

Gender differences in Hispanic children evaluated with the TEMAS and BASC tests¹

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Abstract

The purpose of this study was to examine gender differences in adaptive vs. maladaptive social problem skills as assessed by the TEMAS (Tell-Me-A-Story) personality/narrative test. Samples included Hispanic girls and boys between the ages of 9-11, attending public schools in Puerto Rico or in New York. Results on the TEMAS were compared to another personality test, the Behavior Assessment System for Children - Self Report of Personality (BASC-SRP). Comparisons used one-way analysis of variance (ANOVA) in order to determine significant gender differences between the sites of PR and NY. For students sampled in Puerto Rico results showed significant

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gender differences in the TEMAS scale of Achievement Motivation, Reality Testing and Verbal Fluency. However, no significant gender differences were found in the New York sample. With the BASC gender differences were found in the clinical scale of Anxiety in the Puerto Rican sample, while no significant differences were found in the New York sample. Girls in PR showed a relative strength in several skills, whereas no such gender differences were noted in NY.

Keywords: *TEMAS test, BASC, Hispanic children, gender differences, multicultural assessment.*

Resumen

El propósito de este estudio era examinar las diferencias de género en términos de las destrezas sociales de resolver problemas de forma adaptativa o maladaptativa. Las destrezas fueron evaluadas con la prueba proyectiva/narrativa TEMAS (Tell-Me-A-Story) a niños y niñas hispanos entre las edades de 9-11 que asistían a escuelas públicas en Puerto Rico y Nueva York. Los resultados del TEMAS fueron comparados con otra prueba de personalidad, el Behavior Assessment System for Children - Self Report of Personality (BASC-SRP). Las comparaciones utilizaron la prueba ANOVA para determinar si existían diferencias significativas entre los niños y las niñas que vivían en PR o en NY. Los estudiantes muestreados en Puerto Rico mostraron diferencias significativas de género en las escalas del TEMAS en Motivación de logro, Cotejo de la realidad y Fluidez verbal. Sin embargo, no se encontraron diferencias significativas por género en la muestra de Nueva York. Diferencias significativas por género fueron encontradas en la escala clínica de ansiedad del BASC en la muestra de Puerto Rico, pero no en la muestra de Nueva York. Las niñas en PR muestran una fortaleza relativa en los aspectos medidos de destrezas de resolución de problemas, pero ese no es el caso en Nueva York.

Palabras claves: *Prueba TEMAS, BASC, niños hispanos, diferencias de género, evaluación multicultural*

Gender Differences in Hispanic Children Evaluated with the TEMAS and BASC Tests

The large disparities in mental health care that Hispanic youth face dictate the need for evidence-based, culturally competent assessment techniques. Despite this need there are few personality

tests validated for the Hispanic population. One personality test is the TEMAS (Tell-Me-A-Story), a multicultural instrument available for Hispanic children (Costantino, 1987; Costantino, Dana, & Malgady, 2007; Costantino, Malgady, & Rogler, 1988). Another personality test available for Hispanic children is the BASC (Behavior Assessment System for Children); (Reynolds & Kamphaus, 1998). The TEMAS measures adaptive and maladaptive social problem solving skills in different settings, and the BASC measures personal adjustment and clinical and school maladjustment in different scenarios. Both are personality tests, one is a narrative/projective measure that can be administered in a individual or group format, and the other, an inventory that can be reported by self or others (parents or teachers). These tests can function as complementary measures since both address adjustment and maladjustment issues in children (Flanagan, 1995). Both instruments allow an assessment of personality strengths and weaknesses which are useful in the evaluation of resiliency in at-risk students.

