to other research with Mexican American children will be offered in the following chapter.

Comparison of Mexican American Sample by Level of Acculturation on Like Adaptive Scales on *TRS-C* and *PRS-C* . Exploratory comparison of Parent and Teacher ratings on the three like adaptive scales of the *TRS-C* and *PRS-C* reveal that the internal

consistency of the Leadership and Social Skills scales are very similar, regardless, of the rater group or acculturation level.

The internal consistency of the Adaptability scale, however, varied from this pattern. First, it can be noted that the *PRS-C* Adaptability scale emerges as having some difficulties with item cohesion across all three acculturation levels (High=.57, Medium=.58, Low=.65). Second, the *TRS-C* Adaptability scale of the Medium acculturation (*TRS-C* =.82) and Low acculturation (*TRS-C* =.81) groups has higher and acceptable internal consistency levels when rating these groups. And third, the poor alpha reliability of the *TRS-C* Adaptability scale for the High acculturation group (*TRS-C* =.49) was unexpectedly lower than its *PRS-C* counterpart (*PRS-C* =.57). Further discussion will be offered in the next chapter.

Descriptives, Tests of Normality and Effect Sizes

Descriptives were calculated for the Total (n=123), High (n=23), Medium (n=68), and Low (n=32) Mexican American sample on each of the 16 *PRS-C* scales and their 16 *TRS-C* scale counterparts. A complete presentation of means, medians, standard deviations, percentiles and Shapiro-Wilks test results for the 16 *PRS-C* and 16 *TRS-C* scales are available in Appendices B and C, respectively. *PRS-C* and *TRS-C* scales are listed in alphabetical order within the published clinical, adaptive, and composite groupings.

To facilitate the interpretation of the descriptives, tests of normality and effect sizes for the Mexican American sample, the *PRS-C* and *TRS-C* results will be presented separately. Tables 8 (*PRS-C*) and 10 (*TRS-C*) will display mean T-scores (M), standard

deviations (sd), standard error of the mean (Sm), and effect sizes (d) for the Total Mexican American sample (n=123) for each of the 16 selected scales. These tables provide sample characteristics and express the magnitude of the standardized differences between the Mexican American sample means and the published norms. The 64 standardized differences between the means of the *PRS-C* normative groups and those of the Total Mexican American sample along with its three acculturation level (High, Medium, and Low) groupings will be presented in Table 9 and the 64 standardized differences between the means of the *TRS-C* normative groups and those of the Total Mexican American sample along with its three acculturation level (High, Medium, and Low) groupings will be presented in Table 11.

Parent Rating Scale-Child for the Mexican American Sample

In evaluating the 16 scales of the *Parent Rating Scale-Child* (*PRS-C*) for the Total Mexican American sample, only 6% of the scales were normally distributed. This percentage improves to 33% of 64 scales when the results of the *PRS-C* for the total Parent sample are combined with the 16 *PRS-C* scales per three levels of acculturation, refer to Appendix B.

The published *BASC PRS-C* norms present a mean T-score of 50 and a standard deviation of 10 for all clinical, adaptive, and composite scales. Because of the lack of normality on 94% of the 16 *PRS-C* scales for the Total Mexican American sample, the observations of effect size will be qualified with reference to the obtained medians and the sustained difference between the Mexican American sample and the published norms at the 90^{th} percentile, in order to identify trends in the data.

The results in Table 8 present the standardized difference in means between the Parent ratings of the Total Mexican American sample and the normative group. The clinical, adaptive, and composite *PRS-C* scales are presented as three separate groups with their respective subscales in alphabetical order on the far left side of the table. Thirty-two out of 36 of the possible medians for the Total, High, Medium, and Low *PRS-C* groups on the nine clinical scales were below their respective means and each of their respective distributions did not meet Shapiro-Wilks test of normality, refer to Appendix B. Although there were no large or medium standardized differences in means between the Mexican American sample and the normative group, eight small effect size estimates were noted, the remaining eight were negligible in magnitude.

In Table 8, the nine *PRS-C* clinical scales' effect size values for the Parent ratings of the Total Mexican American sample (n=123) reveals a value range of .02 to .30. This indicates that the means (47.06 to 52.40) for these 9 *PRS-C* clinical scales hovered around the published T-score mean of 50.

Had the distributions of the Total Mexican American sample (n=123) been normally distributed on the 9 clinical *PRS-C* scales (Aggression, Anxiety, Attention Problems, Atypicality, Conduct Problems, Depression, Hyperactivity, Somatization, and Withdrawal) then the obtained means would have been equal to their respective medians, yielding a larger, more notable effect size on the Depression (mdn=46) scale. The literature-based expectation that non-clinical Mexican American children would be rated as demonstrating less depressive symptomatology was noted but the non-normal distributions of this sample prevent a stronger affirmation of these differences.

Table 8

Mean, Standard Deviation, Standard Error of the Mean, and Effect Size Results for *Parent Rating Scale-Child* (*PRS-C*) for Total Mexican American Sample

Scale	N	Mean	Std. Deviation	Std. Error Mean	Effect Size
Clinical Scales					
Aggression	123	47.41	10.58	0.95	0.26
Anxiety	123	51.44	12.15	1.10	0.14
Attention Problems	123	50.28	10.45	0.94	0.03
Atypicality	123	49.66	12.39	1.12	0.03
Conduct Problems	123	51.68	10.98	0.99	0.17
Depression	123	47.06	9.33	0.84	0.30
Hyperactivity	123	48.33	11.51	1.04	0.17
Somatization	123	51.12	15.56	1.40	0.11
Withdrawal	123	52.40	11.10	1.00	0.24
Adaptive Scales					
Adaptability	123	46.92	10.49	0.95	0.31
Leadership	123	48.14	11.57	1.04	0.18
Social Skills	123	48.86	12.25	1.10	0.11
Composite Scales					
Adaptive Skills Composite	123	47.64	11.21	1.01	0.23
Behavior Symptoms Composite	123	48.58	11.45	1.03	0.14
Externalizing Composite	123	49.09	11.24	1.01	0.09
Internalizing Composite	123	49.75	12.70	1.14	0.02

The *BASC* manual classifies T-scores of 70 and above as “clinical” and T-scores of 60 to 69 as “at-risk”. Possible lack of adequate representation in the standardization sample of the *BASC PRS-C* resulting in the subsequent influence on a clinician’s or researcher’s use of “at-risk” versus “clinical” labels with Mexican American children will be discussed in Chapter V.

As for the three scales intended to measure advantageous behavior (Adaptability, Leadership, and Social Skills), the Total, High, Medium and Low groups had seven non-normal distributions on the *PRS-C* Adaptability and Social Skills scales. For the adaptive *BASC PRS-C* scales, T-scores above 50 are desirable, as they are considered to indicate a parent's affirmation of the child's engagement in advantageous behavior. Five of the seven non-normal distributions were negatively skewed, refer to Appendix B. In Table 8, the three *PRS-C* adaptive (Adaptability, Leadership, and Social Skills) scales' effect size values for the Parent ratings of the Total Mexican American sample (n=123) reveals a value range of .11 to .31. These negligible to small effect size values indicate that the means (46.92 to 48.86) for these three *PRS-C* adaptive scales ranged slightly below the published T-score mean of 50. The T-score median range for the Total, High, Medium, and Low *PRS-C* distributions was slightly broader varying from 44 to 52 on the *PRS-C* Adaptability and Social Skills scales. But interestingly, for both the *PRS-C* Adaptability (High=50; Medium=44; Low = 52) and Social Skills (High=50; Medium=44; Low = 51) scales, the medians for the Medium acculturation group's distribution centered approximately half a standard deviation below the published center (T-score =50). The Low acculturation group's distributions centered slightly above the published mean of 50 and were the highest of the three acculturation groups, indicating that the children of the Low acculturation group tended to be rated by their parents as demonstrating slightly more favorable or adaptive behaviors than the other two acculturation level groups, while the Medium acculturation group was rated as slightly

lacking in both areas. Reference to previous research of this favorable rating trend for lower acculturated individuals will be addressed in the next chapter.

On the *PRS-C* adaptive scale Leadership (n=123, d=.18), medians for ratings of all three Mexican American children groups (High mdn=48, M=51.74; Medium mdn=46, M=46.81; and Low mdn=48, M=48.38) were slightly below the obtained means. This indicates that the center of the Mexican American distributions on the *PRS-C* Leadership scale for the Total, High, Medium, and Low acculturation groups clustered slightly below the *BASC* published norm of 50. Suggesting that Mexican American parents, regardless of acculturation group membership tended to rate their children as demonstrating slightly less leadership behaviors, as measured by the *BASC PRS-C*, than the published normative group. Although this difference is not clinically significant, it does potentially show a trend in how this scale is perceived by Mexican American parents and will be addressed in the next chapter. No systematic pattern based on increasing acculturation level membership presented itself on the *PRS-C* scales for this sample.

Of the four obtained *PRS-C* composite scale distributions (Adaptive, Externalizing, Internalizing, and Behavioral Symptoms Index) for the Total, High, Medium, and Low groups, none were normally distributed. In Table 8, the four *PRS-C* composite scales' effect size values for the Parent ratings of the Total Mexican American sample (n=123) ranged in value from .02 to .23. The negligible and small effect sizes indicate that the means (47.64 to 49.75) for these four *PRS-C* composite scales ranged slightly below the published T-score mean of 50. Taken together, these composite scale results indicate

that the Parent ratings of the Total group of Mexican American children in this sample tended to yield T-scores that did not represent more adaptive or advantageous behaviors than maladaptive behaviors.

Table 9

Effect Size Calculations for the *Parent Rating Scale-C* of the Total (n=123), High (n=23), Medium (n=68), and Low (n=32) Acculturation Groups of the Mexican American Sample

Scale	Total (d)	High (d)	Medium (d)	Low (d)
Clinical Scales				
Aggression	.26	.29	.19	.38
Anxiety	.14	.50	.13	.09
Attention Problems	.03	.26	.13	.02
Atypicality	.03	.09	.07	.06
Conduct Problems	.17	.12	.26	.01
Depression	.30	.22	.22	.50
Hyperactivity	.17	.37	.04	.30
Somatization	.11	.41	.05	.03
Withdrawal	.24	.20	.28	.19
Adaptive Scales				
Adaptability	.31	.07	.56	.05
Leadership	.18	.17	.32	.16
Social Skills	.11	.37	.26	.15
Composite Scales				
Adaptive Skills	.23	.19	.46	.13
Behavior Symptoms Index	.14	.13	.06	.32
Externalizing Problems	.09	.21	.02	.23
Internalizing Problems	.02	.31	.03	.26

Now turning to Table 9, the 64 possible *PRS-C* effect sizes for the Total, High, Medium, and Low groups should be suggestive of the differences between each of these groups and the normative sample. Although the effect sizes are designed to show standardized differences between means, when the majority of the distributions are skewed and lack normality, the median and 90th percentile assist in interpreting these effect size results.

Of the nine *PRS-C* clinical scales in Table 9, only the Anxiety (High d=.50, Medium d=.13, Low d=.09), Depression (High d=.22, Medium d=.22, Low d=.50), and Somatization (High d=.41, Medium d=.05, Low d=.03) scales resulted in an effect size $\geq$ .40 for any of the three acculturation levels. This is not to say that the obtained T-scores are all above the normative mean of 50, but rather that the Mexican American sample's mean differs from the normative mean. For example, the medium effect size of the High acculturation group's on the Anxiety (M=55.04) and Somatization (M=54.09) scales indicate that the High acculturation group's means were above the normative sample's mean. Whereas, the medium effect size of the Low acculturation group on the Depression scale (d= .50) is actually indicative of a lower than normative mean (M=45.03). In fact, the High (M=47.78) and Medium (M=47.77) acculturation groups' Depression means were also slightly below the normative group mean results. Although this seems counter-intuitive, given research on adult Mexican American women, it is actually consistent with depression research conducted with non-clinical Mexican American children (Alcala, 1991).

Of the tabled effect size differences noted between each of the acculturation levels and the normative sample on the Anxiety, Depression and Somatization scales; only the Low acculturation group's scores on the Anxiety scale, consistently fell slightly short of the normative 90th percentile expectations with a T-score of 62. On the *PRS-C* Somatization scale, the direction of increasing effect size magnitude (Low d =.03, Medium d=.05, High d=.41) noted among the Low, Medium, and High *PRS-C* groups' distributions is not repeated at the 90th percentile and the effect sizes are not consistently predictive of the upper limits of the Mexican American sub-sample distributions. In fact, the Low acculturation group meets the 99th normative percentile while the Medium acculturation group's upper limit T-score of 73, achieves a 97th normative percentile, clearly exceeding normative expectations for effect sizes of .03 and .05, respectively. Only the High acculturation *PRS-C* Somatization's 90th percentile T-score of 76, equivalent to the normative 98th percentile, was expected with an effect size of .41. Although the upper limits of two of the *PRS-C* Somatization distributions are inconsistent with calculated effect sizes, the obtained *PRS-C* ratings of the Mexican American sample are supportive of previous research, where more somatic complaints are noted for a Hispanic sample than a predominantly Euroamerican normative sample.

Among the distributions for the Total, High, Medium, and Low *PRS-C* groups on the Depression scale, the direction of the changes in effect sizes (High d =.22, Medium d=.22, Low d=.50) repeats itself at the upper limits of their respective distributions. The small effect sizes (d=.22) noted for both the High and Medium acculturation *PRS-C* groups are suggestive of their respective 90th percentile T-scores of 60 and 62: which in

turn are comparable to the 85th and 89th normative percentiles, respectively. Meanwhile, the Low acculturation *PRS-C* Depression scale's mean of 45.03 yielded the medium effect size (d=.50) noted in Table 9. This was consistent at the upper limits (90th percentile) of the Low acculturation group's Depression scale distribution, where a T-score of 54 only achieved the normative sample's 70th percentile.

Of the 12 possible effect size calculations for the three adaptive *PRS-C* scales (Adaptability, Leadership, Social Skills) in Table 9, only the *PRS-C* Adaptability scale for the Medium acculturation group evidenced an effect size $\geq$.40. In this case, the medium effect size (.56) indicated a lower mean (44.43) for the Medium acculturation *PRS-C* group than the normative mean (50). This difference between the means of the Medium acculturation *PRS-C* and the normative group accurately suggested the sustained difference at the upper limits (90th percentile) with a T-score of 58, which is comparable to the 77th normative percentile. In contrast, the negligible effect size (.07) calculated for the High acculturation *PRS-C* Adaptability scale distribution is not suggestive of the differences between the upper limits of the High acculturation and normative distributions because the High acculturation *PRS-C's* 90th percentile T-score of 58 only reaches the normative's 77th percentile. The parents of both the Medium and High acculturation children reported that their children had some difficulty with their ability to adapt to change as measured by the *PRS-C* Adaptability scale. As for the Low acculturation *PRS-C*'s Adaptability distribution, it was most closely related to the normative group (d=.05, M=50.47, 90th percentile= 94th normative percentile). Further exploration of these *PRS-C* ratings will be sought in Question One.

Of the effect sizes calculated for the four *PRS-C* composite scales in Table 9, only the medium effect size (.46) for the Medium acculturation *PRS-C* group's Adaptive Skills composite draws attention to itself. Here, the Medium acculturation group mean (45.74) lags behind its High (51.87) and Low (48.66) acculturation group counterparts. But all three acculturation level groups attain a similar T-score at their distribution's 90th percentile (High=65, Medium =63, Low =63) on the *PRS-C* Adaptive Skills, placing them at the normative's 93rd, 90th, and 90th percentiles, respectively.

In summary, these findings suggest that the lack of normality and skew of the Mexican American sample's *PRS-C* scales restrict a straightforward interpretation of effect sizes. They also lay a foundation for justifying the need for non-parametric analysis of the differences between this Mexican American sample and the normative group's ratings on the 16 scales of the *PRS-C* addressed in the upcoming Question One.

Teacher Rating Scale-Child for the Mexican American Sample

For the Total Teacher sample (n=123), only 13% of the 16 selected scales of the *TRS-C* were normally distributed. This percentage improves slightly to 17% of 64 scales when the results of the *TRS-C* for the Total Mexican American sample are combined with the 16 *TRS-C* scales per three levels of acculturation, refer to Appendix C. The reader is reminded that inclusion in the study required a matched-pair between a Parent and Teacher (*PRS-C* and *TRS-C* of the same child), consequently *TRS-C* results could be grouped into the corresponding acculturation level assigned to the Mexican American sample, regardless of the Teacher's ethnic background. Due to the exploratory nature of this study, observations of effect size will be qualified with reference to the obtained

medians and the sustained difference between the Mexican American sample and the published norms at the 90th percentile, in order to identify trends in the data.

Table 10

Mean, Standard Deviation, Standard Error of the Mean, and Effect Size Results for *Teacher Rating Scale-Child* (*TRS-C*) for Total Mexican American Sample

Scale	N	Mean	Std. Deviation	Std. Error Mean	Effect Size
Clinical Scales					
Aggression	123	47.20	7.42	0.67	0.29
Anxiety	123	47.87	8.32	0.75	0.22
Attention Problems	123	47.11	10.01	0.90	0.29
Atypicality	123	48.67	7.26	0.65	0.14
Conduct Problems	123	47.85	6.68	0.60	0.22
Depression	123	46.99	8.75	0.79	0.30
Hyperactivity	123	47.31	9.30	0.84	0.27
Somatization	123	49.46	10.33	0.93	0.05
Withdrawal	123	49.42	11.89	1.07	0.06
Adaptive Scales					
Adaptability	123	51.41	9.89	0.89	0.14
Leadership	123	50.89	12.13	1.09	0.09
Social Skills	123	50.97	10.97	0.99	0.10
Composite Scales					
Adaptive Skills	123	51.48	10.86	0.98	0.15
Behavior Symptoms Index	123	46.89	8.40	0.76	0.31
Externalizing	123	47.32	7.32	0.66	0.27
Internalizing	123	47.63	8.96	0.81	0.24

In Table 10, the clinical, adaptive, and composite *TRS-C* scales are presented as three separate groups with their respective subscales in alphabetical order on the far left side of the table. The published *BASC TRS-C* norms report a mean T-score of 50 and a standard deviation of 10 for all clinical, adaptive, and composite scales. The results in Table 10 present the standardized difference in means between the Teacher ratings of the Total Mexican American sample (n=123) and the normative sample.

As can be noted in Table 10, no large or medium standardized differences in means between the Total Mexican American sample and the published *TRS-C* means were calculated on any of the selected 16 *TRS-C* scales. Numerous small effect size estimates were noted among the nine clinical and four composite scales and only negligible effect size estimates were found on the three selected adaptive scales. More specifically, the standardized differences between the *TRS-C* Total Mexican American sample (n=123) and the *TRS-C* normative group ranged from .05 to .31 standard deviations across the 16 selected *TRS-C* scales. This indicates that the obtained means (46.89 to 51.48) for these 16 selected *TRS-C* scales approximate the published *TRS-C* mean of 50.

Yet, the actual centers (medians) and upper limits (90^{th} percentile)of the nine *TRS-C* clinical scale distributions show a slight trend where Teachers report non-clinical Mexican American children as displaying fewer aggressive, anxious, distractible, odd, contrived, hyperactive, and avoidant behaviors than the normative sample. For example, all nine of the Total Mexican American sample's *TRS-C* clinical scale distribution medians (range of 43 to 47) were below their respective means and below the published *BASC TRS-C* mean of 50, refer to Appendix C. In addition, the upper extremes (90^{th}

percentiles) of the Total Mexican American sample's distributions remain slightly lower than the normative *TRS-C* sample's on seven of the nine clinical scales, ranging from the 81st to the 89th normative percentile. For these seven *TRS-C* clinical scales, the effect sizes were indicative of small sustained mean differences between this study's Mexican American sample's lower maladaptive behavior ratings and the normative sample.

On the two remaining *TRS-C* clinical scales (Somatization, d=.05, M=49.46, mdn=46; Withdrawal, d=.06, M=49.42, mdn= 45), the negligible effect sizes calculated were sustained at their respective upper limits (90th percentile) where their normative percentile equivalents were 90th and 91st, respectively. Given the research that suggests higher levels of somatic complaints among Hispanics, this comparable reporting of Teacher observed somatic complaints between the Mexican American sample and the normative sample was not expected. The similar ratings received between the normative sample and the Total Mexican American sample on the *TRS-C* Withdrawal scale suggest that as a whole, the non-clinical Mexican American children were as likely to evade social contact as the children used to develop the published norms. How this Teacher rating pattern on the Somatization and Withdrawal scales is not perceived as inconsistent with the current study's findings will be addressed in the next chapter.

