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Cultural Differences in the Relationship between Perceived Family Environments and Self-determination among Students with Disabilities

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Abstract

This study examined the potential role of cultural variables in the relationship between perceived family environments and levels of self-determination among students with disabilities. Participants were 190 Latino, African-American and Euro-American students with disabilities enrolled in six high schools within a large urban school district in the United States. Self-determination was measured using the Arc's Self-Determination Scale (SDS, Wehmeyer & Kelchner, 1996). Students' perceptions of their family environment were measured using seven subscales from the Family Environment Scale (FES, Moos & Moos, 2009) that reflected environments that are expected to nurture self-determination according to Self-Determination Theory (SDT; Deci & Ryan, 2007). The family environment subscales were statistically significant predictors of levels of self-determination, and suggested that cultural variables may moderate the relationship between family environments and self-determination. Implications for how parents and schools can enhance self-determination and successful transition among students with learning disabilities from different cultural groups are discussed.

The concept of self-determination has been studied extensively as it relates to the provision of services for persons with disabilities (Perrin & Nirje, 2004; Wolfensberger, 1972) and in the field of special education (Algozzine, Browder, Karvonen, Test, & Wood, 2001; Field & Hoffman, 2002; Mithaug, 1996; Wehmeyer, 2001). An underlying assumption in this research is that if individuals with disabilities are to enjoy a high quality of life, they must have the ability and opportunity to make their own decisions and be in charge of their destinies. However, there is evidence that the meaning of self-determination varies from one culture to the next (Kagitcibasi, 2005; Matsumoto, 1999; Oyserman, Coon, & Kemmelmeir, 2002; Zhang, 2005; Zhang & Benz, 2006). If people from different cultural backgrounds

have different meanings for self-determination, one implication is that the conditions most likely to foster self-determination may also vary depending on the cultural context.

The Historical and Political Context for the Concept of Self-determination

In the United States, the meaning of self-determination has become associated with the idea of *individualism.* Musgrave (2002) traced the legal and political antecedents of the concept of self-determination to the establishment of dozens of nations since the Enlightenment. In this account, self-determination is said to occur whenever a group of people is able to freely determine its own political status. His analysis recounted the relationship between self-determination and the preservation of minority groups throughout the world, from the eighteenth century until the end of World War II. He distinguished between the notion of self-determination in Western Europe and the United States, which was based on nationalistic ideals that did not take ethnic considerations into account, and the notion prevalent throughout Eastern and Central Europe, which emphasized ethnicity. The Western European view of self-determination was rooted in the writings of John Milton, with references to popular sovereignty, civil liberties and natural rights. These ideas were further shaped in the United States by Thomas Jefferson in his emphasis on the importance of individual liberty and representative government. Because of these influences, self-determination in Western Europe and the United States became rooted in the idea of *individualism*.

According to Musgrave (2002), in many other countries such as those in Central Europe, states were made up of heterogeneous cultures and each ethnic group developed a nationalistic sentiment. For example, states like the Russian and Austro-Hungarian empires were composed of a multitude of ethnic groups. In such circumstances, *ethnic identity* became the issue of primary importance, and a notion of self-determination evolved that was sensitive to a minority voice.

If the concept of self-determination has different meaning to different persons depending on their cultural heritage, it stands to reason that factors that may enhance self-determination, such as a person's family environment, may also vary depending on the person's cultural background. This may be particularly true when one considers that the ways in which family members relate to each other are greatly influenced by cultural factors. Therefore, the purpose of this study was to examine the ways students from varying cultural backgrounds, particularly students with learning disabilities, perceive their family environments, and the ways in which these family environments may differ with respect to levels of self-determination.

Self-determination in Cultural Context

In the landmark study *Culture's Consequences* (1984), Geert Hofstede outlined a system of classification of countries throughout the world on the basis of several dimensions that the author suggested were descriptive of each country's culture. One of the most enduring of these dimensions is the notion that countries vary according to the extent to

which they are *individualistic* or *collectivistic* (IND-COL). The study defined this dimension as the extent to which members of a society are expected to look out for themselves individually as opposed to remaining integrated into groups. Oyserman et al. (2002) conducted a meta-analysis of cultural studies examining the IND-COL dimension and found that these studies did not support the idea of IND-COL as a dimension. Rather, they found that some cultures had elements of both individualistic and collectivistic practices and that it was therefore more appropriate to view the concept orthogonally. They also found that while there was a tendency for US and Canadian samples to score higher on individualistic practices, much variation existed in other geographic areas; collectivistic practices were observed in Western European samples and individualistic practices were observed in Asian and Latin American samples. Nevertheless, the meaning of concepts such as self-determination may vary in accordance with the extent to which a person comes from a culture that values individualistic or collectivistic practices.