The TEMAS test has been standardized with Hispanic children in New York City, with Hispanic children in Puerto Rico, and with Argentinean children in Buenos Aires (Costantino, Malgady, Casullo, & Castillo, 1991). As a multicultural instrument, the TEMAS has the support of extensive empirical studies in the US comparing the minority and non-minority versions of the test with samples of children from Hispanic, White and Black backgrounds (Costantino & Malgady, 1983; Costantino, Malgady, Colón-Malgady, & Bailey, 1992; Costantino, Malgady, Rogler, & Tsui, 1988; Costantino, Malgady, & Vázquez, 1981; Krinsky, Costantino, & Malgady, 1999; Malgady, Costantino, & Rogler, 1984). Cross cultural studies have been performed with Puerto Rican, Argentinean, Mexican-American, Salvadorian, Peruvian, Chinese, and Italian children (Bernal, 1991; Cardala, Costantino, Ortiz-Vargas, León-Velázquez, & Jiménez-Suárez, 2007; Cornabuci, 2000; Costantino, & Malgady, 2000; Costantino, Malgady, Casullo, & Castillo, 1991; Costantino, Malgady & Faiola, 1997; Dupertuis, Silva Arancibia, Pais, Fernández, & Rodino, 2001; Fantini, Aschieri, Bevilacqua, & Augello, 2007; Millán-Arzuaga, 1990; Sardi, Summo, Cornabuci, & Sulfaro, 2001; Sulfaro, 2000; Summo, 2000; Walton, Nuttall, & Vazquez-Nuttall, 1997; Yang, Kuo, & Costantino, 2003). Furthermore, other studies have established the validity (Costantino, Malgady, Colón-Malgady, & Bailey, 1992;

Costantino, Malgady, & Rogler, 1988; Costantino, Malgady, Rogler, & Tsui, 1988) and clinical utility (Cardalda, Costantino, Sayers, Machado, & Guzmán, 2002; Cardalda, Figueroa, Hernández, Rodríguez, Martínez, Costantino, Suárez, & León, 2008; Costantino, Rand, Malgady, Maron, Borges-Costantino, & Rodríguez, 1994; Malgady, Costantino, & Rogler, 1984) of the TEMAS test.

Gender differences have been reported before in studies using the TEMAS, with girls showing higher verbal fluency in the production of stories than boys (Costantino & Malgady, 1983; Costantino, Malgady, & Vázquez, 1981). This finding is significant in light of the fact that verbal productivity as measured by the TEMAS has been correlated with school functioning in Hispanic students living in Puerto Rico and in New York (Cardalda, 1995; Cardalda, Costantino, Ortiz-Vargas, León-Velázquez, & Jiménez-Suárez, 2007). In the referred studies with Hispanic samples from Puerto Rico and New York, Achievement motivation as measured by the TEMAS was significantly correlated to school functioning criteria. Moreover, samples of children in Puerto Rico have showed that scales from the BASC instrument correlated significantly with school grades (Cardalda, Costantino, Martínez, León-Velázquez, Jiménez-Suárez, & Ortiz-Vargas, 2011).

Another gender difference reported is that girls tend to obtain higher school grades than boys (Cardalda, Costantino, Jiménez-Suárez, León-Velázquez, Martínez, & Ortiz-Vargas, 2011). This is consistent with a pattern reported by the Department of Education in Puerto Rico, with girls showing better academic progress than boys (Sanjurjo Meléndez, 2006). Recent educational trends in Puerto Rico and in the US show Hispanic women in higher education earning substantially more bachelor's degrees than Hispanic men (Cámara Fuertes, n.d.; Rios Orlandi, 2005; The Condition of Education, 1995). Latina girls attending school in the US obtain better grades and drop out less than boys (Ginorio & Huston, 2001). Then, it is plausible that certain skills measured by the TEMAS and the BASC can help us understand what protective factors may help girls succeed in school.

The Behavior Assessment System for Children (BASC) is a multimethod, multidimensional approach for evaluating the behavior and self-perceptions of children aged 2 to 18, across both maladaptive and adaptive behavior (Reynolds & Kamphaus, 1998). The BASC has five main components- including the Structured Developmental

History, Parent Rating Scale, Teacher Rating Scale, Self Report of Personality, and Student Observation System. The standardization study of the BASC included Hispanics in the US and demonstrated adequate internal consistency, test–retest reliability and validity (Reynolds & Kamphaus, 1998). The BASC has Spanish and English versions, using multiple informers in different scenarios. With the BASC self report version, children describe their emotions and self-perceptions. The BASC self report test is an omnibus personality inventory, consisting of statements that are responded to as True or False.