On the *TRS-C* adaptive scales (Adaptability, Leadership, and Social Skills) effect size differences for the Teacher ratings of the Total Mexican American sample (n=123) reveal a negligible difference ranging from .09 to .14 standard deviations. The obtained means (50.89 to 51.41) for the Total Mexican American sample approximated the published *TRS-C* mean of 50. The distributions for these three scales were negatively

skewed and the upper extremes (90th percentiles) of the Adaptability, Leadership and Social Skills scales were comparable to the normative 95th percentile.

The same slight tendency to rate this non-clinical Mexican American children's sample as demonstrating less maladaptive behaviors is noted across the four *TRS-C* composite scales (Behavioral Symptoms Index, d=.31; Externalizing, d=.27; Internalizing, d=.24; Adaptive Skills, d=.15) presented in Table 10. These small effect size differences continue to be evident at the 90th percentile (BSI, Externalizing, and Internalizing) where the *TRS-C* Total Mexican American sample's upper limits (90th Percentile) correspond to the *TRS-C*'s normative 84th, 84th, and 88th percentiles of the *TRS-C* composites of maladaptive behavior. As for the composite *TRS-C* Adaptive Skills scale distribution for the Total Mexican American sample, the median of 50 and mean of 51.26 suggest that the sample Teachers observed and rated the Mexican American children as similar to the normative sample. However, the upper limit (90th percentile) of the *TRS-C* Adaptive Skills composite for the Total Mexican American sample's distribution suggested a slight tendency to rate the Mexican American children as engaging in more advantageous behaviors than 95% of the normative sample.

If only the Total Mexican American sample's effect sizes and means were considered, the 16 *TRS-C* scales would appear very similar to the normative sample results; however, the upper extremes (90th percentiles) help to demonstrate the lack of normality and skewness of the Total Mexican American sample's distributions. The researcher suggests that the Mexican American sample ratings in this study are not clearly communicated by effect size values alone because effect sizes are designed to

show standardized differences between means. However, the *TRS-C* Total Mexican American sample's distributions have means that are inflated by the upper limits of the distributions; and these upper limits tend not to achieve or exceed the upper limits of the normative sample. When the Total Mexican American sample was divided into three levels of acculturation, interesting developments in this sample's *TRS-C* distributions emerge.

Given the exploratory nature of this study, a closer examination and comparison of the 64 possible *TRS-C* effect sizes for the Total, High, Medium, and Low Mexican American sample based on the differences between each of these groups and the normative sample were made and can be found in Table 11. In Table 11, the 16 selected *TRS-C* scales are again listed along the far left side of the table in alphabetical order under their respective clinical, adaptive, composite headings.

As previously alluded to, a Teacher rating pattern seemed to emerge for the *TRS-C* High acculturation group. The effect sizes reported for the *TRS-C* High acculturation group's nine clinical scales in Table 11 are dominated by medium effect sizes, ranging in magnitude from .40 to .68. For the Teacher ratings of the High acculturation group, seven out of the nine selected *TRS-C* clinical scale distributions evidenced means ranging from four to seven points lower than the published mean T-score of 50; and medians ranged from five to eight points lower than the published center of 50 for the scales designed to detect maladaptive behavior that are best described as: aggressive, inattentive, immature, anti-social, depressive, hyperactive, and withdrawn. Of the nine

TRS-C clinical scales in Table 11, it can be noted that seven High acculturation distributions achieved effect size differences $\geq$ .40.

Table 11

Effect Size Calculations for the *Teacher Rating Scale-C* of the Total (n=123), High (n=23), Medium (n=68), and Low (n=32) Acculturation Groups of the Mexican American Sample

Scale	Total (d)	High (d)	Medium (d)	Low (d)
Clinical Scales				
Aggression	.29	.55	.18	.31
Anxiety	.22	.32	.24	.09
Attention Problems	.29	.48	.28	.17
Atypicality	.14	.40	.10	.03
Conduct Problems	.22	.44	.15	.20
Depression	.30	.68	.22	.21
Hyperactivity	.27	.52	.16	.32
Somatization	.05	.03	.21	.25
Withdrawal	.06	.42	.00	.08
Adaptive Scales				
Adaptability	.14	.39	.02	.21
Leadership	.09	.20	.08	.16
Social Skills	.10	.35	.01	.10
Composite Scales				
Adaptive Skills	.15	.26	.04	.17
Behavior Symptoms Index	.31	.62	.25	.23
Externalizing Problems	.27	.54	.17	.29
Internalizing Problems	.24	.42	.27	.03

On 34 out of 36 possible *TRS-C* clinical scales' effect size differences calculated between the Total, High, Medium, and Low *TRS-C* Mexican American samples and the normative *TRS-C* sample, the effect size differences indicate a mean and median T-score that are lower than the published *TRS-C* mean of 50. The reader may recall that among the Parent ratings, no such pattern was noted, since the direction of the effect size difference was often different from one acculturation level to another on any given scale. With reference to the *TRS-C*, two out of 36 tabled effect size differences were indicative of a slightly higher mean for the Mexican American sample. They were found on the Low acculturation groups' Somatization, (M=52.50, Mdn=46) and Withdrawal (M=50.78, mdn=45) scale distributions. Further scrutiny of the *TRS-C* Somatization and Withdrawal scale results for the three acculturation levels provide additional support for careful and informed interpretation of effect size results for this Mexican American sample.

Exploring the differences noted between each of the High, Medium, and Low *TRS-C* groups' distributions and the normative sample on the Somatization scale: The calculated effect size magnitudes for the Somatization scale (Low d=.25, Medium d=.21, High d= .03) in Table 11 are ultimately suggestive of the magnitude of the difference between the respective distributions' upper limit (90^{th} percentile) comparison to the norms but do not consistently indicate the direction of the mean difference. For example, the upper limit (90^{th} percentile) of the distribution for the Low acculturation *TRS-C* Somatization scale meets the 97^{th} normative percentile. Yet, the small effect size noted for the difference between the normative mean and the Medium acculturation

TRS-C Somatization scale's mean (47.93) was suggestive of a slight underreporting of somatic symptoms. This slight underreporting of somatic symptoms was sustained at the Medium acculturation distribution's upper limits (90th percentile); where the Medium acculturation *TRS-C* Somatization score of 60 only achieved the 85th normative percentile. Only the negligible effect size calculated for the Somatization scale of the High acculturation *TRS-C* group very accurately suggested that its 90th percentile T-score of 64 is equivalent to the normative's 90th percentile.

Among the 12 distributions for the Mexican American sample's Total, High, Medium, and Low *TRS-C* Withdrawal scale, variations in effect sizes suggests clear distinctions between the three acculturation levels; but closer scrutiny of the distributions also shows that the High, Medium, and Low groups each had the same T-score markers at the 10th percentile (39), 25th percentile (42), and the 50th percentile (45), and that variation observed in the upper half of the distributions is what is most clearly reflected in the effect size outcomes: the High acculturation *TRS-C* Withdrawal scale (d=.42) upper limit (90th percentile) of 55 only reaches the 74th normative percentile; the Medium acculturation *TRS-C* Withdrawal scale (d=.00) upper limit (90th percentile) T-score of 67 is the most similar to the normative group's reaching its 93rd percentile; and the Low acculturation *TRS-C* Withdrawal scale's negligible effect size of .08, underestimates its respective upper limit (90th percentile) T-score of 70 because it actually exceeds the normative group's 98th percentile.

Of the three *TRS-C* adaptive scales selected for inclusion in this study (Adaptability, Leadership, and Social Skills), none of the possible 12 were normally distributed.

Interestingly, of these three *TRS-C* adaptive scales measuring advantageous behavior, 11 of the possible 12 medians were either equal to or exceeded the published *BASC TRS-C* mean of 50 for the Total, High, Medium, and Low *TRS-C* groups, refer to Appendix C. Yet, for the 12 possible *TRS-C* adaptive scales distributions, only four effect sizes could be considered small, while the remaining eight were negligible; these effect size categories do not communicate the differences of the sample's results. Only the Medium acculturation group's median *TRS-C* Leadership score of 48 was below the published mean, yet, all acculturation levels (High, Medium, and Low) obtained an upper limit (90^{th} percentile) $\geq$ the 95^{th} normative percentile on the *TRS-C* Leadership scale. In fact, on 10 out of 12 Mexican American *TRS-C* adaptive scales distributions centered slightly above the published mean and their respective 90^{th} percentile were equal to or exceeded 95% of the normative sample. A closer examination of the Teacher ratings of the non-clinical Mexican American children's behavior will be made in the upcoming Question Two.

Among the four *TRS-C* composite scales (Adaptability, Externalizing, Internalizing and Behavioral Symptoms Index) in Table 11, only the High acculturation *TRS-C* group is noted to have achieved medium effect size differences (.42 to .62) when compared to the normative sample. Given this *TRS-C* High acculturation group's reduced spread of scores, lower than expected center (42 to 45) on all scales intended to measure maladaptive behavior, and its upper limits (90^{th} percentile) on eight of nine clinical scales only ranging from the normative 40^{th} to 80^{th} percentile, it is not surprising that the three composite scales measuring maladaptive behavior (Externalizing, Internalizing and

Behavioral Symptoms Index) yielded these medium effect size differences for the *TRS-C* High acculturation group. However, on the composite *TRS-C* Adaptive Skills scale distributions, the small effect size difference calculated for the High acculturation *TRS-C* group and the negligible to small effect size differences calculated for the Medium and Low acculturation *TRS-C* groups are misleading because each of their respective upper limits (90^{th} percentiles) reached the normative 97^{th} percentile of the composite *TRS-C* Adaptive Skills scale.

The *TRS-C* descriptive results presented for this Mexican American sample trend toward support of scholarship that has documented fewer Hispanics in behavior disordered classrooms.

Although the straightforward interpretation of the standardized differences between the ratings received by the Mexican American sample and the normative sample for both the *PRS-C* and *TRS-C* are hindered because of the lack of normality in the majority of the Mexican American sample's distributions, they also lay a foundation for justifying the need for non-parametric analysis of the differences between this Mexican American sample and the normative sample's ratings on the 16 selected scales of the *PRS-C* and *TRS-C* addressed in the upcoming Questions One and Two, respectively.

Research Question One

When considered as a single group, and when grouped by Mexican American Parent's acculturation level, how do Parent ratings of Mexican American children's behavior on the 16 scales of the *PRS-C* compare to the *BASC's* general norms on the *PRS-C*?

Wilcoxon Signed-Ranks Test for Independent Samples: *PRS-C*

According to Darlington and Carlson (1987) parametric procedures are not adequate for comparing mean values of non-normal distributions. Hence, The Wilcoxon Signed-Ranks Test for independent samples was selected because it is a highly valid test for showing that the center of a distribution differs in some way from a specified value w_o, even if a distribution is extremely skewed (Darlington & Carlson, 1987). The Wilcoxon Signed-Ranks Test requires that all sample median values equaling the comparison median value be eliminated and a redefined N be used in the calculations. Due to the exploratory nature of this study, alpha was set at a .05 for a two-tailed test. In Tables 12 to 15, the redefined N, median, mean, Lowest Rank Total (T) (defined as the lowest of T_+ or T_-), and p value of each of the 16 scales are available. The Lowest Rank Total is used in calculating the Wilcoxon Signed-Ranks test statistic when n>30 and it can function as a quick reference to determine if the majority of the mathematical differences between the samples being compared are negative or positive. If the majority of the sample's data were below the median value of the comparison group, then because there are more negative numbers, the T_+ is selected as the Lowest Rank Total. This is because its absolute value was less than the absolute value of T_-, conversely, if the absolute value of T_- is less than T_+, then there were more data values in the sample that exceeded the comparison group's median value. Although the mean value of the scale under investigation is not used in the calculation of the Wilcoxon test statistic, it is included for quick reference for the reader. The names of the scales are located on the far left side, with the clinical scales listed first, followed by the adaptive and then composite scales.

Wilcoxon Signed-Ranks Test : *PRS-C* Scales Total Mexican American Sample. The median values for the Total Mexican American sample's Parent responses for each of the 16 possible *PRS-C* scales were compared to the published norms. Six of the 16 scales were noted to have significant differences between the parents' median ratings of the Mexican American sample and the published norms.

Table 12 shows the following *PRS-C* clinical scales to be significantly different from the published general norms: Aggression, Depression, Hyperactivity, and Withdrawal. More specifically, the Mexican American parents' responses on the Aggression, Depression, and Hyperactivity scale demonstrated a significant difference, $p \leq .01$, from the published general norm values, where this Mexican American sample's median was below the *BASC's* published T-score of 50 on each of these scales. Indicating that parents of this Total Mexican American sample rated their children as exhibiting less aggressive, depressed, and hyperactive behavior than the published norms.

In contrast, the Total Mexican American sample's Withdrawal scale's median is actually 50; however, because the Lowest Rank Total was T., then the Total Mexican American sample had a significantly larger number of scores above the *BASC's* published T-score of 50, $p < .05$. This means that for this sample, the parents reported their children as more likely to actively avoid others than did the normative child sample.

Among the adaptive scales, the Total Mexican American *PRS-C* Adaptability scale's median of 47 and the larger number of ratings below the published norm suggest that the Mexican American Parents considered their children as less comfortable with changes in

Table 12

Wilcoxon Signed-Ranks Test Results for the Comparison Between the Total Mexican American Parent Sample and the Norm Sample on the *BASC Parent Rating Scale-Child*

Scale	N	Median	Mean	Lowest Rank Total (T)	Asymp .Sig. (2-tailed) p
Clinical Scales					
Aggression	123	48	47.41	$T_+ = 2520$	.00**
Anxiety	119	49	51.44	$T_- = 3405.5$	.66
Attention Problems	120	50	50.28	$T_+ = 3618$	.98
Atypicality	114	46	49.66	$T_+ = 2653.5$	.08
Conduct Problems	123	49	51.68	$T_- = 3306$	.20
Depression	123	46	47.06	$T_+ = 2196$	.00**
Hyperactivity	123	45	48.33	$T_+ = 2798$	.01**
Somatization	115	47	51.12	$T_+ = 2941$	.27
Withdrawal	105	50	52.40	$T_- = 2114$	.03*
Adaptive Scales					
Adaptability	115	47	46.92	$T_+ = 2198.5$	.00**
Leadership	115	47	48.14	$T_+ = 2767.5$	.11
Social Skills	114	49	48.86	$T_+ = 2886$	.27
Composite Scales					
Adaptive Skills	119	46	47.64	$T_+ = 2785.5$	.04*
Behavior Symptoms Index	120	46	48.58	$T_+ = 2844.5$	.04*
Externalizing Problems	118	49	49.09	$T_+ = 2885.5$	.09
Internalizing Problems	115	47	49.75	$T_+ = 2769$	.11

* alpha $\leq$.05 level ** alpha $\leq$.01 level

There were no significant differences between the medians of the Total Mexican American sample and the published norms on either the Leadership or Social Skills scale. As can be noted in Table 12 all four of the *PRS-C* composite scales' medians and

means for the Total Mexican American sample were below the published norms; however, only two of the four comparisons of the *PRS-C* composite scales reached statistical significance.

Both the Behavioral Symptoms Index (BSI) and the Adaptive Skills comparisons attained a p of .04, indicating that the parents of this Mexican American sample rated these children as having fewer overall behavioral problems and yet, the parents also rated these same children as slightly less able to adjust to change and transition from one task to another. How both these results support the literature will be addressed in the following chapter.

Wilcoxon Signed-Ranks Test: *PRS-C* Scales by Level of Acculturation. Based on the exploratory nature of this study, comparisons between the three levels of acculturation and the published norms were also conducted. The Wilcoxon Signed-Rank Test was again employed for the following analyses by acculturation level; the smallest N compared in this study is 18. The Wilcoxon Signed-Rank Test is valid even when comparing sample sizes as small as 6; however, it is only when the sample has less than 5 observations that significance is found regardless of the comparisons made (Darlington & Carlson, 1987), rendering the test powerless.

Wilcoxon Signed-Ranks Test : *PRS-C* Scales High Mexican American Sample. As can be noted in Table 13, the Mexican American Parent responses of the High Acculturation group yielded no statistically significant differences between the sample and the published norms on any of the 16 scales. N's ranged from 23 to 18 for this High

Table 13

Wilcoxon Signed-Ranks Test Results for the Comparison Between the High Acculturation Mexican American Parent Sample and the Norm Sample on the *BASC Parent Rating Scale-Child*

Scale	N	Median	Mean	Lowest Rank Total (T)	Asymp.Sig. (2-tailed) p
Clinical Scales					
Aggression	23	46	47.13	$T_+ = 90$	.14
Anxiety	23	55	55.04	$T_- = 81.5$	.09
Attention Problems	20	50	47.39	$T_- = 1069$	.27
Atypicality	20	50	50.91	$T_+ = 792$	.76
Conduct Problems	23	52	51.22	$T_- = 122$	.62
Depression	23	46	47.78	$T_+ = 83$	.09
Hyperactivity	23	45	46.30	$T_+ = 78$	.07
Somatization	21	50	54.09	$T_- = 98.5$	.56
Withdrawal	18	50	52.00	$T_- = 686$	.37
Adaptive Scales					
Adaptability	20	50	49.35	$T_+ = 502$	.73
Leadership	21	48	51.74	$T_- = 99.5$	.58
Social Skills	18	50	53.70	$T_+ = 875$	.10
Composite Scales					
Adaptive Skills	22	50	51.87	$T_- = 103$	.45
Behavior Symptoms Index	23	46	48.65	$T_+ = 102.5$	.28
Externalizing Problems	20	49	47.91	$T_+ = 67$	.16
Internalizing Problems	20	50	53.13	$T_+ = 86.5$	.49

* alpha $\leq$.05 level ** alpha $\leq$.01 level

acculturation group. Review of the data displayed in Table 13 shows that only the High acculturation group's Hyperactivity Scale's median of 45 approached a nearly significant difference from the published norms (mdn=50) with a p = .07.

Table 14

Wilcoxon Signed-Ranks Test Results for the Comparison Between the Medium Acculturation Mexican American Parent Sample and the Norm Sample on the *BASC Parent Rating Scale-Child*

Scale	N	Median	Mean	Lowest Rank Total (T)	Asymp.Sig. (2-tailed) p
Clinical Scales					
Aggression	68	48	48.07	$T_+ = 819$	.03**
Anxiety	65	48	51.34	$T_+ = 1025.5$	.76
Attention Problems	68	51	51.29	$T_- = 1069$	.52
Atypicality	64	46	49.34	$T_+ = 792$	.10
Conduct Problems	68	52	52.59	$T_- = 898.5$	.09
Depression	68	46	47.77	$T_+ = 775$	.02**
Hyperactivity	68	46	49.62	$T_+ = 984$	.25
Somatization	64	47	50.52	$T_+ = 842.5$	.18
Withdrawal	59	50	52.78	$T_- = 686$	.13
Adaptive Scales					
Adaptability	67	44	44.43	$T_+ = 502$	.00**
Leadership	62	46	46.81	$T_+ = 720$	.07
Social Skills	67	44	47.38	$T_+ = 875$	.10
Composite Scales					
Adaptive Skills	65	44	45.74	$T_+ = 646.5$	.01**
Behavior Symptoms Index	65	48	49.38	$T_+ = 919$	.32
Externalizing Problems	67	49	50.16	$T_+ = 1035$	.52
Internalizing Problems	65	47	49.71	$T_+ = 836$	.12

* alpha $\leq$.05 level ** alpha $\leq$.01 level

Wilcoxon Signed-Ranks Test: *PRS-C* Scales for Medium Acculturation Group.

Comparisons of the *PRS-C* Medium acculturation group ratings were made to the *BASC PRS-C* general norms. Four of the 16 scales achieved statistical significance and one

scale approached significance. Review of Table 14 shows that on two of the nine *PRS-C* clinical scales, the Parent ratings of the Medium acculturation group were significantly less than the published norms both the Aggression (mdn= 48, p=.03) and Depression (mdn= 46, p=.02) scales.

Surprisingly, the medians of the Adaptability scale and the Adaptive Skills composite of the Medium acculturation Parent ratings were significantly less than the published norms. Both of these scales yielded a median score of 44, the rankings attributed to scores below the comparison value (published t-score of 50) yielded a p =.00 for the Adaptability Scale and p = .01 for the composite Adaptive Skills Scale. In addition, the Leadership scale (mdn=46) is the only other scale that approached a significant difference (p=.07) between the Medium acculturation group and the published norms.