Additional studies have pointed to other cultural differences that may impact on the meaning of self-determination. Kagitcibasi (2005) found that differences in subsistence and economic systems can lead to differences in the extent to which family practices promote autonomy (individualistic values) or relatedness (collectivistic values). Theories that have attempted to explain the development of self-determination, such as Deci and Ryan's theory on the development of self-determined motivation, have identified autonomy and relatedness as two of three necessary conditions for the development of self-determination, the third being "competence" (1985, 2000). However, according to Kagitcibasi (2005), the extent to which these conditions occur in family relationships may depend on cultural norms.

Other studies have examined self-determination through a cultural lens (Frankland, Turnbull, Wehmeyer, & Blackmountain, 2004; Zhang, 2005; Zhang & Benz, 2006). Zhang (2005) compared special education students from Anglo, Asian and African American backgrounds in the US and found that Anglo children were more involved in activities that reflected personal independence in the home than were children of Asian or African American backgrounds. In a review of the self-determination literature with culturally diverse students, Zhang and Benz (2006) suggested that though the concept of self-determination is rooted in Western European values, it has applicability to persons from diverse cultures. However, the authors pointed out that if the principles of self-determination are imposed on individuals from diverse cultures without regard to their own cultural values, they may feel that these values are not their own, and be less likely to internalize them. Frankland et al. (2004), in a study of self-determination with people of the Navajo culture, concluded that though the Navajo valued self-regulation and autonomy, these concepts were operationalized more in terms of interdependence and group cohesion.

In spite of research indicating that the meaning of self-determination may vary depending on cultural context, there is also research indicating that self-determination is associated with increased well-being and improved quality of life across a variety of cultural groups (Chirkov, Ryan, Youngmee, & Kaplan, 2003; Chirkov, Ryan & Willness, 2005; Deci

et al., 2001; Nota, Soresi, Ferrari & Wehmeyer, 2010; Ryan et al., 1999). These studies, conducted in Canada, Brazil, Russia, Turkey and Korea, upheld the notion that self-determination and autonomy may also be important constructs among people from backgrounds other than those of Western European descent. However, there is little research on the environmental conditions most suitable for fostering self-determination among people of different cultures, especially among people from Latino cultures.

Most theories of self-determination agree that self-determination is both intrinsic to the individual and enhanced through environmental factors (Abery & Stancliff, 1996; Deci & Ryan, 1985, 2000, 2007; Mithaug, 1996; Wehmeyer, 2001). Many researchers agree on the conditions that should be present to nurture the development of self-determination. These include providing support for autonomy, feelings of competence, and a sense of relatedness with others. However, the impact of cultural variables that may affect the ways in which environments enhance the development of self-determination is less clear.

The Role of Family Environments and the Development of Self-Determination

Deci and Ryan's (1985, 2000) theory of self-determination proposes that extrinsic goals become self-determined to the extent that environmental conditions facilitate a person's ability to satisfy the needs of *autonomy, relatedness* and *competence*. *Autonomy* means contexts that foster autonomous regulation. According to SDT, family environments that promote autonomy are more likely to yield self-determined goal-pursuing behavior. *Relatedness* means that since extrinsically motivated behaviors are not inherently interesting, the primary reason people initially perform such actions is because the behaviors are prompted, modeled, or valued by significant others to whom they feel, or want to feel, attached. Family environments that promote relatedness are more likely to lead to self-determined behavior. *Competence* means that people are more likely to adopt activities that relevant groups value when they feel efficacious with respect to those activities. Family environments that promote feelings of self-efficacy are expected to lead to higher levels of self-determined behavior.