The BASC is a test used as a guide for clinicians to evaluate the difficulties and day-by day problems confronted by children and adolescents. The BASC represents one of the most widely used behavioral self-report measures of mental disorders symptomatology in the field (Flanagan, 1995; Sandoval & Echandia, 1994). A review by Gladman and Lancaster (2003). reported that the BASC test is a comprehensive and psychometrically sound assessment tool with much to offer psychologists that work with children and adolescents. This test lends support in making differential diagnoses according to the Diagnostic and Statistical Manual of Mental Disorders Third Edition, Revised (DSM-III-R) and problem areas covered by the Individuals with Disabilities Education Act (Flanagan, 1995; Merenda, 1996).

There is a lack of studies using the BASC- Self- Report because most of the research conducted has used the Teacher Report Form or Parent Report Form. Also, there is a limited range of studies using the BASC for Hispanic samples with the Spanish version (e.g., Dulin, 2001; Frontera-Benvenuti, 1992; McCloskey, Hess, & D’Amato, 2003; Serrano, 1996; Sines, 2003). Other studies have made use of the BASC among minority groups, such as Korean American (Jung, 2001), Chinese American (Zhou, Peverly, Xin, Huang, & Wang, 2003); African American (Serrano, 1996), and Haitian children (Ramsay, 1997).

Gender differences have been indicated in some scales of the BASC (Reynolds & Kamphaus, 1998). Using the normed sample, results have showed gender differences, with boys showing higher scores in the scales of attention problems, attitude to school, attitude to teacher, atypicality, locus of control, self esteem and sensation seeking. Girls showed to have higher scores in the scales of anxiety, depression, interpersonal relations, relations with parents, sense of inadequacy and

somatization. Consistent with the normative sample study, an investigation including Korean, Korean-American and Caucasian American children, found gender differences with the BASC, with boys rated and reported to be more externalizing than girls, and girls more leadership and social skills than boys (Jung, 2001). This tendency of males displaying more externalizing problems than females was also found also by Czarnecki (1996) and Stanton (1995).

In general, other gender differences have been noted in the literature. Boys and girls exhibit different approaches to handling conflicts within peer groups, which generally includes others of the same gender. Boys are more able to engage in direct confrontations and to discuss rules and issues of fairness in peer conflicts, where as girls use less direct conflict resolution strategies with their female peers (Beal, 1994; Langdale, 1993). Barnett (1986) found that male and female characters in children's storybooks were depicted as showing different styles of helping with problems, with female characters being more likely to help with an expressive style (e.g. comforting, consoling, providing emotional support) whereas male characters were more likely to provide instrumental help (e.g. actions designed to obtain a goal or overcome an obstacle).

Research objectives and questions

Since gender differences have been found with both the TEMAS and BASC instruments, therefore, this study attempted to explore these differences further with the TEMAS and BASC, with the additional dimension of comparing two different sites in Puerto Rico and in New York. Gender differences were examined in social problem solving skills as measured by the TEMAS, and these scale scores were then compared with levels of adjustment or maladjustment presented with the BASC. Scale scores of the TEMAS and BASC were analyzed by scale scores, and tested for sex differences by sites, in Puerto Rico and in New York City. Finally, scale scores were re-ordered according to categories consistent with a scoring system of no risk and at risk status. Both TEMAS and BASC findings are expressed in T-scores. TEMAS scale scores were categorized as no risk (t- scores from 40 on) and at risk (t- scores below 40). Clinical scales of the BASC test measure maladjustment and high scores on these scales indicate negative or impaired functioning in social relationships. T-scores of 59 or less are considered no risk, 60 to 69 are considered at-risk, and of 70 or higher

are considered clinically significant.

In this study several research questions were posed while comparing Hispanic children of Puerto Rico and New York in terms of gender differences:

1. Do girls and boys show significant differences in their social problem skills as measured by the TEMAS scales?
2. Do scale scores of TEMAS show significant gender differences by site (PR vs. NY)?
3. Do girls and boys show significant differences in their risk levels for functions measured by the TEMAS and BASC?