Wilcoxon Signed-Ranks Test: *PRS-C* Scales for Low Acculturation Mexican American Sample. The Mexican American Parent responses for the Low acculturation group indicate that of the 16 *PRS-C* scales only one was statistically different from the published general norms and three were nearly significant.

As can be noted in Table 15, of the *PRS-C's* clinical scales the parents of the Low acculturation group rated their children as showing significantly fewer symptoms associated with depression than the published norms, p= .00. Of the remaining eight *PRS-C* clinical scales, the Aggression and Hyperactivity scales had near significant differences (p=.06 and p=.07, respectively). No significant or near significant differences were found between the Parent ratings of the Low acculturation group and

the published *PRS-C* general norms for the three scales (Adaptability, Leadership, Social Skills) that comprise the adaptive scales.

Table 15

Wilcoxon Signed-Ranks Test Results for the Comparison Between the Low Acculturation Mexican American Parent Sample and the Norm Sample on the *BASC Parent Rating Scale-Child*

Scale	N	Median	Mean	Lowest Rank Total (T)	Asymp.Sig. (2-tailed) p
Clinical Scales					
Aggression	32	50	46.19	$T_+ = 165$	.06
Anxiety	31	48	49.06	$T_+ = 213.5$	.50
Attention Problems	32	47	50.19	$T_- = 252.5$	.83
Atypicality	30	45	49.44	$T_+ = 196.5$	.46
Conduct Problems	32	49	50.09	$T_+ = 256$	.88
Depression	32	43	45.03	$T_+ = 96$	.00**
Hyperactivity	32	45	47.03	$T_+ = 165.5$	.07
Somatization	30	44	50.28	$T_+ = 202.5$	.54
Withdrawal	28	50	51.88	$T_- = 153$	.25
Adaptive Scales					
Adaptability	28	52	50.47	$T_- = 194$	.73
Leadership	32	48	48.38	$T_+ = 216$	.37
Social Skills	29	51	48.53	$T_+ = 175.5$	.36
Composite Scales					
Adaptive Skills	32	49	48.66	$T_+ = 229$	.52
Behavior Symptoms Index	32	46	46.81	$T_+ = 163.5$	.06
Externalizing Problems	31	47	47.66	$T_+ = 187.5$	.20
Internalizing Problems	30	44	47.41	$T_+ = 150$	.09

* alpha $\leq$.05 level ** alpha $\leq$.01 level

With regard to the four *PRS-C* composite scales, only the Behavioral Symptoms Index's median of 46 approached significance (p=.06).

Summary of Results Question One

Each of the comparisons for the 16 *PRS-C* scales has been presented in total and by level of acculturation for this Mexican American Parent sample. The parents of the Total Mexican American sample rated their children significantly lower on the Aggression, Depression, and Hyperactivity scales and significantly higher on the Withdrawal scale. Interestingly, the ratings of the Total Mexican American sample on the *PRS-C* composite scales' Behavioral Symptoms Index and Adaptive Skills (which are considered antithetical to one another) were both significantly below the published norms.

When the sample was subdivided by acculturation level, the Parent ratings of the High acculturation group did not result in any significant differences between the Mexican American sample and the published general norms. However, the Medium acculturation Parent sample evidenced significantly lower differences of center on 25% of the 16 *PRS-C* scales (Aggression, Depression, Adaptability, Adaptive Skills), while the Low acculturation Parent group only evidenced a significantly lower difference on 6% of the 16 *PRS-C* scales (Depression). The similarity between the Low acculturation group and the published general norms was not anticipated, further discussion of the Low acculturation parent ratings will be offered in the final chapter.

Research Question Two

When Teacher ratings are grouped by Total sample and by Parent's level of

acculturation, how do Teacher ratings of Mexican American children's behavior on the *TRS-C* compare to the *BASC*'s *TRS-C* general norms?

The *Teacher Rating Scale-Child* form consists of 10 clinical scales, 4 adaptive scales, and 5 composite scales. For the purposes of this investigation, only the 16 scales that are shared with the *PRS-C* will be discussed. For tables 16-19, the names of the 16 shared scales are located on the far left side. The clinical scales are listed first, followed by the adaptive and then the composite scales. The redefined N, median, mean, Lowest Rank Total (T) (defined as the lowest of T_+ or T_-), and p value of each of the 16 shared scales are also available. Because of the exploratory nature of this study, alpha was set at .05 for a two-tailed test. Although the mean value of the 16 shared scales under investigation are not used in the calculation of the Wilcoxon test statistic, it is included for the convenience of the reader.

The reader is reminded that: 1) only 13% of the 16 shared scales of the *TRS-C* were normally distributed; 2) that this percentage improves slightly to 17% of 64 scales when the results of the *TRS-C* for the Total Teachers of the Mexican American sample are combined with the 16 *TRS-C* scales per three levels of acculturation; and 3) because a matched-pair between a Parent and Teacher (*PRS-C* and *TRS-C* of the same child) was obtained, the *TRS-C* results could be grouped into the corresponding acculturation level assigned to the Mexican American sample, regardless of the Teacher's ethnic background.

Wilcoxon Signed-Ranks Test for Independent Samples: *TRS-C*

Due to the non-normal distributions of the 16 selected scales of the *TRS-C*, parametric procedures were not adequate for comparing the mean values of the Teacher ratings of the Mexican American sample to the published general norm values (Darlington and Carlson, 1987). The Wilcoxon Signed-Ranks Test for independent samples was again applied because of its ability to show that the center of a distribution differs in some way from a specified value w_o, even if a distribution is extremely skewed (Darlington & Carlson, 1987).

Wilcoxon Signed-Ranks Test: Teacher Ratings of Total Mexican American Sample. The median values for the Teachers of the Total Mexican American sample for each of the 16 selected *TRS-C* scales were compared to the published general norms. Thirteen of the 16 scales were noted to have significant differences between the Teacher ratings of the Total Mexican American sample and the Teacher ratings of the *BASC TRS-C* published general norms.

Table 16 shows that each of the nine selected clinical scales for the Total Mexican American sample was found to be significantly different from the *BASC TRS-C* published general norms, $p \leq .05$. The selected clinical *TRS-C* scales consist of: Aggression, Anxiety, Attention Problems, Atypicality, Conduct Problems, Depression, Hyperactivity, Somatization, and Withdrawal. Given these results of significance and the additional information that the Lowest Rank Total (T) was T_+ for each of the selected clinical scales in Table 19, then the direction of the significant difference between the Mexican American sample and the *BASC* published norms can be determined.

Table 16

Wilcoxon Signed-Ranks Test Results for the Comparison Between the Teachers of the Total Mexican American Sample and the Norm Sample on the *BASC Teacher Rating Scale-Child*

Scale	N	Median	Mean	Lowest Rank Total (T)	Asymp.Sig. (2-tailed) p
Clinical Scales					
Aggression	119	44	47.20	$T_+ = 2124.5$	0.00**
Anxiety	123	45	47.87	$T_+ = 2685$	0.00**
Attention Problems	120	44	47.10	$T_+ = 2291$	0.00**
Atypicality	113	47	48.67	$T_+ = 1894.5$	0.00**
Conduct Problems	123	47	47.85	$T_+ = 1923$	0.00**
Depression	123	43	46.99	$T_+ = 1971$	0.00**
Hyperactivity	119	44	47.31	$T_+ = 2127.5$	0.00**
Somatization	123	46	49.46	$T_+ = 3046$	0.05*
Withdrawal	123	45	49.42	$T_+ = 2782$	0.01*
Adaptive Scales					
Adaptability	123	51	51.41	$T_- = 2983.5$	0.04*
Leadership	116	50	51.22	$T_- = 3058$	0.36
Social Skills	117	50	50.97	$T_- = 3211$	0.52
Composite Scales					
Adaptive Skills	118	50	51.26	$T_- = 3088$	0.25
Behavior Symptoms Index	119	45	46.89	$T_+ = 2036$	0.00**
Externalizing Problems	119	45	47.32	$T_+ = 2064.5$	0.00**
Internalizing Problems	114	45	47.63	$T_+ = 2083$	0.00**

* alpha $\leq$.05 level ** alpha $\leq$.01 level

According to Daniel (1990) when applying a Wilcoxon Signed-Ranks Test, if H_o is true, then the expected absolute values of T_+ and T_- are equal or sufficiently similar.

However, the Teachers of the Total Mexican American sample had a significantly greater number of T- (scores below the *BASC*'s published T-score of 50), leaving the Lowest Rank Total (T) as T_+.

Among the three selected adaptive scales of the *TRS-C,* the median of 51, for the Teachers of the Total Mexican American sample on the Adaptability scale was significantly above the published general norms' T-score of 50, at p= .04. There were no significant differences between the medians of the Teacher ratings of the Mexican American sample and the published general norms on either the Leadership or the Social Skills scale.

Of the four selected composite scales of the *TRS-C,* the Behavioral Symptoms Index scale (BSI), Externalizing Problems scale, and Internalizing Problems scale, were found to be significantly below the published *BASC TRS-C* published T-score of 50, p<.01.

Wilcoxon Signed-Ranks Test Results: Teacher Ratings of High Acculturation Mexican American Sample. In Table 17, results of the comparison between the Teacher ratings of the High acculturation group and the Teacher ratings of the published general norms for each of the 16 selected scales are presented. Of the 16 selected scales, 11 scales were significantly below the published *TRS-C* general norms and one scale was significantly higher than the published general norms.

Although the comparisons of medians for eight of the nine selected *TRS-C* clinical scales between the High acculturation group and the published general norms achieved significance, p< .05, seven clinical scales were at or below the .01 level of significance. More specifically, the Aggression, Atypicality, Conduct Problems, Depression,

Hyperactivity and Withdrawal scales were significantly below the *TRS-C* general norms, p=.00, while the Attention Problems scale was significantly below at p=.01, and the High acculturation group's *TRS-C* Anxiety scale ratings were found to be significantly lower from the general norms at p=.04. The Lowest Rank Total (T) was T_+ for these eight *TRS-C* clinical scales, indicating that the centers of the Teacher ratings of the High acculturation group were significantly less than the published general norms. Only the clinical scale Somatization of the Teacher ratings of the High acculturation group was found to have a center similar to the published general *TRS-C* norms, p=.88.

Of the three adaptive scales in Table 17, the comparison of the Teacher ratings of the High acculturation group revealed that neither the Leadership nor the Social Skills scales were significantly different from their respective general norm counterparts.

However, the comparison between the *TRS-C* Adaptability scale of the High acculturation group and the published general norms yielded p=.02. Because the Lowest Rank Total (T) was a T_-, then the significant differences attained indicate that the Teachers of the High acculturation sample rated them as demonstrating more behaviors associated with adjusting to changes and successfully transitioning from one task to another.

With regard to the composite scales of the Teacher ratings of the High acculturation group, it is not surprising that the three out of four composite scales designed to measure maladaptive behavior (Behavioral Symptoms Index scale, Externalizing, and Internalizing) reached a significance level $p \leq .01$ because their centers were lower than the published norms, given the significantly lower centers of the majority of the *TRS-C*

High acculturation clinical scales. Possible implications of these findings will be addressed in Chapter V.

Table 17

Wilcoxon Signed-Ranks Test Results for the Comparison Between the Teachers of the High Acculturation Mexican American Sample and the Norm Sample on the *BASC Teacher Rating Scale-Child*

Scale	N	Median	Mean	Lowest Rank Total (T)	Asymp.Sig. (2-tailed) p
Clinical Scales					
Aggression	22	43	44.52	$T_+ = 22$	0.00**
Anxiety	23	45	46.83	$T_+ = 71$	0.04*
Attention Problems	23	42	45.13	$T_+ = 51.5$	0.01**
Atypicality	21	45	46.00	$T_+ = 12$	0.00**
Conduct Problems	23	43	45.61	$T_+ = 15$	0.00**
Depression	23	43	43.30	$T_+ = 23$	0.00**
Hyperactivity	23	42	44.78	$T_+ = 45$	0.00**
Somatization	23	46	49.74	$T_+ = 133$	0.88
Withdrawal	23	45	45.78	$T_+ = 37.5$	0.00**
Adaptive Scales					
Adaptability	23	54	54.87	$T_- = 61.5$	0.02*
Leadership	22	53	52.04	$T_- = 107.5$	0.54
Social Skills	21	50	53.52	$T_- = 77.5$	0.19
Composite Scales					
Adaptive Skills	23	53	53.17	$T_- = 94.5$	0.18
Behavior Symptoms Index	23	42	43.78	$T_+ = 22$	0.00**
Externalizing Problems	23	44	44.61	$T_+ = 23.5$	0.00**
Internalizing Problems	22	42	45.83	$T_+ = 47.5$	0.01**

* alpha $\leq$.05 level ** alpha $\leq$.01 level

Wilcoxon Signed-Ranks Test: *TRS-C* of Medium Acculturation Mexican American Sample. Results of the comparison between the *TRS-C* of the Medium acculturation group and the *BASC's TRS-C* general norms are presented in Table 18. Of the 16 selected *TRS-C* scales, 11 of the comparisons achieved statistical significance.

Eight of the nine Medium acculturation Mexican American sample's *TRS-C* clinical scales were found to be significantly lower than the *BASC TRS-C* general norms. This equals the number of significantly lower centers of the *TRS-C* High acculturation's clinical scales.

For the Medium acculturation *TRS-C* group: the Aggression and Hyperactivity scales achieved a .05 level of significance; the Anxiety and Atypicality scales achieved a .03 level of significance; the Attention Problems, Depression, and Somatization scales achieved p=.01, and the Conduct Problems scale achieved a p=.00. Notice, that unlike the Teacher ratings of the High acculturation group which had lower Withdrawal scores than the published general norms, the Teachers of the Medium acculturation group reported less somatic concerns than the published general norms.

Results of the comparisons between the Teacher ratings of the three adaptive scales of the Medium acculturation group to the *BASC TRS-C* general norms found in Table 18 were unremarkable. All three of the *TRS-C* adaptive scales for the Medium acculturation sample had similar centers to the adaptive scales of the published *TRS-C* general norms.

With regard to the *TRS-C* composite scales of the Medium acculturation group, three of the four composite scales that measure maladaptive behavior were significantly below

the *BASC*'s *TRS-C* general norms. The Behavioral Symptoms Index achieved a p=.02, Externalizing Problems scale achieved a p=.03, and the Internalizing Problems scale evidenced the largest discrepancy within the composite scale comparisons with a p=.01. All three of these composite scales' centers were below the published general norms, echoing the findings of the *TRS-C* High acculturation group.

Table 18

Wilcoxon Signed-Ranks Test Results for the Comparison Between the Teachers of the Medium Acculturation Mexican American Sample and the Norm Sample on the *BASC Teacher Rating Scale-Child*

Scale	N	Median	Mean	Lowest Rank Total (T)	Asymp.Sig. (2-tailed) p
Clinical Scales					
Aggression	67	44	48.24	$T_+ = 827.5$	0.05*
Anxiety	68	45	47.66	$T_+ = 812.5$	0.03*
Attention Problems	67	46	47.19	$T_+ = 731.5$	0.01**
Atypicality	63	47	49.06	$T_+ = 689.5$	0.03*
Conduct Problems	68	47	48.53	$T_+ = 717$	0.00**
Depression	68	43	47.81	$T_+ = 731$	0.01**
Hyperactivity	65	46	48.41	$T_+ = 777$	0.05*
Somatization	68	44	47.93	$T_+ = 760$	0.01**
Withdrawal	68	45	50.02	$T_- = 911.5$	0.11
Adaptive Scales					
Adaptability	68	51	50.25	$T_- = 1082$	0.58
Leadership	64	48	50.78	$T_+ = 980.5$	0.69
Social Skills	67	50	50.09	$T_+ = 1089$	0.76
Composite Scales					
Adaptive Skills	63	50	50.38	$T_- = 987.5$	0.89
Behavior Symptoms Index	65	45	47.56	$T_+ = 719$	0.02*
Externalizing Problems	65	46	48.32	$T_+ = 739$	0.03*
Internalizing Problems	65	45	47.29	$T_+ = 695.5$	0.01**

alpha $\leq$.05 level ** alpha $\leq$.01 level

Table 19

Wilcoxon Signed-Ranks Test Results for the Comparison Between the Teacher of the Low Acculturation Mexican American Sample and the Norm Sample on the *BASC Teacher Rating Scale-Child*

Scale	N	Median	Mean	Lowest Rank Total (T)	Asymp.Sig. (2-tailed) p
Clinical Scales					
Aggression	30	44	46.94	T_+= 143	0.07
Anxiety	32	48	49.06	T_+= 228	0.50
Attention Problems	30	46	48.31	T_+= 181.5	0.29
Atypicality	29	47	49.75	T_+= 159.5	0.21
Conduct Problems	32	43	48.00	T_+= 147	0.03*
Depression	32	46	47.91	T_+= 138	0.02*
Hyperactivity	31	44	46.78	T_+= 142	0.04*
Somatization	32	46	52.50	T_+= 263	0.98
Withdrawal	32	45	50.78	T_+= 243	0.69
Adaptive Scales					
Adaptability	32	54	52.13	T_-= 180	0.11
Leadership	30	50	51.56	T_-= 203	0.54
Social Skills	29	51	51.00	T_-= 187	0.51
Composite Scales					
Adaptive Skills	32	53	51.75	T_-= 213.5	0.34
Behavior Symptoms Index	31	46	47.69	T_+= 154	0.07
Externalizing Problems	31	45	47.13	T_+= 149.5	0.05*
Internalizing Problems	27	49	49.66	T_+= 152	0.00**

* alpha $\leq$.05 ** alpha $\leq$.01

Wilcoxon Signed-Ranks Test: *TRS-C* of Low Acculturation Mexican American Sample.

As for the Teacher ratings of the Low acculturation group, in Table 19, five of the 16 *TRS-C* scales selected for comparison attained statistically significant differences and

two of the 16 approached significance. Each of the five instances of significance were accompanied by a Lowest Rank Total score of T_+, meaning that the center and majority of the ratings obtained on each of these Low acculturation *TRS-C* scales were below that of the *TRS-C* published general norms.

Among the nine *TRS-C* clinical scales, Teacher ratings of the Low acculturation students on only three clinical scales (Conduct Problems, p=.03; Depression, p=.02; and Hyperactivity, p=.04) were found to be statistically lower than the *BASC* general norms.

Results of the comparisons between the Teacher ratings of the Low acculturation group on the three *TRS-C* adaptive scales to the *BASC TRS-C* general norms were unremarkable, indicating that all three of the adaptive scales had similar centers to the published *TRS-C* general norms' adaptive scales.

Of the four *TRS-C* composite scales of the Low acculturation group, two were significantly different from the published *TRS-C* general norms and one composite scale was nearly significant. The centers of the Mexican American sample's *TRS-C* Externalizing (p=.05) and the Internalizing (p=.00) Problems scales were significantly below the published *TRS-C* general norms, while the Behavioral Symptoms Index median of 46 (p=.07) only approached significance.

Summary of Results Question Two

Each of the comparisons for the 16 *TRS-C* scales has been presented in Total and by level of acculturation (High, Medium, Low) for the Teacher ratings of the Mexican American children. For the purposes of this investigation, only the 16 scales that are shared with the *PRS-C* were discussed. When the Teacher ratings of the Total Mexican

American sample are considered, 12 of the 16 selected *TRS-C* scales were significantly lower than the published *BASC's* general norms and one of the scales was significantly above. The teacher ratings of the Total Mexican American sample offer support to the body of literature that suggests that Hispanic children are less likely to be identified as behaviorally disordered, given that the centers and majority of the distributions for the various clinical scales (measures of maladaptive behavior) are all well below the published *TRS-C* general norms.

When the *TRS-C* sample was subdivided into High, Medium, and Low acculturation groups, the High and Medium *TRS-C* ratings resembled the Total sample's results the most. Both the High and Medium *TRS-C* groups had significantly lower centers on 8 of 9 possible clinical scales and consequently had significantly lower centers on the three maladaptive behavior composite scales. However, Teachers of the Low acculturation group only echoed the High and Medium acculturation group's ratings on the Conduct Problems, Depression, and Hyperactivity scales. The Teachers of the Low acculturation group also trended toward reporting less aggression but significance was not achieved. Of the three *TRS-C* composite scales intended to measure maladaptive behavior, the Teachers of the Low acculturation group also rated these children as significantly less demonstrative of behaviors typically considered as Externalizing (acting out) or Internalizing (over-controlled). Although the Low acculturation *TRS-C* group did not achieve a significantly lower Behavioral Symptoms Index score, they did approach significance.