Several studies have demonstrated a connection between family environments that provide autonomy support, their impact on the development of self-determined behavior, and positive school outcomes. Grolnick, Krurowski, and Gurland (1999) studied the relationship between parenting practices, children's motivations, and school achievement and found that parents who provided autonomy support had children who performed better and who demonstrated higher levels of intrinsic motivation. In a related study, Joussemet, Landry, and Koestner (2008) conducted parent observational studies and interviews to determine the correlates of children's self-determined motivation. They found that a family environment where structure is provided in a democratic manner, with respect for the child's feelings and interests, is associated with higher self-determination and more positive educational and socio-emotional outcomes.

The Role of Culture in the Relationship between Family Environments and Self-Determination

The potential role of culture as a moderator of the conditions that can enhance self-determination has not been closely examined in the literature, though research has shown that cultural background is associated with differences in family interaction patterns (Roth, 2008; Suarez-Orozco, 1989; Suarez-Orozco & Suarez-Orozco, 1995; Valdes, 1996). If cultural differences affect family interaction patterns, these differences may also be associated with the development of self-determination.

Suarez-Orozco (1989) elaborated on Ogbu's work (1987, 1992) on the dual frame of reference in an ethnographic study of Central American immigrant families and their children who attended two low socioeconomic status (SES) high schools in Southern California. According to Ogbu, voluntary minorities, like many Latino immigrants, develop a *dual frame of reference.* Unlike African-American minorities, who are descendants of immigrants who were brought to the United States involuntarily as slaves, the vast majority of Latino immigrants have entered the United States voluntarily. This means that even though these voluntary immigrants may not have assimilated into the cultural mainstream of the country and may live in poverty, they still consider themselves to have greater educational opportunity relative to their countries of origin. This dual frame may be a source of self-determined motivation in that students may internalize the need to work hard from their parents, in order to avoid returning to the conditions of poverty in their country of origin.

Suarez-Orozco (1989) and Suarez-Orozco and Suarez-Orozco (1995) conducted an ethnographic study comparing first generation Mexican immigrants and second generation Mexicans to Euro-American non-Hispanics born in the United States. They examined a variety of issues impacting on the development of the youths' self-identity, including the concept of *familism*. Familism is defined as a "strong identification and attachment of individuals with their families, strong feelings of loyalty, reciprocity, and solidarity among members of the same family" (1989, p. 113-114). They found that this attitude toward the family stood in stark contrast to the pervasive attitude of individualism among youth from Euro-American families. Euro-American adolescents scored lower than any of the other groups studied on a familism scale. The authors also examined youths' responses to the Thematic Apperception Test and found differences in the prevailing themes when comparing Mexican and Latino youth. Stories told by Mexican youth tended to contain a higher proportion of themes related to family conflict, romance, parents sacrificing themselves so their children can pursue an education, and parents who are nurturing and supportive. Themes from Euro-American youth respondents tended to focus on individualism and pursuing an education to move away from parents.

Valdes (1996) conducted an ethnographic study with ten firs- generation Mexican families and found consistent differences between Latino and Euro-American family environments. First, Latino families were organized "hierarchically". Each member understood his or her role, and their primary responsibility was to the family. This contrasted

with commonly held views of Euro-American families that encouraged equality and independence. Second, family members did not raise their voice and tended to stay close to the family most of their lives. This contrasted with Euro-American family patterns that encouraged assertiveness and an emphasis on social mobility. Third, and consistent with Suarez-Orozco's findings, for Latinos, showing gratitude and respect for parents' sacrifices was a deeply held value. In contrast, the more commonly held value among Euro-Americans was that individual effort and merit were more important. Fourth, these differences in family patterns translated to differences in behavior patterns in the classroom. Latino parents did not expect their children to raise their hands or be among the first to answer questions, since these actions might be viewed as disrespectful. This contrasted with the Euro-American view that it was important to demonstrate personal initiative and decisiveness.

These studies, conducted with Latino immigrants in the US, suggest that Latino family interaction patterns may be different from Euro-American family interaction patterns. If Euro-American and Latino family interaction patterns differ, it is also possible that the conditions in the family environment that are most associated with the development of self-determined motivation also differ.

Self-determination and Positive Educational Outcomes among Students with Learning Disabilities

Research findings related to both differential levels of self-determination and long-term educational and post-school outcomes for youth with intellectual disabilities (ID) and learning disabilities (LD) have been unequivocal in their findings that youth with ID and LD demonstrate lower levels of self-determination and poorer academic achievement and graduation outcomes than youth without disabilities (Newman, Wagner, Cameto, & Knokey, 2009; Wehmeyer & Kelchner, 1995). Recent research has examined goal attainment (a subdomain of self-determination) of diverse middle and high school youth with LD and ID and found no significant difference in goal attainment scores (pre-treatment) between youth with LD and ID (Shogren, Palmer, Wehmeyer, Williams-Diehm, & Little, 2012). This finding supports the current study's focus on an examination of family environment factors that may support the development of self-determination for students with LD in particular.