Method

Participants

In Puerto Rico the sample selected for this study were 110 Hispanic students (45 boys and 65 girls, ages 9 to 11 ($M=10.34$, $SD=1.41$); and in New York City 105 Hispanic students (girls = 60 and boys = 45), ages 9 to 11 ($M=10.26$, $SD=.46$). Participating schools in Puerto Rico were selected from a list of active public schools from the local Department of Education. These included four schools located in the metropolitan San Juan area in Puerto Rico. Appropriate permission from the Central Board of the Department of Education and from the Institutional Review Board for protection of human subjects was obtained prior to data collection. Schools were sampled sequentially, that is, only one at a time to facilitate the logistics of the study and decrease any potential disruptions to school schedules. Recruitment procedures in New York were limited to two public schools in Brooklyn, New York City, where the Lutheran Medical Center Sunset Park Mental Health Center managed a School-based Mental Health Program. Due to restrictions of the agency, children could not be queried as per their specific ethnicity; thus, this variable could not be controlled, although Census analyses suggest that the areas sampled include a majority of low-income Puerto Ricans.

Instruments

The TEMAS instrument has a well-researched and standardized scoring system that includes norms for Puerto Rican children (ages 5-13), both in Puerto Rico and New York. The TEMAS is composed of chromatic pictures that present conflict situations. Examinees are motivated to develop a narrative about the psychological conflict represented in the pictures that portray antithetical situations (e.g., complying with a parental request vs. continuing playing with peers; helping an elderly person carry groceries vs. harassing an elderly person). Both the content (what is told) and the structure (how the story is told) of the stories are scored.

TEMAS pictures are depicted in full colors in order to faithfully depict the settings and themes and to motivate children's attention (Costantino, 1987). TEMAS characters are depicted interacting in settings, such as: school, street, and home. There are two parallel sets of pictures for TEMAS: one for minorities and one for non-minorities. Also, there are two standard versions of the TEMAS: a long version of 23 chromatic pictures, and a short version of nine pictures.

The TEMAS short version (reported herein) takes approximately an hour to complete. The instrument is administered according to standardized instructions and structured inquiries. There are two systems for administering the TEMAS, one is the individual/oral format and another is the group/written format reported herein. This study used the group format, where children watch TEMAS pictures projected on a screen and write down a narrative on a pre-structured writing form with standardized questions.

In order to assess social problem skills, the TEMAS is comprised of nine personality functions, 18 cognitive functions and seven affective functions. The TEMAS personality scales of interest used in this study were: Interpersonal Relations, Control of Aggression, Control of Anxiety/Depression, Achievement Motivation, Delay of Gratification, Self-concept of Competence, Sexual Identity, Moral Judgment, Reality Testing; and the TEMAS cognitive scales were: Verbal Fluency, and Narrative Omissions of Characters, Events and Settings. These TEMAS variables were selected since they can be expressed in T-values and compared to the BASC scale scores which are also expressed in T-values.

TABLE 1
 TEMAS variables of interest

<i>TEMAS variables</i>	<i>Operational definitions</i>
Interpersonal Relations	Refers to the degree and quality of relatedness to parental and authority figures, siblings, and peers, as revealed by the TEMAS stories.
Control of Aggression	Refers to the direct verbal and physical expression of the intent to kill, harm, or injure oneself or others, or to destroy property.
Control of Anxiety/ Depression	Refers to irrational fears or worries about situations which are perceived as dangerous and/or threatening at the present time or in the future that might happen.
Achievement Motivation	Refers to the desire to attain a goal or to succeed in an endeavor that is measured by some standard of excellence. Achievement Motivation could refer to personal accomplishment or to competition with others in areas such as sports and games, school and learning, of vocation and avocation.
Delay of Gratification	Refers to the ability to forgo an immediate reward or gratification in order to await or work to achieve a greater future reward or gratification.
Self-Concept of Competence	Refers to the realistic self-perception of intellectual, social, physical, and vocational abilities, also it also refers to an individual's ability to master his or her environment.
Sexual Identity	Refers to the positive perception of the self in various social roles, and to age appropriate psychosocial maturity.