These *TRS-C* results for this sample of non-clinical Mexican American children strongly suggest that Texas teachers observed and reported fewer overall maladaptive behaviors, supporting the numerous scholarly observations of fewer Hispanics in behaviorally disordered classrooms. Discussion of these findings and implications for further research will be addressed in the following chapter.

Research Question Three

Does Parent acculturation level systematically influence the level of agreement between Parent (*PRS-C*) and Teacher (*TRS-C*) ratings of Mexican American children on the 16 selected *BASC* scales?

The ill-behaved data (non-normal and non-constant variances) prevented the intended two-way ANOVA. A single, more complex MANOVA was not possible because of the large ratio of dependent measures to sample size. In addition, an omnibus MANOVA does not focus on the exploratory question of what degree and type of effect the level of acculturation may have on ratings. To answer that question, all 16 scales cannot be lumped together for a single result. The data could have been corrected through transformations; however, these transformations would necessarily vary among the 16 dependent variables. This would then prevent direct comparisons among the 16.

Thus, level of agreement was approached through two different analytic approaches: The first analytic approach investigated the impact of acculturation level using mean differences between the Parent and Teacher ratings on the same students; the second analytic approach involved rank (Spearman Rho) and mean (Pearson "r") correlations to directly explore the levels of agreement between the Parent-Teacher ratings of the Total

sample, as well as the Parent-Teacher ratings at each acculturation level (High, Medium, and Low). For comparison of these obtained levels of agreement between the Parents and Teachers of the Total, High, Medium, and Low groups, Fisher z coefficients of the largest tabled Pearson r differences across acculturation levels within each of the 16 scales were calculated.

The first analysis, involving the comparison of means of the Parent and Teacher groups, was a Two-Way Repeated Measures ANOVA, where acculturation level was the grouping factor and Parent versus Teacher was the repeated measure. Repeated Measures ANOVAs were conducted for each of the 16 shared scales. Because of the non-normal and non-constant variances found on a majority of the sample's *PRS-C* and the *TRS-C* scales, Eta-squared effect size calculations instead of the straightforward interpretation of the inferential statistics were examined.

By employing Eta-squared effect size calculations on the two main effects and one main interaction effect, the amount of variance between the raters attributable to acculturation level membership could be obtained. Main effect eta-squared effect size calculations will allow for the differences between the acculturation levels to be examined when 1) raters are collapsed into one group per acculturation level and 2) when the difference among Parent ratings are compared to the difference among Teacher ratings within each acculturation level. The main interaction's eta-squared effect size will yield the variance predicted from the differences between means of Parents to Parents and Teachers to Teachers when compared across the three acculturation levels.

The following table summarizes the two main effect sizes and the one (most important) interaction effect size for each of the 16 *PRS-C* /*TRS-C* selected *BASC* scales. Eta-squared effect size values will range from zero to one because the values are the r^2 form of categorical predictors.

As can be noted in Table 20, three Eta-squared values were calculated for each of the 16 selected *BASC* scales. The Eta-squared effect size values presented in the second column are for the main effect calculated for the influence of Acculturation level on both Parents' and Teachers' behavior ratings of the 123 Mexican American students on each of the 16 selected scales. The third column presents the Eta-squared effect size values for the main effect of rater (Parents' versus Teachers') on the behavior ratings received by the 123 Mexican American students on each of the 16 selected scales.

And finally, the fourth column presents the Eta-squared effect size of the interaction between the raters' and the levels of acculturation, most directly answering the question regarding systematic affect of acculturation on the level of agreement between Teacher (*TRS-C*) and Parent (*PRS-C*) ratings of Mexican American children on the 16 selected *BASC* scales. The two-way repeated measures ANOVA yielded miniscule to very low Eta-squared effect sizes for all of the 16 selected *BASC* scales when level of acculturation was the focus; Eta-squared ranged in magnitude from .00 to .04. This signifies that when the mean ratings for the aggregated group of Parents and Teachers at a given acculturation level were compared to the mean ratings of the aggregated Parents and Teachers at any other acculturation level, no significant differences emerged for any of the16 selected scales.

Table 20

Summary of Effect Size (Eta-Squared) Calculations for Main Effect of Acculturation, Main Effect of Rater (Parent/Teacher) and Main Interaction of the Acculturation Level by Rater of Mexican American Sample (n=123)

Scale	Main Effect Acculturation df=2	Main Effect of Parent vs.Teacher df=1	Interaction of Acculturation x Rater df=2
Clinical Scales			
Aggression	0.01	0.00	0.00
Anxiety	0.00	0.03	0.02
Attention Problems	0.01	0.01	0.00
Atypicality	0.00	0.01	0.01
Conduct Problems	0.01	0.04	0.00
Depression	0.01	0.00	0.02
Hyperactivity	0.02	0.00	0.00
Somatization	0.01	0.00	0.01
Withdrawal	0.01	0.02	0.01
Adaptive Scales			
Adaptability	0.04	0.03	0.01
Leadership	0.01	0.01	0.00
Social Skills	0.03	0.00	0.00
Composite Scales			
Adaptive Skills	0.02	0.02	0.00
Beh. Sym. Index	0.01	0.01	0.01
Externalizing	0.02	0.01	0.00
Internalizing	0.00	0.01	0.02

Similarly, the data clearly showed no systematic effect on any of the 16 selected *BASC* scales when rater (Parent versus Teacher) was the focus; Eta-squared effect sizes again ranged in magnitude from .00 to .04. Denoting that for this sample, the means of the discrepancies calculated between the Total Parent group versus the Total Teacher group's, ratings yielded no significant differences on each of the 16 scales. This indicates that when the children's behavior ratings were taken as a Total Parent unit and a Total Teacher unit, the obtained means of each of these Total rater groups were not significantly different from one another on any of the 16 scales.

Examination of the Eta-squared effect size for the main interaction of these two variables (Acculturation Level x Rater) is the most involved of the relationships between the factors. This Eta-squared effect size reveals the influence of acculturation membership on the level of similarity or agreement between 1) the differences between the mean of one acculturation group's *PRS-C* to another acculturation group's *PRS-C* ratings for each of the 16 selected *BASC* scales and 2) the differences between the mean of the one acculturation group's *TRS-C* to another acculturation group's *TRS-C* ratings for each of the 16 selected *BASC* scales for this Mexican American sample. Given that the parents varied in acculturation level, a tendency toward significant differences between the High acculturation Parent group and the Low acculturation Parent group would have been expected. However, as can be noted in the results listed on the farthest right column of Table 20, the Eta-squared effect size values for this "main interaction" only ranged from .00 to .02. Surprisingly, suggesting for this sample, the level of acculturation membership had no systematic effect on the ratings obtained on the *TRS-C*

or *PRS-C* for the Mexican American sample on each of the 16 shared *BASC* scales. This can also be understood as indicating that the mean differences among Parent rater groups were as relatively constant as they were among Teacher rater groups, when acculturation level was used as the grouping criteria.

Although this analysis appears to support the null hypothesis regarding the lack of a systematic affect of acculturation on level of agreement for Parent/Teacher ratings, it does not render a discerning view of the relationship between the raters (matched parent-Teacher) per acculturation level, nor does it reveal specific comparisons of those levels of agreement. This leads us to the second set of analyses.

For the second analytic approach a) rank (Spearman Rho) and mean (Pearson r) correlations were conducted between Teacher and Parent ratings for the entire group of 123 and then by level of acculturation (High, Medium, and Low); and b) Fisher z coefficients of the largest tabled Pearson r differences were calculated to identify significant differences between correlations across acculturation levels within each of the 16 scales. This allowed for the establishment of the magnitude of the level of agreement between the Parent-Teacher ratings found at each level of acculturation and the statistical comparison of the differences in levels of agreement across the three acculturation levels within any given scale. Table 21 shows Parent-Teacher agreement levels based on the rankings (Spearman "rs") of the Parent and Teacher ratings first and the Parent-Teacher agreement levels based on the means (Pearson "r") of the Parent-Teacher ratings second for each of the 16 selected scales. Columns allow for instant visual comparison of correlation results for the total sample and each of the three

acculturation levels. Historically, scholars have found low to moderate levels of agreement between the Parent and Teacher ratings on broad-band (Floyd & Bose, 2003) behavior rating scales (Achenbach & Edelbrock, 1983; Reynolds & Kamphaus, 1992; Stanger & Lewis, 1993). Similarly, among the 16 shared scales of *PRS-C* and the *TRS-C* for the Total Mexican American sample, only low to moderate correlations between the Parent-Teacher comparisons were noted regardless of whether the ranks or means were used. The highest correlations between Parent-Teacher ratings of the children of the Total Mexican American sample (n=123), which can only be considered moderate, were noted on the Leadership scale (rs =.45/r =.45). The Parent-Teacher agreement levels for this Mexican American sample that exceeded those correlations typically found in previous research were calculated using the Parent-Teacher ratings of the High acculturation children (n=23) on the Attention Problems scales (rs = .71, r = .64) and the Leadership scales (rs= .64, r = .55).

In fact, when the Parents and Teachers of the Mexican American sample were subdivided into three levels of acculturation, the High acculturation group achieved the two strongest correlations between raters and the most numerous moderate correlations between raters. The four moderate level correlations within the High acculturation group were found on the Aggression (rs = .41, r =.44); Adaptive, (rs =.43, r =.41); Externalizing, (rs=.43, r =.65); and Internalizing (rs=.43, r =.53) scales. The Externalizing scale is conservatively categorized as a moderate level of agreement because of the apparent influence of outliers on this scale's mean-based correlation.

Table 21

Spearman Rho / Pearson r Correlation Results for Exploratory Comparison of the *PRS-C* and *TRS-C* of the Mexican American Sample on Each of the 16 Selected *BASC* Scales

	Spearman Rho/ Pearson r	Total n=123	High n=23	Medium n=68	Low n=32
Clinical Scales					
Aggression	rs / r	.30 / .30	.41 / .44	.30 / .28	.23 / .29
Attention Problems	rs / r	.38 / .43	.71 / .64	.35 / .43	.23 / .27
Anxiety	rs / r	.13 / .17	.37 / .35	.03 / .13	.26 / .27
Atypicality	rs / r	.12 / .13	.21 / .36	.04 / .14	.27 / .10
Conduct Problems	rs / r	.29 / .26	.27 / .27	.24 / .24	.40 / .30
Depression	rs / r	.23 / .09	.52 / .34	.18 / .09	.27 / .07
Hyperactivity	rs / r	.27 / .34	.37 / .42	.30 / .35	.16 / .18
Somatization	rs / r	.09 / .20	.35 / .54	-.12 / -.09	.36 / .46
Withdrawal	rs / r	.10 / .06	-.07 / -.11	.14 / .06	.12 / .15
Adaptive Scales					
Adaptability	rs / r	.13 / .21	.03 / -.06	.08 / .20	.23 / .27
Leadership	rs / r	.45 / .45	.64 / .55	.39 / .41	.48 / .48
Social Skills	rs / r	.36 / .41	.37 / .41	.25 / .33	.59 / .59
Composite Scales					
Adaptive	rs / r	.34/.39	.43/.41	.27/.35	.44/.45
BSI	rs / r	.25/.25	.27/.53	.19/.24	.37/.21
Externalizing	rs / r	.30/.34	.43/.65	.32/.32	.14/.26
Internalizing	rs / r	.17/.15	.43/.53	.01/.00	.41/.35

In Table 21, progressively higher agreement (correlations) between Parents and Teachers were expected as level of acculturation increased. In other words, a trend was anticipated where the highest level of agreement would be found in the High group, followed by progressively lower levels of agreement for the Medium and Low groups. That trend would support a hypothesis of differential social/behavioral judgments according to level of acculturation, and was found in four of the nine clinical scales, and two out of four composite scales.

More specifically, of the nine shared clinical scales, only the Attention Problems (High, r =.64 ; Medium r =.43; Low, r =.27), Atypicality (High, r =.36; Medium r =.14; Low, r =.10), Depression (High, r =.34; Medium r =.09; Low, r =.07), and Hyperactivity (High, r =.42; Medium r =.35; Low, r =.18) scales demonstrated a slight pattern of increase in Parent-Teacher rating agreement as level of acculturation increased. Fisher z coefficients of the largest tabled Pearson r differences across acculturation levels within each of the above mentioned scales were calculated and revealed no significant difference between Parent-Teacher agreement levels across acculturation levels on these scales.

With regard to the three shared adaptive scales, none demonstrated the trend of increasing level of agreement between raters as acculturation level increased.

Of the four shared composite scales, the Behavioral Symptoms Index (High, r =.53; Medium, r =.24; Low, r = .21) and the Externalizing (High, r = .65; Medium r = .32; Low, r = .26) scales also demonstrated a slight pattern of increase in Parent-Teacher rating agreement as level of acculturation increased. However, when the Fisher z

coefficients of the largest tabled Pearson r differences within each scale were applied, no statistically significant difference emerged between Parent-Teacher agreement levels across acculturation levels on these two composite scales. In fact, for the largest tabled discrepancy of the six scales showing this trend, the Externalizing scale's differences (High, r =.65 vs. Low r =.26) yielded a p=.10; establishing that with small sample sizes, a large difference between correlations is needed to reach significance.

In order to more fully explore the differences between levels of agreement for Parent-Teacher sets, Fisher z coefficients of the largest tabled Pearson r differences on every scale were also conducted, regardless of acculturation order. Ultimately, only three significant differences between acculturation levels were noted. The two groups with differences between Parent-Teacher agreement levels in the anticipated direction were the High and Medium groups on the clinical scale: Somatization (High, r =.54, vs. Medium, r = -.09, yielded p=.01) and the composite scale: Internalizing (High, r =.53, vs. Medium, r =.00, yielded p=.02). Meaning that the level of agreement between the High group Parent-Teacher was significantly higher than the level of agreement between the Medium group Parent-Teacher for both the Somatization scale and the Internalizing scale. The third significant difference between levels of Parent-Teacher agreement was not in the anticipated direction. Here the moderate level of agreement between the Parent-Teacher ratings of the Low acculturation group (r=.46) sharply contrasted the miniscule and negative level of agreement between the Parent-Teacher ratings of the Medium acculturation group's behavior on the Somatization scale.

Although these findings alone are insufficient to claim a systematic affect of the Parent acculturation level on the level of agreement between Parent-Teacher ratings of Mexican American children, it is interesting that on the 11 of the16 selected scales (seven out of nine shared clinical scales, one out of three adaptive scales, and three out of four composite scales) the Parents and Teachers of the children from the High acculturation group evidenced the strongest positive level of agreement. Both rater groups tended rate these non-clinical Mexican American children as engaging in less maladaptive behaviors than the normative sample.

The significantly higher Parent-Teacher agreement levels for the High acculturation group as compared to the Medium group are noted to be in the expected direction. However, finding the Low group's Parent-Teacher agreement levels exceeding the Medium group seems counter-intuitive but a research-based explanation will be discussed in the final chapter.

Summary of Results Question Three

A two-pronged analytic approach was used to examine the 16 *PRS-C* /*TRS-C* selected scales for a systematic affect on the level of agreement between Parent and Teacher behavior ratings of the same 123 Mexican American children. Due to violations of the two assumptions of normality and non-constant variances straightforward interpretation of the inferential statistics from the Two Way Repeated Measures ANOVA were not offered. Instead, emphases on the effect sizes of the results were considered more appropriate than p values.

Of the 16 *PRS-C* /*TRS-C* selected scales, main interaction eta-squared effect size calculations revealed that for this sample, neither acculturation level membership (High, Medium, Low) nor rater (Parent, Teacher) was a significant contributor to the behavior ratings obtained for the 123. Main effect eta-squared effect size calculations also indicated that the differences between the three acculturation levels remained relatively constant when 1) raters were collapsed into one group per acculturation level and 2) when differences between Parent ratings were compared to differences between Teacher ratings within each acculturation level. Means tables underlying the graphs are available in Appendix C. Sixteen line graphs of these interaction relationships are included in Appendix D.

Secondly, in an effort to illuminate the level of rater agreement for each acculturation level on any given scale, Spearman Rho (rank correlation) and Pearson r (mean correlation) were calculated. Of the possible 16 Rho/r correlation pairs that belong to the High acculturation group, 11 reached a moderate or above level of agreement ($\geq$.4) and clearly outnumbered the two moderate Rho/r correlation pairs for the Medium acculturation group raters and the five moderate Rho/r correlation pairs belonging to the Low acculturation group raters. To further investigate the tabled differences, a Fisher z coefficient was calculated for the largest tabled differences within each scale. Fourteen of the 16 scales had no significant differences between correlation values across the three levels of acculturation when verified with Fisher z coefficients. This can also be interpreted as statistically similar levels of Parent-Teacher agreement were noted between acculturation levels when means were the focus of the correlation results on

88% of the 16 scales under consideration. The two scales that yielded three significantly discrepant results between acculturation levels were Somatization (High acculturation vs. Medium acculturation; Medium acculturation vs. Low acculturation) and Internalizing (High acculturation vs. Medium acculturation). Although these findings were not indicative of a systematic effect based on acculturation levels for any of the 16 scales, it does indicate that in general, the Parents and Teachers of the High acculturation group tended to moderately agree more often with one another when rating the same child's behavior than the Parents and Teachers of the Medium acculturation and Low acculturation groups. No systematic effect or tendency was claimed across the 16 scales because the Low acculturation group's Parents and Teachers also moderately agreed more often with one another than the Medium acculturation group's Parents and Teachers.

These confirmations of the null hypothesis regarding the progressive influence of acculturation level on agreement levels between Parent-Teacher behavior rating patterns on the *BASC PRS-C* /*TRS-C* does not imply that the results of this study do not distinguish the Mexican American sample from the standardization sample, because clearly previous results suggest otherwise; however, it does demonstrate that these 123 Mexican American children, whose Parents and Teachers independently rated their behavior, tended to rate the children's behavior as consistently across settings as has been previously encountered in the literature.

CHAPTER V

DISCUSSION AND SUMMARY

Organization

This chapter will briefly review the study's purpose, design, and rationale for the research questions posed. It will recap the major findings, both on data reliability and in response to the three research questions. All major findings will be discussed, in order, in light of expectations, and existing literature. Finally, the study's limitations and implications for future research will discussed.

The purpose of this study was to explore the applicability of the *BASC Parent Rating Scale-C*'s and *Teacher Rating Scale-C's* general norms to a non-clinical Mexican American sample. Behavior ratings for 123 children of Mexican descent (ages 6-11) attending Texas public schools were provided by their parents and teachers. Due to the heterogeneity within the Mexican American culture, acculturation level was also assessed and used to establish grouping variables.

Since the *BASC Parent Rating Scale-Child (PRS-C)* and *Teacher Rating Scale-Child(TRS-C)* forms have become some of the most frequently used multi-symptom behavior rating scales (Kamphaus, 2003) employed as a part of a standard psychological evaluation for children between the ages of 6-11, it was important to investigate whether the norms-designated levels of emotional functioning were applicable to an ethnic minority group, Mexican Americans, who is not well represented in the standardization sample.

Summary

Internal Consistency Reliabilities

According to Helms (1992), the usefulness of a multi-symptom behavior rating scale with a target ethnic group that was not sufficiently included in its standardization sample can be inferred by evaluating the degree to which the scales reliably represent particular domains of behaviors within and across cultural groups. Cronbach alpha coefficients were calculated for both the *Parent Rating Scale-C (PRS-C)* and the *Teacher Rating Scale-C (TRS-C)*. Internal consistency calculations ranged from tolerable to excellent levels for the obtained behavior ratings of the Total Mexican American sample on both the *PRS-C* and the *TRS-C*. The teacher group was expected to have the higher level of internal consistency for a majority of the scales; as is the pattern noted in the *BASC PRS-C* and *TRS-C* published norms (Reynolds & Kamphaus, 1992).

Indeed, as expected, the teacher ratings achieved numerous norms-comparable, or better, internal consistency reliabilities than the parents' ratings when the Mexican American sample was analyzed as a single group. More specifically, the obtained *TRS-C* ratings demonstrated a higher level of cohesion on six of the nine clinical scales and all three of the shared adaptive scales. Only the Anxiety, Somatization, and Conduct Problems scales were more cohesive for the *PRS-C* ratings of the Total sample of non-clinical Mexican American children.