Therefore, this study examined the relationship between perceived family environments and self-determination among students with disabilities by asking the following questions:

1. Do students who self-identify as Latino, African American, or Euro-American differ in levels of self-determination?
2. Do students who self-identify as Latino, African American, or Euro-American differ in how they perceive their family environments?
3. In what ways are students' perceived family environments associated with levels of self-determination?

4. Is the association between perceived family environments and self-determination moderated by self-reported cultural identity?

Method

Participants

Participants in this study were recruited from six high schools in an urban Florida school district. The sample consisted of 190 high school students identified by the school district to receive special education services. The demographics of the sample approximate the demographics of the school district, where 62% of the youth are Latino, 27% African-American, 9% Euro-American, and 2% other/multiracial. The participant demographics were 58% Latino, 27% African-American, and 15% Euro-American. These groupings were based on student self-report. Students were coded as Latino if they self-reported as Latino or if they reported one or both of their parents were born in a Latino country or Puerto Rico, or described one or more of their parents' ancestries as Latino. Hispanic countries were defined as Spanish-speaking countries in the Caribbean, Central and South America.

Students' race was coded as Euro-American if they reported that they and both of their parents were born in the US and they identified their race as "White". Students were coded as "African-American" if they reported having been born in the US and if they self-declared as Black or African-American. A small number of students who self-identified as Black but also indicated that their backgrounds were Haitian or from other non-Latino Caribbean countries were not included as participants in this study. Thus, the Latino group reflects youth from 1st to 3rd generation immigrant status and therefore, group comparisons made in all analyses must be interpreted with this in mind. Exclusion criteria for participation in the study, however, did include English language learner (ELL) status. The mean age for the overall sample was 17.5 years. The mean age for Latinos was 17.4 years, Euro-Americans was 17.2 years, and African-American was 17.9 years. Males comprised 67% of the sample; 33% were females. The ratio of males to females was similar for each sub-group. Males comprised 67% of the Latino group, 69% of the Euro-American group and 64% of the African-American group.

As noted, all of the students in the sample were district-identified as meeting the criteria for special education services. Of these, 74 % were students with learning disabilities, 7% were other health impaired, 4% were emotionally/behaviorally disabled, 4% were intellectually disabled, 2% were "other" low incidence disabilities and disability category data were unavailable for the remaining 9%.

According to school records, 60% of the students in the sample were receiving free or reduced-priced lunch. Eighty-two percent of the African-American students were receiving free or reduce-priced lunch, as compared to 60% of the Latino students and 25% of the Euro-American students. During the time data for the study were collected, however, many schools in the district were offering a free lunch program to all students, so the percentage of students receiving free or reduced-price lunch may not be a reliable indicator of socioeconomic status.

Procedure

This study was conducted within the context of a larger study with both general and special education youth within the local school district. Permissions were granted by school district and school site administrators prior to the start of the study. Once parent consent and student assent were obtained, the research team administered the survey measures to students individually or in small groups in the school media centers. All items were read aloud to students to account for different reading levels. The measures administered were the Arc's Self-Determination Scale (SDS) (Wehmeyer & Kelchner, 1995) and the Family Environment Scale (Moos & Moos, 2009).

Measures

The Arc's Self-Determination Scale (SDS). The Arc's Self-determination Scale (Wehmeyer & Kelchner, 1995) is a measure of students' levels of self-determination. The SDS is a student self-report measure designed for adolescents with disabilities. The scale is divided into four subdomains:

(1) Autonomy measures a sense of personal control over one's life. It involves the belief that one is acting according to one's own preferences, interests or abilities. Respondents are asked to indicate how frequently they perform a variety of activities associated with autonomy: for example, "I do free time activities based on my interests." There are 32 items comprising this subdomain.