Continuation Table 1

<i>TEMAS variables</i>	<i>Operational definitions</i>
Moral Judgment	Refers to the developmental stage at which the superego or social conscience is operational. Moral judgment refers to the ability to discriminate between right and wrong and to act accordingly, to accept responsibility for wrongdoing, and to experience appropriate guilt for wrongdoing.
Reality Testing	Refers to the ability to distinguish between fantasy and reality. It refers to an individual's ability to recognize problematic situations and to anticipate the personal and social consequences of his or her behavior.
Verbal Fluency	Refers to verbal productivity, which is determined by the total word count of each TEMAS story.
Narrative Omissions of Characters, Events and Settings	Refers to a count of the characters, events, and settings that are depicted in the pictures but are not mentioned in an individual's thematic response. Refers to a count of the characters, events, and settings that are depicted in the pictures but are not mentioned in an individual's thematic response.

Source: TEMAS (Tell-Me-A-Story) manual (1988)

The BASC has five components which may be used individually or in any combination. This study used only one of the five components, specifically the Self Report of Personality (SRP). The SRP takes about 30 minutes to complete and has forms at two age levels: child (8-11) and adolescent (12-18) (The former age level was used in this study). The developmental levels overlap considerably in scales, structure, and individual items.

This study used the Self Report of Personality Child Level (SRP-C) that has 12 scales (see Table 2). The BASC variables of interest were: Anxiety, Attitude to school, Attitude to teachers, Atypicality, Depression, Interpersonal Relations, Locus of Control,

Relations with parents, Self Esteem, Self Reliance, Sense of Inadequacy, and Social Stress. These scales can be arranged into the following composites: Clinical Maladjustment, School Maladjustment, Personal Adjustment and Emotional Symptoms Index. To correct and interpret the SRP-C the computer program BASC Enhance Assist, was used, which generates profiles, calculates validity indexes, and identifies strengths and weaknesses. The SRP-C can be interpreted with reference to national age norms (General, Female, and Male) or to Clinical norms.

TABLE 2
BASC variables of interest

<i>BASC scale</i>	<i>Operational definition</i>
Anxiety	Feelings of nervousness, worry, and fear; the tendency to be overwhelmed by problems
Attitude to school	Feelings of alienation, hostility, and dissatisfaction regarding school
Attitude to teachers	Feelings of resentment and dislike of teachers; beliefs that teachers are unfair, uncaring, or overly demanding
Atypicality	The tendency towards gross mood swings, bizarre thoughts, subjective experiences, or obsessive-compulsive thoughts and behaviors often considered odd
Depression	Feelings of unhappiness, sadness and dejection; a belief that nothing goes right
Interpersonal Relations	The perception of having good social relationships and friendships with peers
Locus of Control	The belief that rewards and punishments are controlled by external events or other people

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Continuation Table 2

<i>BASC scale</i>	<i>Operational definition</i>
Relations with Parents	A positive regard towards parents and a feeling of being esteemed by them
Self Esteem	Feelings of self esteem, self respect, and self acceptance
Self Reliance	Confidence in one's ability to solve problems; a belief in one's personal dependability and decisiveness
Sense of Inadequacy	Perceptions of being unsuccessful in school, unable to achieve one's goals, and generally inadequate
Social Stress	Feelings of stress and tension in personal relationships; a feeling of being excluded from social activities

Source: BASC manual (1998)

Procedure

During the recruitment phase children were invited to participate through their classroom teachers. Informed consent was obtained in writing from the children's parents, and assent from the children. Confidentiality was assured by identifying the participants with a code number. The permission obtained from the Department of Education did not allow gathering personal demographic information. That is why ethnicity could not be more appropriately controlled. Only the Project Director had access to the master list linking only the names, age and sex of the students to code numbers.

Testing was administered in the community schools during regular hours in classrooms or in the library. Research assistants were assigned to each group administration. In Puerto Rico, the test was administered in Spanish, whereas in New York City, the Hispanic

children used English or Spanish according to their preference. Graduate clinical psychology students supervised by the project director conducted the testing and scoring. Protocols were scored completely blind. This type of research did not seem to pose risks to participants and no adverse reactions among the children were noted. The inter-rater reliability of the TEMAS scales was assessed by comparing the scores independently given by the researcher with those given by another clinician, both trained in the TEMAS administration and scoring system (adequate reliabilities from .73 to .87 were obtained). Reliability was not calculated for Verbal Fluency since it required a simple word count. To correct and interpret the SRP-C the computer program BASC Enhance ASSIST was used, which generates profiles, calculates validity indexes, identifies strengths and weaknesses and computes multi-rater comparisons.