Perhaps the sample size was not large enough for teachers to witness a wide variety of behaviors associated with anxiety and somatic complaints. These "overcontrolled" behaviors are often more difficult for teachers to identify than overt, disruptive

behavioral displays (Knight, 1996). Parents spend more time, are charged with caring for a child's physical and emotional needs and are more likely to observe a behavioral repertoire that includes physical and emotional distress. Therefore, it is more likely that the anxiety and somatic symptomatology would manifest itself in the home environment. According to researchers, parent reported behavioral symptoms significantly correlate to a child's report of behavioral symptoms when investigating non-clinical populations (Reynolds, Anderson & Bartell, 1985; Wierzbicki, 1987).

Due to the heterogeneity within the Hispanic culture, it was also important to analyze internal consistency by levels of Mexican American acculturation. This would offer insight as to which, if any, of the acculturation groups may have achieved results that suggest further investigation. It was expected that as acculturation level increased and more closely approximated the culture of the predominantly Euroamerican sample the norms were based on, the reliability of the subscales would increase for both the parent and teacher groups. In addition, the teacher group was expected to obtain the higher of the tabled reliabilities on all scales, regardless of assigned acculturation level membership. This was the pattern noted among the *BASC PRS-C* and *TRS-C* published norms (Reynolds & Kamphaus, 1992).

When the sixteen *PRS-C* scales were analyzed by acculturation level (High, Medium and Low), 44 of the possible 48 reliabilities ranged from good to excellent for the parent groups. Only the Adaptability scale (for the three acculturation groups) and the Withdrawal scale (for Low acculturation parents) achieved tolerable reliability levels. According to Mayfield (1996) and Harrington (1988), the ethnic and experiential

background of the item authors may affect item characteristics, consequently affecting the intended construct.

Item characteristics may seem a reasonable explanation for the lower levels of internal consistency found on all three acculturation level's *PRS-C* Adaptability scale and the Low acculturation group's *PRS-C* Withdrawal scale. However, it does not provide an explanation for the unanticipated findings of the *TRS-C* scales.

When the sixteen *TRS-C* scales were analyzed by acculturation level (High, Medium and Low), 45 of the possible 48 reliabilities ranged from good to excellent for the teacher groups. However, three *TRS-C* scales became notably unreliable, based on the teachers' ratings: the High acculturation *TRS-C's* Conduct Problems, Withdrawal and Atypicality scales. In each of these cases, the highly acculturated children sample was rated with zero-point responses on so many of the items constituting the scales that the respective reliabilities of the scales were greatly affected.

In the clinical setting, had a teacher reported the complete absence of lying, cheating, stealing, avoidant and psychosis-related behaviors on the part of a highly acculturated child , the conclusion drawn would be that the child was not engaging in these behaviors. However, the numerous reportings of the complete absence of these behaviors in this study made the highly acculturated children indistinguishable from each other. This rendered the Conduct Problems, Withdrawal and Atypicality scales useless in measuring these symptoms in the school setting. It is possible that these non-clinical, highly acculturated children, all 23 of them, were adept at following behavioral expectations in the school setting. However, the low reliability level of the parent's Conduct Problems

scale implies that in the home environment a larger repertoire of behaviors is witness by the parent and the items constituting the *PRS-C* Conduct Problems are more representative of the construct being assessed.

According to James (1995) and Mayfield (1996), *BASC* rating subscales that are not shown to reliably assess behavior from one ethnic group to another suggest that the "white middle and upper-middle class" males employed as academics and psychologists who generated the *BASC* item pool may not have provided items that universally embody the construct at hand. A more ethnically diverse pool of psychologists may be useful in generating items that can more reliably distinguish between clinical and non-clinical levels of behaviors associated with constructs of Withdrawal, Atypicality, and Conduct Problems for Mexican American children from highly acculturated homes.

On the other hand, it is also possible that the small sample size was responsible for the lack of variance in the teacher ratings received by these children. Only additional investigations with Mexican American subjects and the *BASC TRS-C* will replicate or refute the tendencies noted here.

In conclusion, there are actually more similarities than dissimilarities between the Mexican American sample and the sample used to create the *BASC PRS-C* and *TRS-C* general norms. This suggests that the *BASC PRS-C* and *TRS-C* can be useful measures of emotional and behavioral displays in Mexican American children. However, *caution* is suggested when interpreting teacher ratings of: the behaviors represented on the Conduct Problems, Withdrawal, and Atypicality scales of highly acculturated children;

and 2) parent ratings of all Mexican American children's ability to adapt to change, as measured on the *BASC PRS-C* Adaptability scale.

As the Mexican American population in the US increases, the likelihood that their children will need psychological assessment and intervention increases with them. At present, two of the most frequently used assessment tools are the *BASC PRS-C* and *TRS-C* . Exploring the applicability of the *PRS-C* and *TRS-C* scales' constructs "as is" provides information to clinicians/researchers that particular subscales may not have the same meaning in a Mexican American child's assessment. Creation of community-based norms are not in vogue (Dana, 2000), but the more informed the clinician, the more accurate the diagnosis, and the better and more effective the intervention.

Question One

Question one called for the comparison of the obtained parent ratings on the *PRS-C* to the published *BASC PRS-C* general norms for each of the 16 scales. This comparison of the Mexican American parent sample's *PRS-C* to the *PRS-C* general norms was considered of benefit because scholars regard parents to be a reliable source of information regarding a child's behavior. However, because of the heterogeneity of the Mexican American culture, differences of potential clinical relevance were explored by comparing the Total, High, Medium, and Low acculturation groups' 16 *PRS-C* scales' distributions to the *BASC PRS-C* general norms. It was expected that as acculturation level increased, the obtained Mexican American *PRS-C* ratings would to be more similar to the predominantly Euroamerican sample used to establish the *PRS-C* general norms.

No studies in the published literature have compared *BASC PRS-C* results for non-clinical Mexican American children to the published norms in their primary analyses. It would seem logical to make a non-clinical norm comparison since the responses of the predominantly Euroamerican sample provide the basis for the scores used to make clinical, research and educational inferences about the subject being rated.

Direct comparison cannot be made to Mayfield's (1996) study with the *BASC PRS-Adolescent* form using the Hispanics of the standardization sample because: 1) these youths are of a different developmental stage, 2) are rated by a differing set of items, 3) are not exclusively Mexican American, and 4) acculturation level was not measured or addressed. However, a more general observation of construct is offered: Hispanic parents tended to report fewer aggressively-based behaviors when rating their non-clinical Hispanic adolescents.

In the present study, when parent ratings of the Total Mexican American child sample were analyzed, the Aggression, Depression, Hyperactivity, Adaptability, Adaptive Skills and Behavioral Symptom Index scales were significantly lower than the published *PRS-C* general norms. Expectedly, the responses given by the parent's of the High acculturation group evidenced no significant differences on any of the 16 *PRS-C* scales. However, the Medium acculturation Parent sample evidenced significantly lower centers on Aggression, Depression, Adaptability, and Adaptive Skills scales and a significantly higher center on the Withdrawal scale; while the Low acculturation Parent group only evidenced significantly lower ratings on the Depression scale. The similarity between the Low acculturation group and the published general norms was not anticipated, but it

is possible that the small sample size contributed to the lack of variability noted in these children's behavior.

The small subsamples of both the High and Low acculturation groups may have been responsible for the lack of significance noted between the ratings of these acculturation groups and the published *PRS-C* general norms. This is hypothesized because the Medium acculturation group was more than double the size of the High or Low acculturation groups. And several of the High and Low *PRS-C* scales trended toward the Medium acculturation group's significantly different median ratings. However, only one of a possible thirty-two scale distributions was significantly different from the published general norms. In addition, a larger sample could potentially provide normal distributions which would permit more powerful analyses to tease out the influence of Mexican American culture.

Despite reporting fewer tendencies toward aggressive and depressive behavior, the Medium acculturation parent group also rated their children as less likely to adapt to changes in the environment, more likely to evade others, and more likely to avoid social contact than the sample parent group of the general norms. It appears contradictory for parents to report children as manifesting less aggressive and less depressive behaviors while reporting more displays of displeasure in changes of routine, expected family outings, and losing a competition. But this can also be interpreted as parents are honestly reporting that their children are saddened or disappointed when an expected event or family outing must be cancelled. Similarly, it would appear inconsistent for parents to report children as stable in their emotional displays, not overtly aggressive or

pouty, and as having a healthy self-concept and yet rate these same children as withdrawn rather than more likely to actively engage others. However, because of how the items are worded on the Withdrawal and Adaptability scales, the Medium acculturation parent responses may indicate their children's social needs are currently filled by interactions within the nuclear or extended family rather than extra-curricular activities.

Due to the violations of normality by the majority of the obtained *PRS-C* scale distributions, this researcher adds to Greene's (1987) requirement that the distribution comparisons in this study had to have also resulted in a significant difference to merit "clinically relevant" status. Clinically relevant differences are moderate effect size differences that are likely to surface in a clinical setting (Cohen, 1977). According to Greene (1987) moderate effect size (or a T-score point differences of 5 units between group means) is required to have a clinically relevant difference.

Of the six *PRS-C* scales achieving statistical significance among the Total, Medium, and Low *PRS-C* groups, only two clinically relevant differences on the *PRS-C* scales were identified. The Low acculturation parents rated their children lower on the Depression scale and the Medium acculturation parents rated their children lower on the Adaptability scale. To qualify these clinically relevant findings further, the reader is reminded of the medium level of internal consistency achieved by the Low acculturation *PRS-C* Depression scale and the low level of internal consistency achieved by the Medium acculturation *PRS-C* Adaptability scale.

Given these reliability levels and the clinically relevant differences noted above, the following are recommended. Interpret *PRS-C* Adaptability scores with caution when evaluating Mexican American children of a Medium acculturation level. And pursue further information regarding depressive symptoms in children from Low acculturation homes whose *PRS-C* Depression scores are not high enough to be considered at-risk or clinical, but are close to the upper limits of the "normal" range. This would allow intervention strategies administered by a clinician to be based on the level of severity of the presenting problem for the assessee. An accurate diagnosis and clear understanding of the magnitude of the symptoms is critical (Reynolds & Ramsay, 2003) to effectively intervene with any child.

If for example, a child of a Low acculturation Mexican American home were to be rated by a parent in the upper limits of the "normal" range, the child could be experiencing the perceived magnitude of depressive symptoms comparable to the "at-risk" range of a Euroamerican child. Unattended, the depressive symptoms can increase, lead to a lack of motivation and interest in everyday activities, and eventually lead to feelings of disenfranchisement typical of high school drop-outs. This may appear to be an extreme progression of events. However, Mexican Americans have been found to manifest less depressive symptoms in childhood (Alcala, 1991). Yet, appear to manifest higher than expected levels of depression in adolescence and adulthood (Garcia & Marks, 1989; Roberts & Sobhan, 1992, Roberts, 1994). Therefore there must be a turning point in which the Mexican American youngster's world perception and behavior change.

Previous studies identifying syndromes within clinical populations are not adequate for comparison with the present non-clinical subjects, because the comparison is mismatched. Even the *BASC* provides clinical norms separately from its general norms. The focus of this study was to illuminate average or typical levels of behaviors that are commonly tested with broadband behavior rating scales as part of psychological batteries applied to children of Mexican descent.

This study's findings indicate that Low acculturation parents endorsed items in a manner which noted their children as displaying fewer behaviors that are consistent with dysphoric mood, suicidal ideation, and self-reproach. Upon first glance, these findings appear contrary to a body of literature that has tended to note that adolescents and adults of Hispanic descent are more likely to display depressive symptoms than Euroamericans (Garcia & Marks, 1989; Roberts & Sobhan, 1992, Roberts, 1994).

However, Alcala's (1991) study of depressive symptoms used a similar child sample, from a similar geographical region, and offers some support to the present study's clinically relevant difference noted on the Depression scale. Alcala used 454 fourth- and fifth-grade public school students from South Texas schools. Although Alcala did not control for special education student participation, the results significantly demonstrated that the Mexican American children were rated by peers as manifesting less depressive symptoms than both the Anglo classmates and the normative group of the Peer Nomination Inventory of Depression (Lefkowitz & Tesiny, 1985). Interestingly, in this same study, the Mexican American children's self-report of depressive symptoms on the Children's Depression Inventory (Finch, Saylor, & Edwards, 1985) were significantly

above the self-report measures' normative group. Perhaps, an observer could disregard certain behaviors as behavioral mistakes, whereas the internal thoughts of the child subject could be more precise regarding the amount of self-doubt, perception of inefficacy, and dysphoric mood. It could even be postulated that depression manifests itself differently in children of Hispanic descent.

One may argue that one or two scales out of sixteen are not sufficient for the introduction of supplemental norms or T-score corrections. However, if the Depression and Adaptability scales consistently surface (in future research with Mexican American samples) as statistically and clinically different from the published norms, then T-score corrections would help a clinician more accurately interpret *PRS-C* information during a psychological evaluation. T-score corrections of the clinical scales which in turn would affect the composite scales have a precedent.

According to Reynolds & Kamphaus (1992), the *BASC PRS's* norms development revealed fathers' ratings to be consistently lower than mother's ratings on the Social Skills scale and consequently resulted in a lower Adaptive Skills composite for the children from the Pre-school and Child groups. In their case, the difference was fairly small, averaging between one-fourth and one-third a standard deviation. Yet, Reynolds & Kamphaus (1992) determined to handle the consistently deflated T-scores with the correction of 3 T-score points. These 3 T-score points would be added to the Social Skills scale if the *PRS-P* or *PRS-C* rater were a father. This would then "have the desired effect of increasing the Adaptive Skills composite T-score."

The purpose behind a broadband behavior rating scale is a cost-effective tool that provides a broad scope of reliable and valid information (Tyson, 2004; Kamphaus, et al., 2000). Because computer-scoring is by far the norm in clinical and research practices, if after several replicated efforts, *PRS-C* norms that are tailored to the Mexican American assessee are needed, only a computer-scoring update would be required. This would leave unchanged the consumer's perception of: ease of use, cost-effectiveness, and simplicity in scoring. And yet, the diagnostic and intervention benefits would be notable in the ethnic population of interest. Only additional studies with Mexican American samples that incorporate acculturation level will provide the insight needed to adequately assess this heterogeneous group.

Question Two

Question two called for the comparison of the obtained teacher ratings on the *TRS-C* to the published *BASC TRS-C* general norms for each of the 16 selected scales.

According to scholars, teacher ratings of behavioral and emotional displays are different from but just as valuable as parent ratings. Therefore, a fair exploration of possible ethnic/cultural behavioral differences between the non-clinical Mexican American sample and the *BASC* general norm sample required a matched teacher's input (*PRS-C* and *TRS-C* on same child). Differences of potential clinical relevance were identified by comparing the Total, High, Medium, and Low acculturation groups' 16 selected *TRS-C* scales' distributions to the *BASC TRS-C* general norms.

Question two had one overriding assumption: teacher ethnicity was not critical to obtaining valid results with the *BASC TRS-C*. This assumption was based on Reynolds

and Kamphaus' (1992) inter-rater reliability study and Zimmerman et al.'s (1995) findings. The inter-rater reliability study showed that several teachers of the same child rated the child similarly on the *TRS*, and concluded that one teacher is as reliable at reporting the child's school behavior as several were. Additionally, Zimmerman et al. (1995) noted that Anglo and Hispanic teachers did not rate children of their own ethnicity as less problematic.

For the Total Mexican American children's sample, the teacher raters gave significantly lower maladaptive behavior ratings on all nine selected clinical scales (Aggression, Anxiety, Attention Problems, Atypicality, Conduct Problems, Depression, Hyperactivity, Somatization and Withdrawal) and three composite scales (Behavioral Symptom Index, Externalizing, and Internalizing); with significantly higher scores noted on one adaptive scale (Adaptability). Taken as a whole, the teacher ratings of the Total, High, Medium, and Low Mexican American sample indicated that teachers in this study observed and reported fewer overall maladaptive behaviors. This is consistent with the review of surveys performed by the Office of Civil Rights for the years of 1978, 1980, 1982, and 1984 by Chinn and Hughes (1987) that notes that Hispanic children were underrepresented in the categories of behaviorally/emotionally disordered.

However, Reid, DuPaul, Power, Anastopoulos, et al.(1998) observe that despite various research efforts by numerous scholars to determine whether cross-cultural or cross-ethnic behavioral differences are due to an actual difference in the base rate of maladaptive behaviors or are simply reflective of the shortcomings of the instruments remains unclear. For example, the implied tendency to underreport Hispanic children's

maladaptive behaviors (Chinn & Hughes, 1987) has been frequently contraindicated. There are numerous studies that have shown teachers' less favorable perceptions of Hispanic students' behavior (Bahr, Fuchs, Stecker & Fuchs, 1991; Prieto & Zucker, 1981; Roberts, Hutton, & Plata, 1985; So, 1987; Zimmerman, Khoury, & Vega 1995) and academic ability (Buriel, 1982; McCombs & Gay, 1988; Olague, 1993). Even in a Texas study, conducted specifically with schools where the Mexican American children constituted the majority of the student population, teachers were more likely to identify them as engaging in more ADHD-like behaviors than African American students (Madrigal, Juarez, Anderson, Langsdorf, and Waechter, 1979). However, when the Mexican American students were in the numerical minority of the student population, Langsdorf, Anderson, Waechter, Madrigal, and Juarez (1979) found Texas teachers proportionately underidentifying rural Mexican American students' behavior as hyperactive.

This is not to suggest that majority-minority student populations guarantee overidentification of behavioral problems in Mexican American children. For example, in another study specific to teacher ratings of Mexican American children, Carlson & Stephens (1986) reported findings that support both Chinn & Hughes' (1987) summary and this study's findings: the implied tendency of teachers to underreport behavioral problems among Hispanic students.

Specifically, Carlson & Stephens (1986) compared total scores obtained from teacher ratings on the *Social Behavior Assessment Scale* (*SBAS*) using a South Texas sample. Authors reported that the *SBAS* scale was selected because it represented a broad domain

of behaviors (Stephens, 1980). Hispanic students represent 68% to 96% of the student populations in the districts of South Texas. According to the authors, teachers were aware that the 30 Mexican American and 20 Anglo, first to third grade, children had been previously identified as having "serious emotional problems". Yet, despite this knowledge, teachers rated the behavior of the Mexican American children as less problematic than the Anglo children. In fact, not only were the ratings significantly lower than their Anglo age-mates, but researchers concluded that the use of the *SBAS* total score alone, would have lead to the underidentification of the Mexican American children's group. Authors did not consider this an invalidation of the measure, but rather a demonstration that Mexican American children manifest emotional and behavioral symptoms differently from Anglo children.

The available scholarly work conducted with Mexican American children offers limited and conflicting trends in teacher rating behavior. Therefore, prior to drawing conclusions based solely on the statistically significant rating trends of this sample of Texas teachers and offering cautionary suggestions when interpreting Mexican American children's *TRS-C* scores, this researcher will qualify the obtained significant discrepancies.

In addition to Greene's (1987) score requirement for clinical relevance, the distribution comparisons in this study had to have resulted in a significant difference. According to Cohen (1977), for relevant differences to emerge in a clinical setting, a moderate effect size based on standardized differences of group means is necessary.

According to Greene (1987), a moderate effect size or a T-score point difference of 5 units between group means is required to have a clinically relevant difference.

Using these criteria on the thirteen *TRS-C* scales achieving statistical significance in any of the Total, High, Medium, and Low *TRS-C* groups, only five clinically relevant differences on the *TRS-C* scales were identified. Specifically, the sample teachers rated the High acculturation children consistently lower on the Aggression, Depression, Hyperactivity, Behavioral Symptom Index, and Externalizing scales. The internal consistency levels achieved on these five High acculturation group's *TRS-C* scales ranged from good to excellent. Only the Conduct Problems, Atypicality and Withdrawal scales presented serious problems of internal consistency for this High acculturation subsample.

Based on these clinically relevant differences, it is concluded that it is best to pursue further information regarding *TRS-C* Aggression, Depression, Hyperactivity, Behavioral Symptom Index, and Externalizing scores in children from High acculturation homes. Especially when interpretation of the teacher's behavioral perception is based on scores that are not high enough to be considered at-risk or clinical, but are close to the upper limits of the "normal" range.

It is understood that no valid psychological assessment would rely solely on the results of one behavior rating scale (Kamphaus, 2003). However, this study's *TRS-C* findings combined with its *PRS-C* findings suggest that out of the 16 overlapping scales, only the Depression scale would most likely underidentify a Mexican American child's need for psychological intervention.

As previously suggested for the *PRS-C* discrepancies, T-score corrections or supplemental norms may be warranted if a consistent difference between groups is noted in future research with the *TRS-C* and Mexican American children. Although T-score corrections with the *TRS-C* do not have precedent, the previously detailed Reynolds & Kamphaus (1992) method allows for the application of the T-score correction to the clinical or adaptive scale's T-score, which in turn automatically influences the composite scales' T-score and percentile. This would then lessen the possibility of overlooking important, clinically relevant, depressive symptom levels in a Mexican American child.

Question Three

Question three called for an examination the 16 *PRS-C/TRS-C* selected scales for a systematic influence on the level of agreement between Parent and Teacher behavior ratings of the same 123 Mexican American children. The reader is reminded that although these scales bear similar names, the items on each scale are not identical. They are not intended to be exact images of one another. These scales are used by researchers and clinicians to aid in the determination of the consistency of like behavior across settings. Previous research with multi-symptom behavior rating scales has repeatedly shown low to moderate correlations between parent and teacher raters: in an extensive meta-analysis of 119 studies, Achenbach, McConaughy & Howell (1987) reported the mean intercorrelations between parents and teachers was .27. Differences between various informants were initially interpreted as lack of reliability in the measures (Achenbach, et al., 1987). However, others have suggested that children's behavior varies according to situations and contexts (Fergusson & Horwood, 1993, Frauenglass &

Routh, 1999). And it is now concluded that the low to moderate degree of agreement between multiple informants is supportive of the unique information provided by a parent and teacher, suggesting that they are, therefore, not interchangeable (Stanger & Lewis, 1993; Frauenglass & Routh, 1999, Reynolds & Kamphaus, 1992).

Because of the ill-behaved data in the present study, both rank correlations (Spearman Rho) and mean correlations (Pearson r) of parent-teacher agreement level were obtained for the Total and three acculturation groups on the 16 selected scales. Correlations ranged from low to moderate.

Similarly, Serrano's (1996) cross-ethnic intercorrelation study used parent and teacher behavior ratings of White, Hispanic, and African American children. Obtained parent-teacher correlations ranged from low (.09) to moderate (.65) with no significant differences between intercorrelations based on ethnic group membership.

In addition, the authors of the BASC thoroughly investigated parent-teacher correlation using 1,423 children's TRS and PRS ratings. Reynolds & Kamphaus (1992) found low to moderate correlations for the child level (ages 6-11), with correlations ranging from .12 to .62, with a median correlation of .37.

Therefore, with confidence, it is concluded that the Parents and Teachers of these 123 Mexican American children, who independently rated their behavior, tended to rate the children's behavior as consistently across settings as has been previously encountered in the literature (Achenbach, et al., 1987; Reynolds & Kamphaus, 1992; Stanger & Lewis, 1993; Serrano 1996).

Because of the interest in a systematic influence of acculturation level membership on the obtained behavior ratings, the differences and similarities between the Parent and Teacher groups were analyzed. No systematic influence based on acculturation level membership was noted. Specifically, as acculturation level increased, the number of strongest correlations between raters did not increase; however, expectedly the High acculturation group did have the most moderate level correlations of all three acculturation groups.

It is also suggested that the obtained parent-teacher correlations combined with the clinically relevant reports of lower aggressive, depressive, hyperactive, and generally externalizing maladaptive behaviors, are the documentation of actual behavioral differences and similarities in the school and home setting for the Mexican American children in this study.

Conclusion

This study's exploration of the *BASC PRS-C's* and *TRS-C's* applicability to children of Mexican descent revealed the following. When the entire sample of parents and the entire sample of teachers were taken as single units, Mexican American children were reliably measured and did not evidence any clinically relevant differences of behavior from the predominantly Euroamerican sample used to establish the *PRS-C* and *TRS-C* general norms. However, when the acculturative heterogeneity of the Mexican American sample was taken into account, notable differences in scale reliability and behavior rating pattern emerged.

The nine clinical and three adaptive *PRS-C* scales proved to be reliable measures of Mexican American children's behavior regardless of parent's acculturation level. However, the Conduct Problems, Atypicality and Withdrawal scales of *TRS-C* were unable to reliably assess the children from high acculturation homes.

Ultimately, teachers of the High acculturation group provided lower ratings to aggressive, depressive, hyperactive and generally externalizing maladaptive behaviors for this Mexican American sample. The Medium acculturation parents reported their children's lower ability to accept changes in planned activities. And the Low acculturation parents consistently rated their children as demonstrating fewer depressive symptoms.

It is noted that although the Low acculturation parents and High acculturation teachers were not rating the same children, a larger sample may reveal lower Depression scale ratings that are "significant" or "clinically relevant" for both teachers and parents of a single acculturation level. This possibility alone is justification for future research with Mexican American children and the *BASC PRS-C* and *TRS-C*. Undiagnosed depression has numerous negative implications for a child of any cultural background.

Limitations of the Study

The limitations associated with this exploratory study are at least five in number. The first limitation refers to socially desirable responses. Social desirability has been shown to affect response patterns of Spanish-speaking consumers (Marin, Gamba, & Marin, 1992), although this response pattern has been noted to dissipate as acculturation level increased (Gaffey, 1997), it is possible that the parents of the Low acculturation

subsample responded in a manner that they perceived was socially desirable. This may have led to a large number of similarities between the Low acculturation *PRS-C* results and the *BASC PRS-C* general norms.

The second limitation can be attributed to sample size. A larger sample in each acculturation level category may have allowed normal distributions and therefore more powerful analyses. Third, acquiring parent's last grade completed rather than a range, may have allowed a better understanding of the relationship between parent sample demographics and acculturation level and typology. Fourth, having collected teacher's ethnic background information, would have allowed data to be explored in a richer manner. Lastly, having divided the respondent groups into acculturation groups solely on *ARSMA-II* typology may have rendered more normal distributions.

Recommendations for Future Research

Several recommendations for future research have emerged. Researchers must continue to modify the manner in which acculturation is addressed in their scholarly work. The norm has been to use the linear portion of the *ARSMA-II*, by simply partitioning the sample into halves or thirds, based on linear acculturation scores. Despite having the ability to measure cultural orientation toward the Mexican culture and the Anglo culture independently (orthogonal measurement) in the *ARSMA-II*, only one study at present has divided the sample based on typology (*ARSMA-II's* Part 2 results). Further investigation, perhaps even a re-analyses of the previously obtained data, based on typology may yield data that is more akin to the psychological distress literature. It would be logical to hypothesize that the more "Integrated Bicultural"

(whether High or Low) would interact with their children, spouse and community in a more effective manner than the "Marginalized" or "Unable to Classify" individual. Thereby, leading to: the teaching of more effective coping skills; adequate or high social skills; and more successful learners because they have the ego-strength to ask for clarification of concepts that are unclear to them.

Additional modification and validation of the *ARSMA-II* should be conducted. According to Hui & Trandis (1983) Hispanics made more extreme responses than non-Hispanics on a 5-point scale questionnaire, with these differences fading on a 10-point scale questionnaire. With this extreme response research in mind, perhaps the likelihood of "Unable to Classify" typology would be reduced if the respondents had a larger continuum of responses to choose from. Or perhaps the typologies would be more consistent within the five linear acculturation levels proposed in the *ARSMA-II*, allowing for more straightforward and standardized classification of Mexican American acculturation across various disciplines' research studies.

There remains a need for more exploration and explanation of ethnic differences on the *BASC* Parent Rating Scale (English and Spanish) and Teacher Rating Scale at the pre-school, child and adolescent level. Even research with a single identified homogeneous acculturation level would be as valuable to the current body of knowledge as research with multiple levels of acculturation regarding Mexican American children's behavior.

Socioeconomic status and ethnic make-up of a participating community and sample should be included in future research with Mexican American children, so as not to

confuse these factors with those psychological symptoms that are better explained by variations in ethnicity.

Finally, investigations that either replicate these findings or dispute them will give a scientist/practitioner a more informed base from which to interpret and intervene when a child of Mexican descent is brought in for intervention. If replication studies were to note that non-clinical children of Mexican descent are repeatedly rated by parents as "happier" or "less depressed" than the published norms, then perhaps there is a turning point in a person's life when life stressors begin to impact the "world view" of the Hispanic individual that needs to be identified.

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APPENDIX A

DESCRIPTIVES OF *PARENT RATING SCALE-CHILD* USING A MEXICAN AMERICAN SAMPLE

Table A1

PRS-C Clinical Scale: Aggression

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	47.41	10.58	0.95	32	39	48	53	60	0.96
High	47.13	8.59	1.79	34	39	46	53	59	0.97
Medium	48.07	11.95	1.45	32	39	48	55	63	0.96
Low	46.19	8.78	1.55	33	37	50	53	55	0.92

Table A2

PRS-C Clinical Scale: Anxiety

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	51.44	12.15	1.10	37	44	49	59	69	0.96
High	55.04	13.29	2.77	33	44	55	67	72	0.94
Medium	51.34	12.65	1.53	38	44	48	57	69	0.90
Low	49.06	9.72	1.72	37	43	48	57	62	0.99

Table A3

PRS-C Clinical Scale: Attention Problems

				Percentile Distribution					
Group	M	SD	Sm	10th	25th	50th	75th	90th	Shapiro-Wilk Statistic
Total	50.28	10.46	0.94	38	42	50	58	63	0.95
High	47.39	9.46	1.97	34	39	50	53	60	0.89
Medium	51.29	11.39	1.38	37	43	51	58	63	0.86
Low	50.19	8.85	1.57	40	43	47	58	62	0.85

Table A4

PRS-C Clinical Scale: Atypicality

				Percentile Distribution					
Group	M	SD	Sm	10th	25th	50th	75th	90th	Shapiro-Wilk Statistic
Total	49.66	12.40	1.12	38	40	46	55	67	0.87
High	50.91	12.10	2.52	38	42	50	58	68	0.89
Medium	49.34	12.25	1.49	38	40	46	55	67	0.86
Low	49.44	13.22	2.34	38	38	45	55	75	0.85

Table A5

PRS-C Clinical Scale: Conduct Problems

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	51.68	10.98	0.99	37	45	49	56	68	0.93
High	51.22	10.83	2.26	37	45	52	56	66	0.91
Medium	52.59	10.92	1.33	41	45	52	56	68	0.92
Low	50.09	11.34	2.00	37	41	49	59	68	0.91

Table A6

PRS-C Clinical Scale: Depression

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	47.06	9.33	0.84	36	41	46	53	60	0.92
High	47.78	7.47	1.56	41	43	46	53	60	0.87
Medium	47.77	10.50	1.27	34	41	46	53	62	0.92
Low	45.03	7.68	1.36	36	39	43	48	54	0.92

Table A7

PRS-C Clinical Scale: Hyperactivity

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	48.33	11.51	1.04	35	41	45	55	61	0.94
High	46.30	9.24	1.93	34	38	45	54	59	0.97
Medium	49.62	12.86	1.56	36	41	46	57	69	0.93
Low	47.03	9.75	1.72	33	41	45	54	60	0.96

Table A8

PRS-C Clinical Scale: Somatization

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	51.12	15.56	1.40	36	41	47	56	76	0.82
High	54.09	16.03	3.34	40	41	50	59	76	0.81
Medium	50.52	15.76	1.91	36	39	47	56	73	0.80
Low	50.28	15.02	2.66	36	39	44	55	78	0.82

Table A9

PRS-C Clinical Scale: Withdrawal

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	52.40	11.10	1.00	38	44	50	60	66	0.96
High	52.00	10.99	2.29	39	44	50	63	68	0.95
Medium	52.78	11.60	1.41	38	44	50	60	69	0.96
Low	51.88	10.38	1.84	38	45	50	62	65	0.96

Table A10

PRS-C Adaptive Scale: Adaptability

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	46.92	10.50	0.95	34	39	47	55	58	0.96
High	49.35	9.02	1.88	36	44	50	58	58	0.95
Medium	44.43	10.67	1.29	33	39	44	53	58	0.94
Low	50.47	9.94	1.76	36	44	52	58	66	0.97

Table A11

PRS-C Adaptive Scale: Leadership

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	48.14	11.57	1.04	35	41	47	55	64	0.97
High	51.74	10.52	2.19	41	43	48	61	68	0.92
Medium	46.81	11.89	1.44	32	40	46	55	64	0.96
Low	48.38	11.36	2.01	35	40	48	55	66	0.96

Table A12

PRS-C Adaptive Scale: Social Skills

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	48.86	12..25	1.10	34	40	49	58	63	0.96
High	53.70	9.41	1.96	40	49	50	60	68	0.93
Medium	47.38	13.58	1.65	34	39	44	58	62	0.93
Low	48.53	10.34	1.83	34	39	51	58	61	0.95

Table A13

PRS-C Composite Scale: Adaptive Skills

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	47.64	11.21	1.01	35	40	46	57	63	0.96
High	51.87	9.46	1.97	41	44	50	62	65	0.90
Medium	45.74	11.77	1.43	33	38	44	55	63	0.95
Low	48.66	10.43	1.84	37	40	49	58	63	0.97

Table A14

PRS-C Composite Scale: Behavioral Symptoms Index

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	48.58	11.45	1.03	34	41	46	56	64	0.97
High	48.65	9.21	1.92	38	44	46	53	62	0.96
Medium	49.38	12.66	1.54	34	40	48	57	67	0.97
Low	46.81	10.23	1.81	34	40	46	52	62	0.97

Table A15

PRS-C Composite Scale: Externalizing Problems

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	49.09	11.24	1.01	34	41	49	55	64	0.96
High	47.91	8.94	1.87	33	43	49	52	57	0.92
Medium	50.16	12.39	1.50	36	41	49	56	65	0.95
Low	47.66	10.13	1.79	34	38	47	54	64	0.96

Table A16

PRS-C Composite Scale: Internalizing Problems

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	49.75	12.70	1.15	36	41	47	57	70	0.92
High	53.13	13.55	2.83	36	44	50	62	74	0.94
Medium	49.71	13.33	1.62	36	40	47	57	70	0.89
Low	47.41	10.28	1.82	36	41	44	54	62	0.96

APPENDIX B

DESCRIPTIVES OF *TEACHER RATING SCALE-CHILD* USING A MEXICAN AMERICAN SAMPLE

Table B1

TRS-C Clinical Scale: Aggression

				Percentile Distribution					
Group	M	SD	Sm	10th	25th	50th	75th	90th	Shapiro-Wilk
Total	47.20	7.42	0.67	41	41	44	50	60	0.80
High	44.52	5.33	1.11	41	41	43	46	49	0.62
Medium	48.24	7.71	0.94	41	42	44	55	60	0.85
Low	46.94	7.77	1.37	41	41	44	49	62	0.75

Table B2

TRS-C Clinical Scale: Anxiety

				Percentile Distribution					
Group	M	SD	Sm	10th	25th	50th	75th	90th	Shapiro-Wilk Statistic
Total	47.87	8.32	0.75	39	41	45	52	62	0.88
High	46.83	6.38	1.33	41	41	45	52	57	0.87
Medium	47.66	8.74	1.06	39	41	45	52	62	0.86
Low	49.06	8.71	1.54	39	41	48	54	62	0.90

Table B3

TRS-C Clinical Scale: Attention Problems

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	47.10	10.02	0.90	35	39	44	53	62	0.94
High	45.13	8.01	1.67	36	40	42	53	57	0.91
Medium	47.19	10.51	1.28	34	38	46	53	62	0.93
Low	48.31	10.32	1.83	37	41	46	56	66	0.93

Table B4

TRS-C Clinical Scale: Atypicality

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	48.67	7.26	0.65	42	44	47	50	59	0.78
High	46.00	3.39	0.71	42	44	45	47	51	0.90
Medium	49.06	7.74	0.94	42	44	47	50	61	0.78
Low	49.75	7.93	1.40	42	44	47	53	58	0.80

Table B5

TRS-C Clinical Scale: Conduct Problems

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	47.85	6.68	0.60	43	43	47	51	55	0.74
High	45.61	3.32	0.69	43	43	43	47	51	0.72
Medium	48.53	7.18	0.87	43	43	47	51	59	0.77
Low	48.00	7.18	1.27	43	43	43	51	58	0.72

Table B6

TRS-C Clinical Scale: Depression

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	46.99	8.76	0.79	41	41	43	51	59	0.72
High	43.30	4.31	0.90	41	41	43	43	47	0.55
Medium	47.81	8.98	1.09	41	41	43	54	61	0.77
Low	47.91	10.09	1.78	41	41	46	50	68	0.71

Table B7

TRS-C Clinical Scale: Hyperactivity

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	47.31	9.31	0.84	38	40	44	53	60	0.89
High	44.78	7.27	1.52	37	38	42	52	56	0.87
Medium	48.41	10.18	1.23	38	40	46	54	65	0.89
Low	46.78	8.47	1.50	38	41	44	53	60	0.87

Table B8

TRS-C Clinical Scale: Somatization

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	49.46	10.33	0.93	42	42	46	55	64	0.75
High	49.74	9.34	1.95	42	42	46	59	64	0.78
Medium	47.93	8.82	1.07	42	42	44	51	60	0.72
Low	52.50	13.25	2.34	42	42	46	55	78	0.78

Table B9

TRS-C Clinical Scale: Withdrawal

				Percentile Distribution					
Group	M	SD	Sm	10th	25th	50th	75th	90th	Shapiro-Wilk Statistic
Total	49.42	11.89	1.07	39	42	45	51	64	0.77
High	45.78	5.29	1.10	39	42	45	48	55	0.90
Medium	50.02	13.03	1.58	39	42	45	54	67	0.76
Low	50.78	12.55	2.22	39	42	45	60	70	0.79

Table B10

TRS-C Adaptive Scale: Adaptability

				Percentile Distribution					
Group	M	SD	Sm	10th	25th	50th	75th	90th	Shapiro-Wilk Statistic
Total	51.41	9.89	0.89	38	46	51	59	64	0.97
High	53.87	7.46	1.56	42	49	54	60	65	0.95
Medium	50.25	10.63	1.29	35	43	51	57	65	0.97
Low	52.13	9.64	1.70	36	47	54	59	63	0.94

Table B11

TRS-C Adaptive Scale: Leadership

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	51.22	11.37	1.03	37	42	50	59	68	0.97
High	52.04	11.98	2.50	37	42	53	59	71	0.96
Medium	50.78	11.29	1.37	39	42	48	61	68	0.97
Low	51.56	11.42	2.02	38	43	50	60	68	0.97

Table B12

TRS-C Adaptive Scale: Social Skills

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	50.97	10.97	0.99	38	44	50	60	67	0.99
High	53.52	10.91	2.28	40	44	50	64	70	0.96
Medium	50.09	11.41	1.38	36	42	50	57	67	0.98
Low	51.00	10.06	1.78	38	46	51	56	64	0.98

Table B13

TRS-C Composite Scale: Adaptive Skills

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	51.26	10.89	0.98	38	43	50	59	67	0.98
High	53.17	10.31	2.15	39	44	53	64	67	0.95
Medium	50.38	11.26	1.37	36	42	50	57	68	0.98
Low	51.75	10.60	1.87	38	44	53	60	68	0.98

Table B14

TRS-C Composite Scale: Behavioral Symptoms Index

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	46.89	8.41	0.76	38	40	45	51	60	0.89
High	43.78	5.23	1.09	39	40	42	46	52	0.86
Medium	47.56	8.96	1.09	38	40	45	55	61	0.90
Low	47.69	8.73	1.54	38	41	46	53	65	0.90

Table B15

TRS-C Composite Scale: Externalizing Problems

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	47.32	7.32	0.66	40	41	45	52	59	0.85
High	44.61	4.47	0.93	40	41	44	46	50	0.80
Medium	48.32	7.78	0.94	40	42	46	55	59	0.88
Low	47.13	7.64	1.35	40	41	45	50	60	0.82

Table B16

TRS-C Composite Scale: Internalizing Problems

Group	M	SD	Sm	Percentile Distribution					Shapiro-Wilk Statistic
				10th	25th	50th	75th	90th	
Total	47.63	8.97	0.81	39	40	45	53	62	0.87
High	45.83	7.13	1.49	39	40	42	51	56	0.85
Medium	47.29	8.32	1.01	39	39	45	53	62	0.87
Low	49.66	11.12	1.97	39	41	49	53	70	0.83