For this cross-sectional study, analysis of variance (ANOVA) was used to examine gender differences for the TEMAS and BASC scales. Statistical significance was determined by $p=.05$. All data was analyzed using Statistical Package for the Social Sciences Software (SPSS) version 13.0.

Results

In Puerto Rico, all participants presented their stories in Spanish; but in the New York sample, 87 children (80.6%) responded in English while 21 children (19.4%) responded in Spanish. In New York, children who responded in Spanish had significantly higher verbal fluency in the TEMAS stories than the children who responded in English [$F(1, 106) = 7.663, p = .007, h^2 = .07$]. Therefore, children were at a disadvantage when producing their stories in a second language.

In Puerto Rico, three TEMAS scales showed significant gender differences in favor of girls: Achievement Motivation, Reality Testing and Verbal Fluency (refer to Table 3). Also, girls showed a tendency toward significance in higher self concept of competence than boys. Girls in the sample from Puerto Rico showed maladaptive skills in the areas of control of Aggression, control of Depression/Anxiety, Delay of Gratification, Sexual Identity, and Moral Judgment. Boys showed maladaptive skills in the areas of control of Aggression, Control of Depression/Anxiety, Achievement Motivation, Delay of Gratification,

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Self Concept, Sexual Identity, Moral Judgment, Reality Testing, and Verbal Fluency.

TABLE 3
Puerto Rico: TEMAS scales gender differences
(n = 110; girls =65; boys = 45)

	<i>Mean (SD)</i> <i>Girls</i>	<i>Mean (SD)</i> <i>Boys</i>	
Interpersonal Relations	41.11 (10.92)	42.30 (11.43)	.45 (.501)
Aggression	38.28 (10.30)	38.10 (7.98)	.01 (.902)
Depression/Anxiety	36.53 (9.10)	36.41 (10.47)	.01 (.939)
Achievement Motivation	41.34 (14.63)	34.57 (12.84)	9.43 (.003)**
Delay of Gratification	34.03 (12.98)	35.17 (12.89)	.31 (.580)
Self-Concept	40.37 (12.11)	36.73 (13.25)	3.31 (.071)
Sexual Identity	27.63 (21.58)	31.97 (18.04)	1.85 (.176)
Moral Judgment	39.60 (15.88)	37.61 (13.24)	.71 (.399)
Reality Testing	43.14 (11.07)	38.17 (10.01)	8.70 (.004)**
Verbal Fluency	43.33 (11.28)	36.60 (10.16)	15.39 (.000)***
Total Omissions	47.25 (11.09)	46.46 (9.90)	.223 (.638)

Note: * p<.05; ** p<.01; ***p<.001

In New York, there were no significant gender differences with the TEMAS scales (refer to Table 4). However, one scale showed a marginal significance (Total Omissions). In the New York sample, Hispanic girls showed maladaptive skills in the areas of control of Aggression, control of Depression/Anxiety, Moral Judgment, Reality Testing, and Verbal Fluency. Boys showed maladaptive skills in Aggression, Depression/Anxiety, Moral Judgment, Reality Testing, and Verbal Fluency.

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TABLE 4
New York TEMAS scales gender differences
(n = 105; girls = 60 and boys = 45)

	<i>Mean (SD)</i> <i>Girls</i>	<i>Mean (SD)</i> <i>Boys</i>	
Interpersonal Relations	41.26 (9.42)	40.60 (9.73)	.13 (.720)
Aggression	38.75 (10.38)	38.83 (9.96)	.00 (.970)
Depression/Anxiety	35.87 (12.01)	34.81 (11.41)	.22 (.643)
Achievement Motivation	40.52 (12.55)	42.94 (13.10)	.94 (.333)
Delay of Gratification	42.77 (11.27)	44.32 (11.61)	.49 (.486)
Self-Concept	41.08 (10.35)	40.49 (11.21)	.08 (.777)
Sexual Identity	44.02 (9.51)	43.91 (9.09)	.00 (.955)
Moral Judgment	38.62 (10.96)	38.64 (11.02)	.00 (.994)
Reality Testing	39.98 (11.41)	39.51 (10.35)	.05 (.825)
Verbal Fluency	32.05 (7.99)	30.34 (7.73)	1.25 (.267)
Total Omissions	45.13 (9.11)	42.26 (6.96)	3.23 (.075)

In Puerto Rico, only one BASC scale showed significant gender differences, the Anxiety scale, showing that girls have a more adaptive control of anxiety (refer to Table 5); while no significant differences were found in the New York sample.