APPENDIX C

TWO-WAY REPEATED MEASURES ANOVA MEANS TABLES UNDERLYING LINE GRAPHS OF INTERACTION RELATIONSHIPS OF MEXICAN AMERICAN SAMPLE'S *PRS-C* AND *TRS-C*

Table C1

Means Table for *PRS-C* and *TRS-C* Aggression Scale

Term	Count	Mean	Standard Error
All	246	46.848	
A: AccLvl			
1	46	45.826	1.348
2	136	48.154	0.784
3	64	46.563	1.143
B: Teach_Parent			
parent	123	47.130	0.824
teach	123	46.565	0.824
AB: AccLvl,Teach_Parent			
1,parent	23	47.130	1.907
1,teach	23	44.522	1.907
2,parent	68	48.074	1.109
2,teach	68	48.235	1.109
3,parent	32	46.188	1.616
3,teach	32	46.938	1.616

Table C2

Means Table for *PRS-C* and *TRS-C* Anxiety Scale

Term	Count	Mean	Standard Error
All	246	49.832	
A: AccLvl			
1	46	50.935	1.532
2	136	49.500	0.891
3	64	49.063	1.298
B: Teach_Parent			
parent	123	51.815	0.937
teach	123	47.850	0.937
AB: AccLvl,Teach_Parent			
1,parent	23	55.043	2.166
1,teach	23	46.826	2.166
2,parent	68	51.338	1.260
2,teach	68	47.662	1.260
3,parent	32	49.063	1.836
3,teach	32	49.063	1.836

Table C3

Means Table for *PRS-C* and *TRS-C* Attention Problems Scale

Term	Count	Mean	Standard Error
All	246	48.251	
A: AccLvl			
1	46	46.261	1.511
2	136	49.243	0.879
3	64	49.250	1.281
B: Teach_Parent			
parent	123	49.624	0.924
teach	123	46.878	0.924
AB: AccLvl,Teach_Parent			
1,parent	23	47.391	2.137
1,teach	23	45.130	2.137
2,parent	68	51.294	1.243
2,teach	68	47.191	1.243
3,parent	32	50.188	1.812
3,teach	32	48.313	1.812

Table C4

Means Table for *PRS-C* and *TRS-C* Atypicality Scale

Term		Count	Mean	Standard Error
All		246	49.083	
A: AccLvl				
	1	46	48.457	1.502
	2	136	49.199	0.874
	3	64	-1.273	1.281
B: Teach_Parent				
parent		123	49.896	0.919
teach		123	48.270	0.919
AB: AccLvl,Teach_Parent				
1,parent		23	50.913	2.124
1,teach		23	46.000	2.124
2,parent		68	49.338	1.235
2,teach		68	49.059	1.235
3,parent		32	49.438	1.801
3,teach		32	49.750	1.801

Table C5

Means Table for *PRS-C* and *TRS-C* Conduct Problems Scale

Term	Count	Mean	Standard Error
All	246	49.340	
A: AccLvl			
1	46	48.413	1.341
2	136	50.559	0.780
3	64	49.047	1.137
B: Teach_Parent			
parent	123	51.300	0.820
teach	123	47.379	0.820
AB: AccLvl,Teach_Parent			
1,parent	23	51.217	1.897
1,teach	23	45.609	1.897
2,parent	68	52.588	1.103
2,teach	68	48.529	1.103
3,parent	32	50.094	1.608
3,teach	32	48.000	1.608

Table C6
Means Table for *PRS-C* and *TRS-C* Depression Scale

Term	Count	Mean	Standard Error
All	246	46.600	
A: AccLvl			
1	46	45.543	1.326
2	136	47.787	0.771
3	64	46.469	1.124
B: Teach_Parent			
parent	123	46.860	0.811
teach	123	46.340	0.811
AB: AccLvl,Teach_Parent			
1,parent	23	47.783	1.875
1,teach	23	43.304	1.875
2,parent	68	47.765	1.090
2,teach	68	47.809	1.090
3,parent	32	45.031	1.590
3,teach	32	47.906	1.590

Table C7

Means Table for *PRS-C* and *TRS-C* Hyperactivity Scale

Term	Count	Mean	Standard Error
All	246	47.817	
A: AccLvl			
1	46	45.543	1.542
2	136	49.015	0.897
3	64	46.906	1.307
B: Teach_Parent			
parent	123	48.325	0.943
teach	123	47.309	0.943
AB: AccLvl,Teach_Parent			
1,parent	23	46.304	2.180
1,teach	23	44.783	2.180
2,parent	68	49.618	1.268
2,teach	68	48.412	1.268
3,parent	32	47.031	1.848
3,teach	32	46.781	1.848

Table C8
Means Table for *PRS-C* and *TRS-C* Somatization Scale

Term	Count	Mean	Standard Error
All	246	50.841	
A: AccLvl			
1	46	51.913	1.947
2	136	49.221	1.132
3	64	51.391	1.651
B: Teach_Parent			
parent	123	51.628	1.191
teach	123	50.055	1.191
AB: AccLvl,Teach_Parent			
1,parent	23	54.087	2.753
1,teach	23	49.739	2.753
2,parent	68	50.515	1.601
2,teach	68	47.926	1.601
3,parent	32	50.281	2.334
3,teach	32	52.500	2.334

Table C9

Means Table for *PRS-C* and *TRS-C* Withdrawal Scale

Term	Count	Mean	Standard Error
All	246	50.539	
A: AccLvl			
1	46	48.891	1.699
2	136	51.397	0.988
3	64	51.328	1.441
B: Teach_Parent			
parent	123	52.218	1.039
teach	123	48.860	1.039
AB: AccLvl,Teach_Parent			
1,parent	23	52.000	2.403
1,teach	23	45.783	2.403
2,parent	68	52.779	1.398
2,teach	68	50.015	1.398
3,parent	32	51.875	2.037
3,teach	32	50.781	2.037

Table C10

Means Table for *PRS-C* and *TRS-C* Adaptability Scale

Term	Count	Mean	Standard Error
All	246	50.081	
A: AccLvl			
1	46	51.609	1.479
2	136	47.338	0.860
3	64	51.297	1.254
B: Teach_Parent			
parent	123	48.081	0.905
teach	123	52.082	0.905
AB: AccLvl,Teach_Parent			
1,parent	23	49.348	2.092
1,teach	23	53.870	2.092
2,parent	68	44.426	1.217
2,teach	68	50.250	1.217
3,parent	32	50.469	1.773
3,teach	32	52.125	1.773

Table D11

Means Table for *PRS-C* and *TRS-C* Leadership

Term	Count	Mean	Standard Error
All	246	50.218	
A: AccLvl			
1	46	51.891	1.693
2	136	48.794	0.985
3	64	49.969	1.436
B: Teach_Parent			
parent	123	48.974	1.036
teach	123	51.462	1.036
AB: AccLvl,Teach_Parent			
1,parent	23	51.739	2.395
1,teach	23	52.043	2.395
2,parent	68	46.809	1.393
2,teach	68	50.779	1.393
3,parent	32	48.375	2.030
3,teach	32	51.563	2.030

Table C12

Means Table for *PRS-C* and *TRS-C* Social Skills

Term	Count	Mean	Standard Error
All	246	50.703	
A: AccLvl			
1	46	53.609	1.705
2	136	48.735	0.992
3	64	49.766	1.445
B: Teach_Parent			
parent	123	49.870	1.043
teach	123	51.537	1.043
AB: AccLvl,Teach_Parent			
1,parent	23	53.696	2.411
1,teach	23	53.522	2.411
2,parent	68	47.382	1.402
2,teach	68	50.088	1.402
3,parent	32	48.531	2.044
3,teach	32	51.000	2.044

Table C13

Means Table for *PRS-C* and *TRS-C* Adaptive Skills

Term	Count	Mean	Standard Error
All	246	50.261	
A: AccLvl			
1	46	52.522	1.619
2	136	48.059	0.942
3	64	50.203	1.373
B: Teach_Parent			
parent	123	48.754	0.990
teach	123	51.769	0.990
AB: AccLvl,Teach_Parent			
1,parent	23	51.870	2.290
1,teach	23	53.174	2.290
2,parent	68	45.735	1.332
2,teach	68	50.382	1.332
3,parent	32	48.656	1.941
3,teach	32	51.750	1.941

Table C14

Means Table for *PRS-C* and *TRS-C* Behavioral Symptom Index

Term	Count	Mean	Standard Error
All	246	47.313	
A: AccLvl			
1	46	46.217	1.481
2	136	48.471	0.861
3	64	47.250	1.255
B: Teach_Parent			
parent	123	48.282	0.905
teach	123	46.343	0.905
AB: AccLvl,Teach_Parent			
1,parent	23	48.652	2.094
1,teach	23	43.783	2.094
2,parent	68	49.382	1.218
2,teach	68	47.559	1.218
3,parent	32	46.813	1.775
3,teach	32	47.688	1.775

Table C15

Means Table for *PRS-C* and *TRS-C* Externalizing Scale

Term	Count	Mean	Standard Error
All	246	47.631	
A: AccLvl			
1	46	46.261	1.396
2	136	49.243	0.812
3	64	47.391	1.184
B: Teach_Parent			
parent	123	48.577	0.854
teach	123	46.686	0.854
AB: AccLvl,Teach_Parent			
1,parent	23	47.913	1.975
1,teach	23	44.609	1.975
2,parent	68	50.162	1.148
2,teach	68	48.324	1.148
3,parent	32	47.656	1.674
3,teach	32	47.125	1.674

Table C16

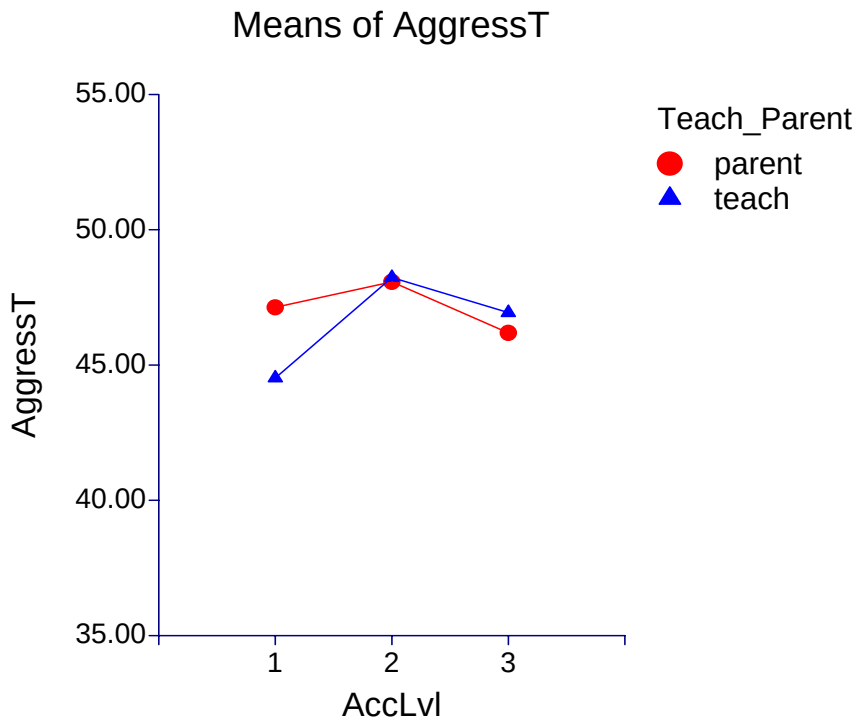
Means Table for *PRS-C* and *TRS-C* Internalizing Scale

Term	Count	Mean	Standard Error
All	246	48.837	
A: AccLvl			
1	46	49.478	1.616
2	136	48.500	0.940
3	64	48.531	1.370
B: Teach_Parent			
parent	123	50.081	0.988
teach	123	47.592	0.988
AB: AccLvl,Teach_Parent			
1,parent	23	53.130	2.285
1,teach	23	45.826	2.285
2,parent	68	49.706	1.329
2,teach	68	47.294	1.329
3,parent	32	47.406	1.937
3,teach	32	49.656	1.937

APPENDIX D

LINE GRAPHS OF INTERACTION RELATIONSHIPS FOR PARENT RATING SCALE-C AND TEACHER RATING SCALE-C USING A MEXICAN AMERICAN SAMPLE

Figure D1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AggressT
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AccLvl
Teach_Parent
parent
teach

Figure D2

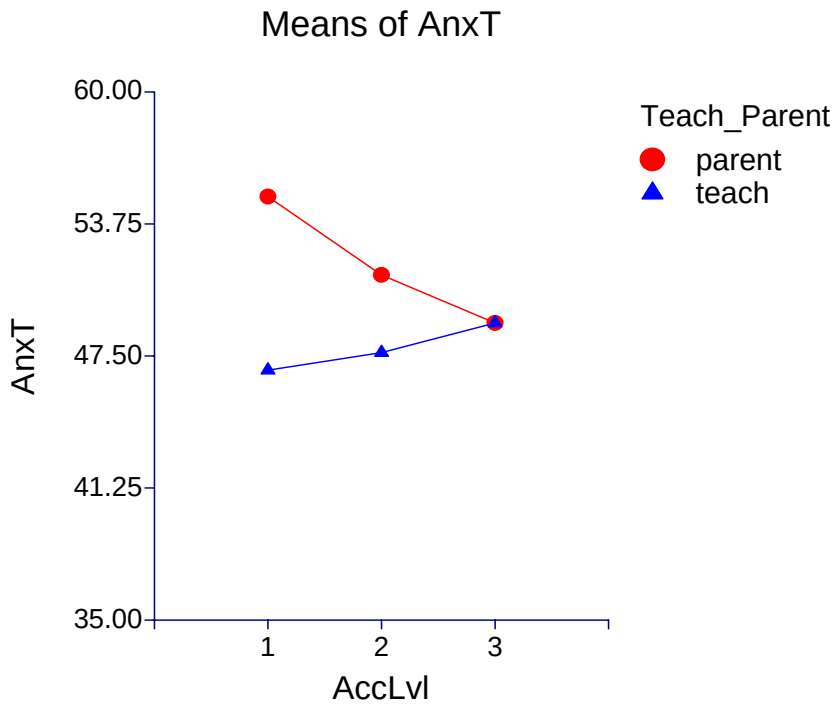


Figure D3

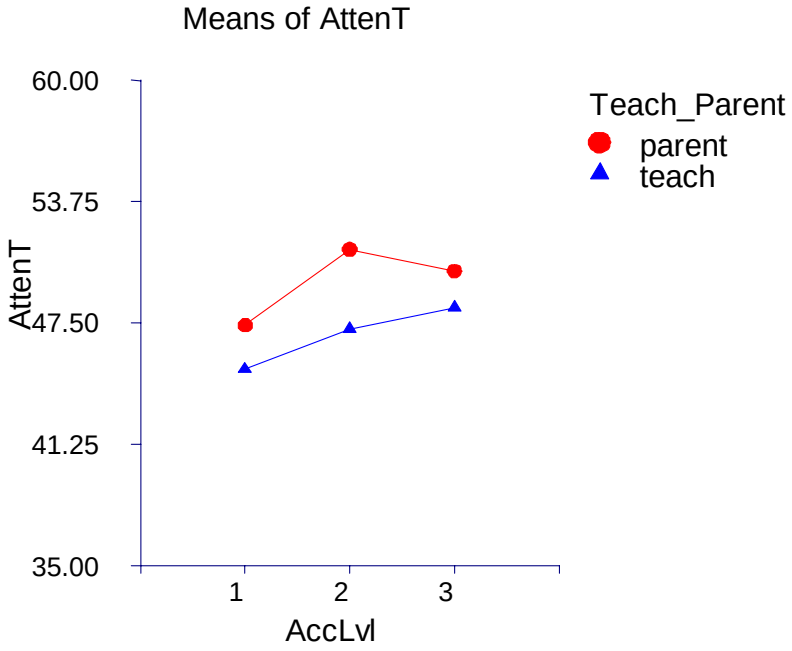


Figure D4

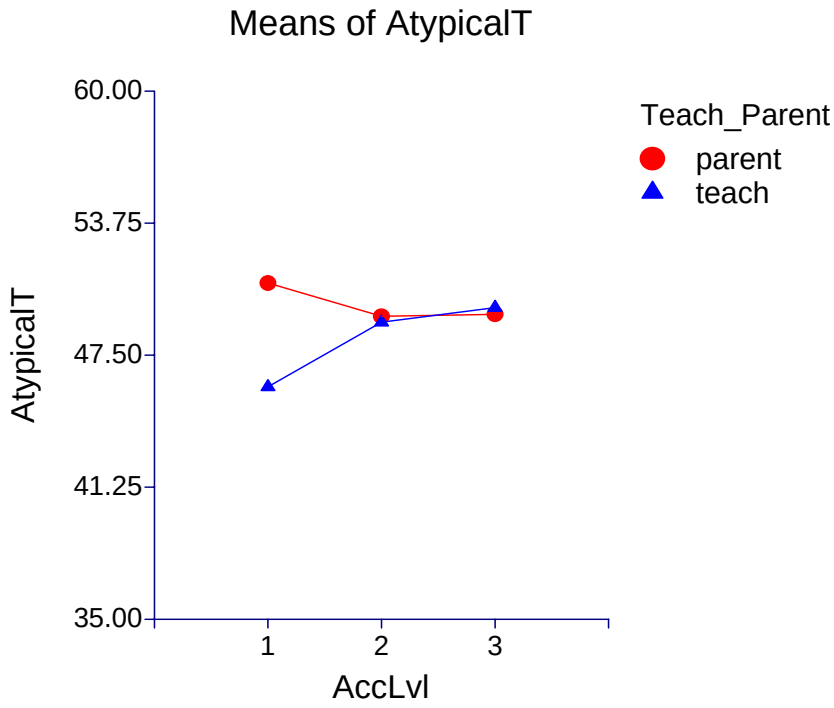


Figure D5

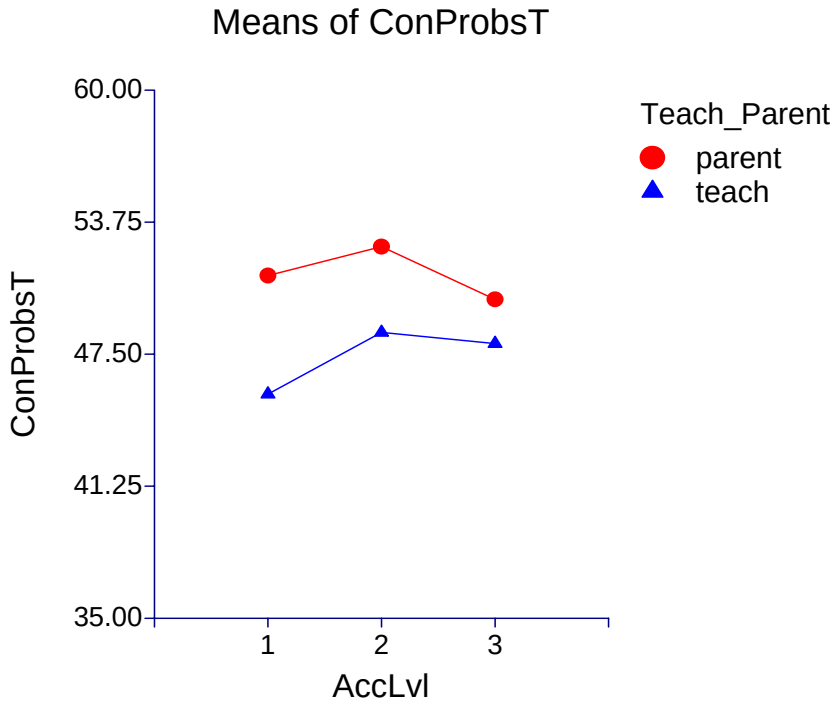


Figure D6

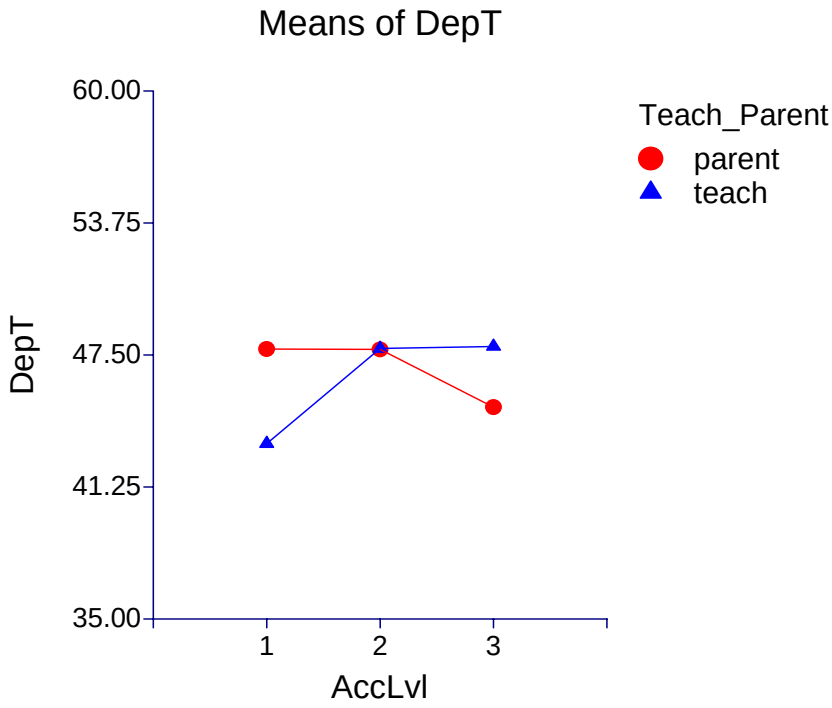


Figure D7

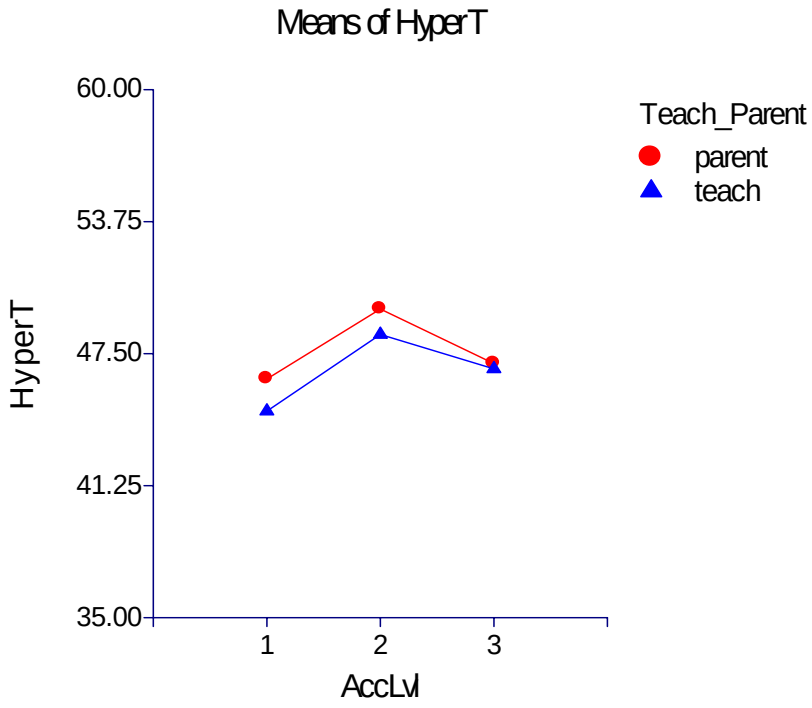


Figure D8

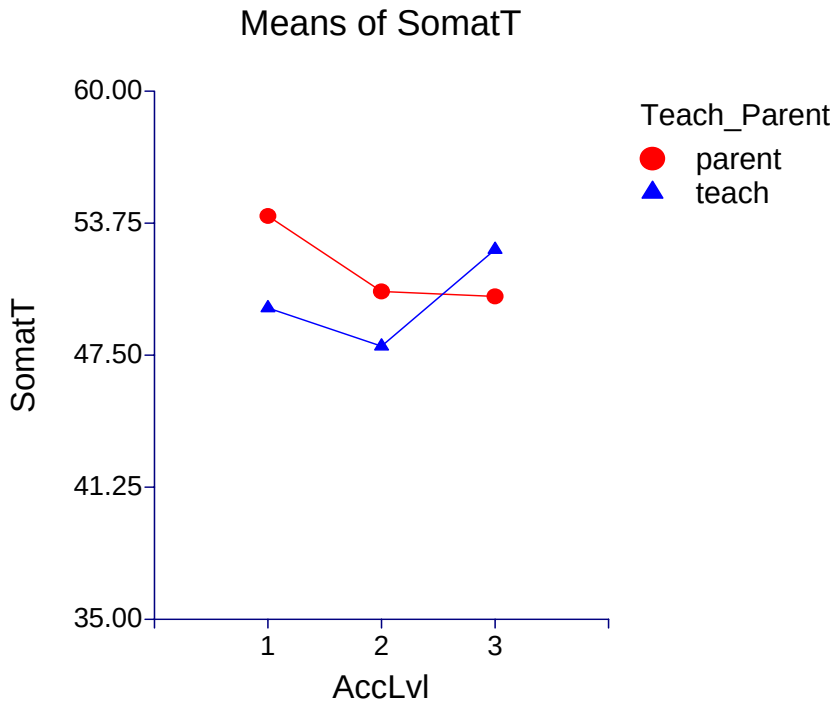


Figure D9

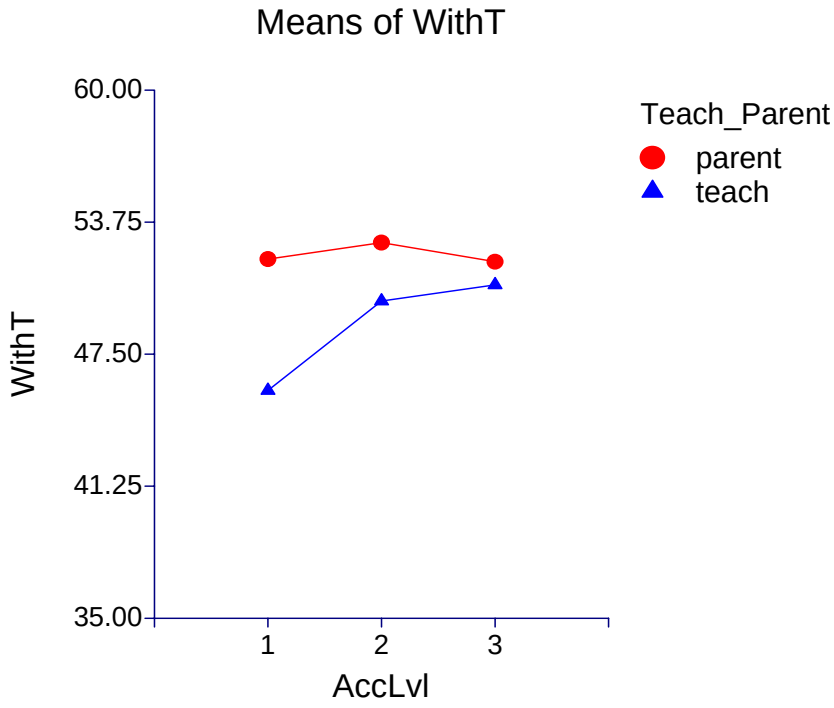


Figure D10

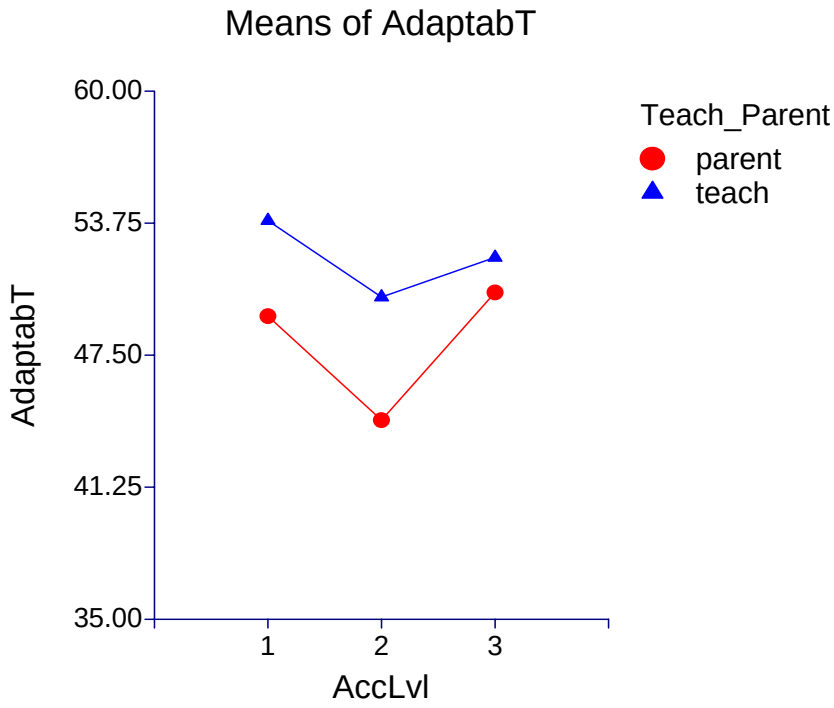


Figure D11

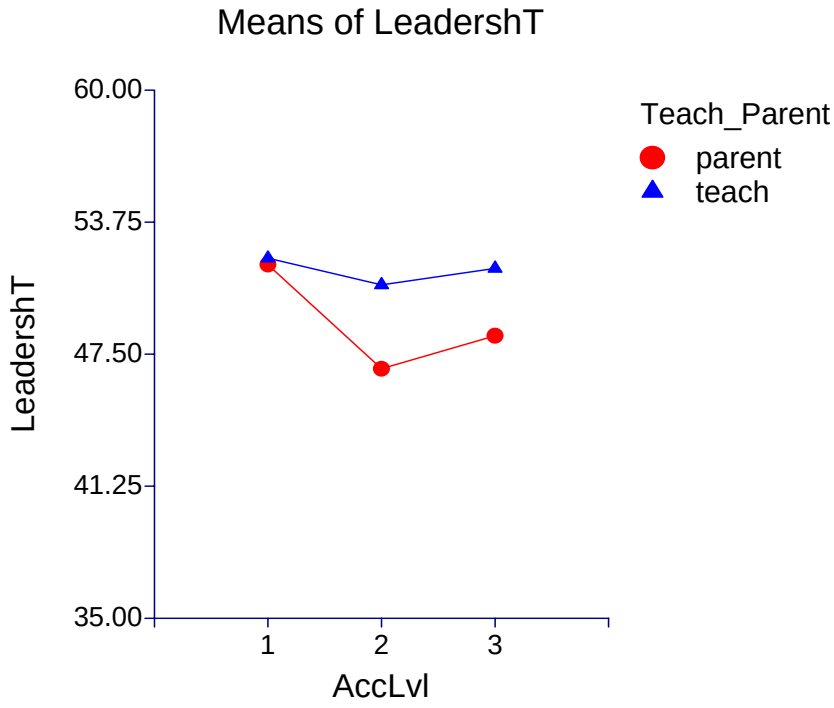


Figure D12

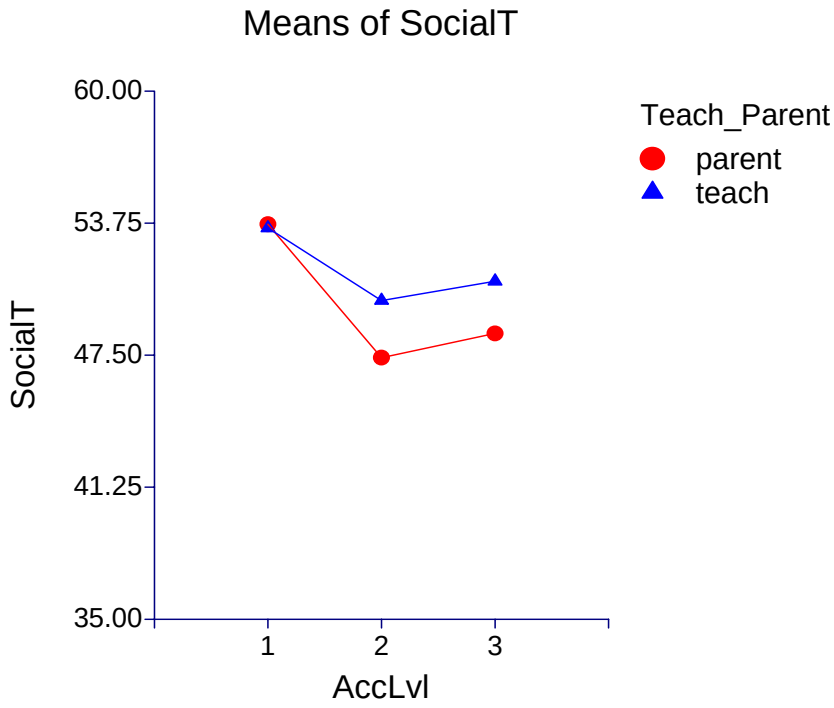


Figure D13

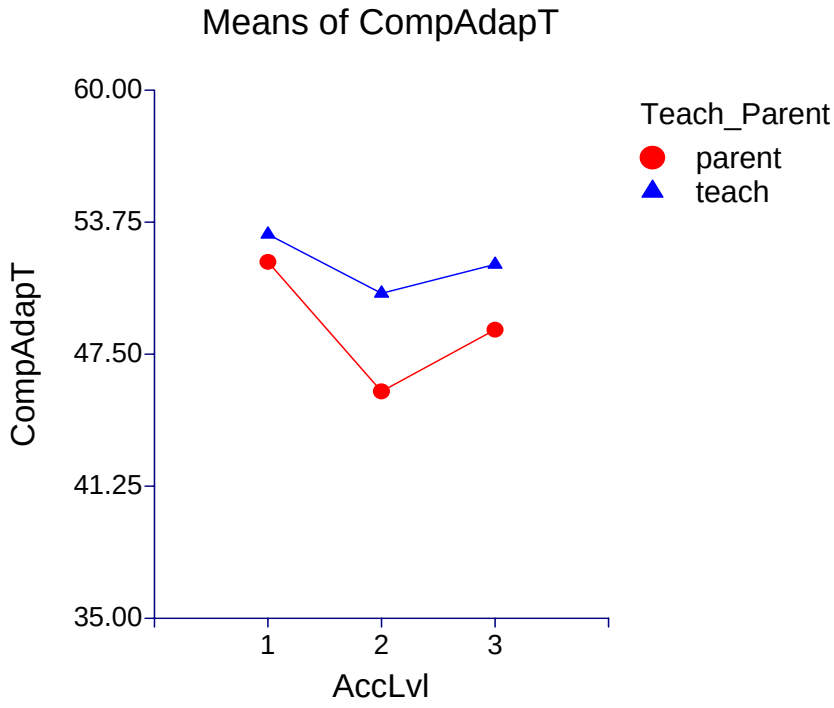


Figure D14

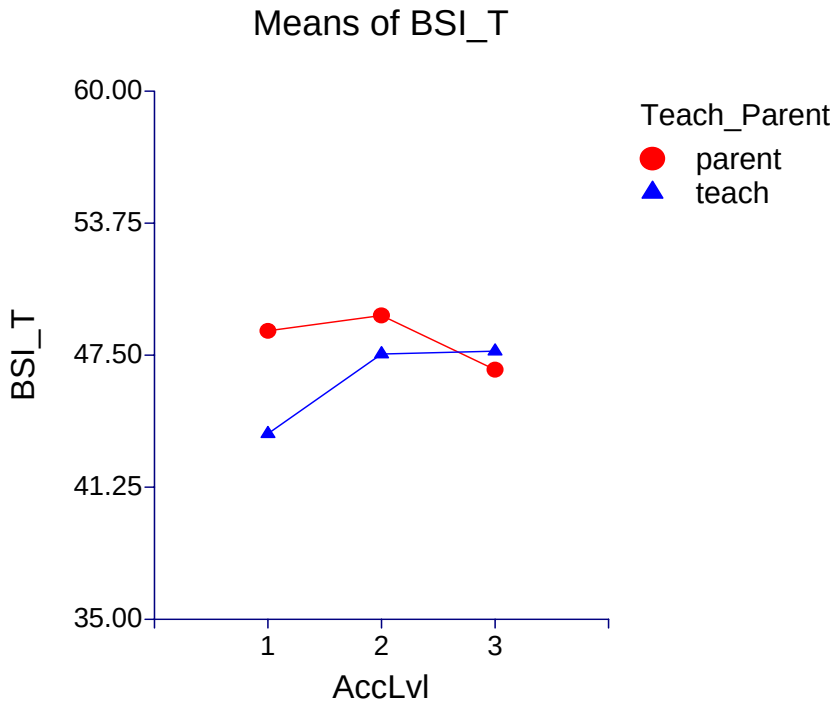


Figure D15

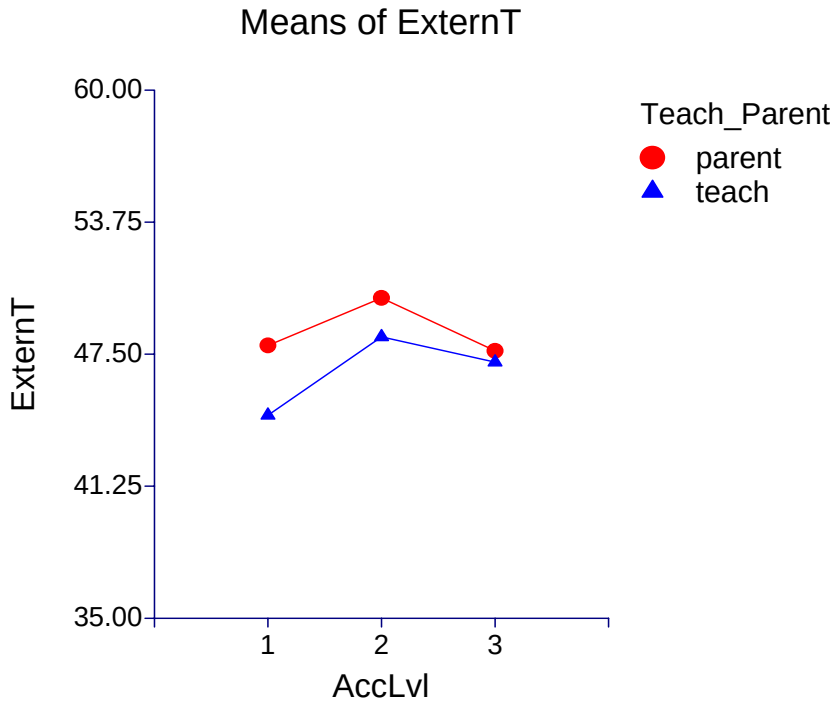
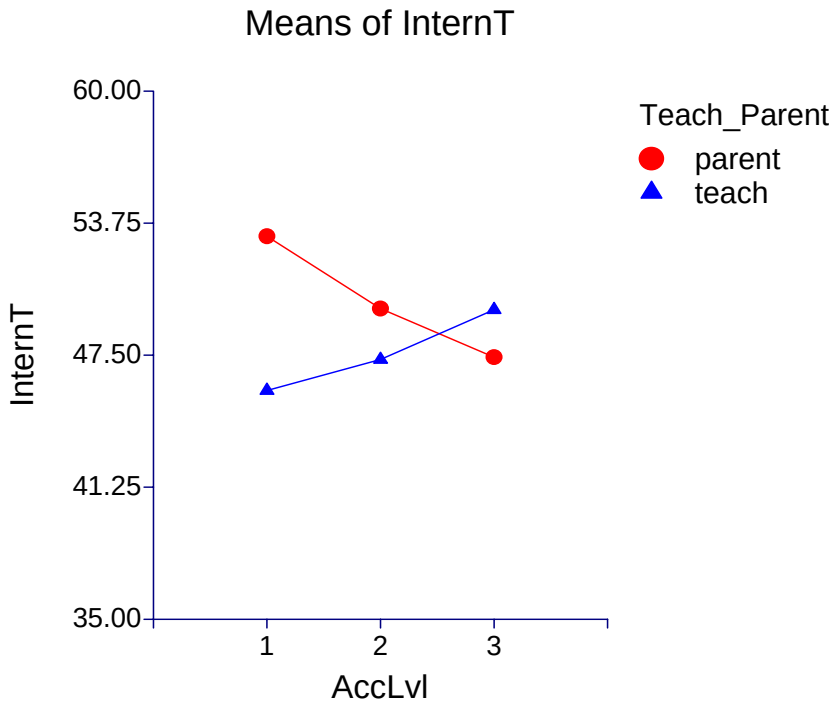


Figure D16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VITA

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Hernandez, M.E. & Turk, K. (1993, April). *Preparation for Adult Living Skills*. Symposium conducted at the meeting of the National Association of School Psychologists, Washington, D.C.1993.

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