TABLE 5
Puerto Rico: BASC scales and gender differences
(n = 110; girls = 65; boys = 45)

	<i>Mean (SD)</i> <i>Girls</i>	<i>Mean (SD)</i> <i>Boys</i>	
BASC Composites/Scales:			
School Maladjustment	52.20 (10.71)	53.05 (8.23)	.20
Attitude to School	49.86 (8.73)	50.91 (8.42)	.39
Attitude to Teachers	55.14 (9.12)	54.49 (8.13)	.15

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Continuation Table 5

	<i>Mean (SD)</i> <i>Girls</i>	<i>Mean (SD)</i> <i>Boys</i>	
BASC Composites/Scales:			
Clinical Maladjustment	50.63 (8.70)	53.38 (8.54)	2.64
Atypicality	50.66 (8.87)	52.64 (9.57)	1.24
Locus of Control	52.11 (7.92)	52.82 (7.86)	.21
Social Stress	49.48 (9.75)	52.80 (9.38)	3.15
Anxiety	50.10 (8.29)	53.53 (7.84)	4.72 *
Depression	52.24 (9.63)	53.53 (10.77)	.42
Sense of Inadequacy	52.68 (10.27)	53.93 (9.93)	.41
Personal Adjustment	45.45 (10.65)	45.89 (9.01)	.05
Relations With Parents	44.02 (12.84)	46.87 (11.51)	1.43
Interpersonal Relations	44.83 (11.43)	44.22 (10.87)	.08
Self Esteem	48.74 (7.03)	46.76 (7.19)	2.07
Self Reliance	48.31 (10.24)	49.56 (9.29)	.42
Emotional Symptoms Index	52.13 (9.04)	54.44 (9.19)	1.69

Note: * $p < .05$

With the TEMAS, as can be seen in Tables 6 and 7, in Puerto Rico about three quarters of boys and girls seems at risk for maladjustment, when attempting to resolve conflicts that require skills controlling Anxiety/depression, Delay of gratification and Sexual identity. In New York, about three quarters of the sample including boys and girls seems at risk for maladjustment, when attempting to resolve conflicts that require skills controlling Depression/anxiety, Moral judgment, Reality testing. Therefore, both in Puerto Rico and in New York Hispanic boys and girls appear remarkably at risk when dealing with situations that may induce depression/anxiety. Limited English Proficiency as reflected in poor verbal fluency sets Hispanic children in NY at risk.

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TABLE 6
Puerto Rico: TEMAS scales gender differences in risk status (n = 110; girls =65; boys = 45)

<i>Scales</i>	<i>%- No risk</i>		<i>%- At risk</i>	
	<i>Girls</i>	<i>Boys</i>	<i>Girls</i>	<i>Boys</i>
Interpersonal Relations	53.3	61.4	46.7	38.6
Aggression	41.3	30.0	58.7	70.0
Depression/Anxiety	26.1	25.7	73.9	74.3
Achievement Motivation	46.7	22.9	53.3	77.1
Delay of Gratification	20.7	27.1	79.3	72.9
Self-Concept	43.5	30.1	56.5	69.9
Sexual Identity	18.5	21.4	81.5	78.6
Moral Judgment	34.8	22.9	65.2	77.1
Reality Testing	43.5	18.6	56.5	81.4
Verbal Fluency	66.3	37.1	33.7	62.9
Total Omissions	77.2	72.9	22.8	27.1

TABLE 7
New York TEMAS scales gender differences in risk status (n = 105; girls = 60 and boys = 45)

<i>Scales</i>	<i>%- No risk</i>		<i>%- At risk</i>	
	<i>Girls</i>	<i>Boys</i>	<i>Girls</i>	<i>Boys</i>
Interpersonal Relations	57.4	55.3	42.6	44.7
Aggression	34.4	63.2	65.6	63.8
Depression/Anxiety	27.9	21.3	72.1	78.7
Achievement Motivation	36.1	48.9	63.9	51.1
Delay of Gratification	49.2	48.9	50.8	51.1
Self-Concept	54.1	51.1	45.9	48.9
Sexual Identity	50.8	85.1	49.2	14.9
Moral Judgment	18.0	19.1	82	80.9
Reality Testing	24.6	19.1	75.4	80.9
Verbal Fluency	19.7	17.0	80.3	83.0
Total Omissions	72.1	63.8	27.9	36.2

Discussion

In Puerto Rico, Hispanic girls were more fluent verbally when developing narratives about conflict situations. In NY both girls and boys showed problems with verbal fluency (below age expectation), hence, no significant differences were found. Relative lower verbal fluency for samples in NY may be related to their limited English proficiency status. As stated by previous research with the TEMAS, children responding in Spanish exhibit higher verbal fluency than when attempting to produce their stories in English (Costantino & Malgady, 1983; Costantino, Malgady, & Vázquez, 1981). Since length of neither stay nor acculturation status was controlled, the question remains as to whether girls that respond in Spanish show higher verbal fluency than boys.

Gender differences in verbal fluency are congruent with findings indicating that in terms of narrative ability, as early as in pre-school girls are more verbal and adept at producing coherent narratives (Fiorentino & Howe, 2004). Nevertheless, as reviewed by Hyde (1990), although some studies favor females in verbal abilities; recent findings using meta-analyses have not found such differences. In turn, lower verbal fluency for boys could be related to what Pollack (1998) described as the “Code of men”, an unwritten list of social beliefs about how the young men must act and behave. This social code requires that the men act strong, do not show their feelings and inhibit the verbal expression of their experiences when faced with frustration or difficulty.

Given the advantage of females in verbal fluency and school grades, it is beneficial to look more closely at cross-cultural samples to determine if gender plays a role in other cognitive skills. For instance, in a previous report of a TEMAS study in Puerto Rico (with a larger sample size and covering a wider age range 9-15) showed significant differences between boys and girls in story transformations [$F(1, 160) = 7.018, p .009, n^2 = .04$], with boys making more story transformation than girls, which is another cognitive indicator where girls perform better than boys (Cardalda, Costantino, Jiménez-Suárez, León-Velázquez, Martínez, & Ortiz-Vargas, 2011).

Higher grades, robust cognitive skills, and more adaptive self concept of competence and achievement motivation for girls may suggest protective factors geared to maintain competence in school

environments. But despite these relative strengths, educational disparities persist as the graduation rate for Latinas is lower than for girls in any other racial or ethnic group in the US (Ginorio & Huston, 2001). Therefore, the question remains, how females use skills to their advantage in school and whether these effects may taper off developmentally. For instance, how do cognitive skills interact with the potential for emotional problems such as depression and anxiety? Several studies have pointed out that depression is an area of mental health disparities between Hispanic and other groups of children. Canino, Gould, Prupis, and Schafer (1986) found that Hispanic children and adolescents reported more depression and anxiety symptoms than Blacks and this is consistent with a nation-wide epidemiological study that reported that Hispanics had the highest rates of depression and other affective disorders, and higher co-morbidity, compared to any other ethnic groups (Kessler et al., 1994). Other depression studies have showed that Hispanic adolescents express somatic complaints more prominently than Whites and Blacks (Roberts, 1992).

There are however, some limitations of this study. Only public schools were used in these comparisons. Children from private schools as well and SES contributions to mental health need to be considered in order to interpret specific patterns. Another question is what can happen if the group testing format is administered in other sites in the United States. Inter-rater reliability was not calculated although consensus for scoring and double-checking by others was followed. Finally, due to the kind of permission obtained from the Department of Education, personal demographic information or identification of the children could not be collected in any way, and ethnicity could not be controlled. Future recommendations for similar studies include examining specific populations and age groups of Hispanic/Latino children; in order to evaluate risk and protective factors to consider what works and does not work with these minority at risk groups.

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