(2) Self-Regulation includes self-management strategies such as self-monitoring, self-instruction, self-evaluation and self-reinforcement. Goal-setting and problem-solving are also associated with this scale. The self-regulation section consists of two subscales with nine questions that require that students write their answers. The first subscale involves story-based items that require that students indicate how they would solve a problem. Each response is scored on a scale of 0-2 points, depending on how thoroughly the student's response brings the situation to a successful conclusion. In one question, a scenario is presented where the student is in a planning meeting with parents and teachers and he/she has to convince them of the desire to take a particular course instead of the one preferred by the parents and teachers. Section II of the self-regulation subdomain asks students to identify goals in several life areas and indicate the steps needed to achieve those goals. These items are scored on a scale ranging from 0 to 3 points, depending on how well the student has planned the steps needed to achieve a goal. The responses to these questions were scored by the authors, who achieved 100% consensus on the number of points that should be assigned to each student's responses to the questions.

(3) Psychological empowerment involves the perception that one has control over circumstances that are important, that one has the skills and efficacy necessary to achieve desired outcomes, and that identified outcomes will result from one's actions. This sub-domain consists of 16 questions asking students to choose, from two options, the one that best describes them. Answers that reflect psychological empowerment are scored a "1" and those that do not are scored a "0." For example, students can choose between the options "I

usually do what my friends want" and "I tell my friends if they are doing something I don't want to do." The second option reflects psychological empowerment.

(4) Self-realization involves having reasonably accurate knowledge of one's interests, abilities and limitations and the capacity to fulfill one's potential. Like the previous section, items are scored either "1" or "0" depending on the direction of the answer. For example, the student may either agree or disagree with the statement, "I do not feel ashamed of my emotions." Agreement reflects self-realization, since it indicates valuing of one's feelings.

The scale was normed on 500 general and special education students aged 14-22 across five states. Students in general education represent 14% of the norm sample and students in special education represent 86% of the sample. The norm sample students who were served in special education primarily represented the learning disability, emotional/behavior disorder, and intellectual disability categories (83%). Fifty-six percent of these youth were Euro-American, 18% Latino, 23% African-American, and 3% other. The scale was validated concurrently against three previously validated measures of internal-external locus of control, intellectual achievement and self-efficacy. The internal consistency measure for the instrument yielded a Cronbach's alpha of .90.

The Family Environment Scale (FES). The FES (Moos & Moos, 2009) was developed to measure social and environmental characteristics of families. The FES consists of 90 items and is scored on a dichotomous scale based on the respondents' true or false answers. The measure consists of 10 subscales of 9 items each. The seven subscales of interest in this study were:

Cohesion – the degree of commitment, support and help family members provide for one another. An example of an item on this scale is "Family members really help and support each other."

Expressiveness – the extent to which family members are encouraged to express their feelings directly. An example of an item on this scale is "We tell each other about our personal problems."

These two subscales are conceptually related to Deci and Ryan's notions of *relatedness* as an important condition for the development of self-determination.

Independence – the extent to which family members are assertive, self-sufficient and make their own decisions. An example of an item on this scale is "In our family, we are strongly encouraged to be independent."

Control – how much set rules and procedures are used to run family life. An example of an item on this scale is "There is one family member who makes most of the decisions."

These subscales are conceptually related to Deci and Ryan's notion of *autonomy* as an important condition for the development of self-determination in opposite ways. "Independence" was expected to be positively associated with higher levels of self-determination, whereas "Control" was expected to be inversely related to higher levels of self-determination among Euro-Americans, but not necessarily Latinos. This subscale was reverse coded, where "no" answers received a point instead of "yes" answers.

Achievement Orientation – how much activities are cast into an achievement-oriented or competitive framework. An example of an item on this subscale is "Getting ahead in life is very important in our family."

Organization – the degree of importance of clear organization and structure in planning family life. An example of an item on this subscale is "Being on time is very important in our family."

Intellectual/Cultural Orientation - the level of interest in political, intellectual, and cultural activities. An example of an item on this subscale is "Learning about new and different things is very important in our family."

These last three scales are conceptually related to Deci and Ryan's notion of *competence.* Family environments that promote achievement, organization and an intellectual orientation were considered to also promote a sense of competence among family members.

The norm groups for the FES consisted of 2,220 family participants including both adult and adolescent groups. The group represented a culturally and ethnically diverse sample, with 68% Euro-American and 32% Latino or Black. The FES manual contains only these two broad groups in the description of the scale development (Moos & Moos, 2009). Internal consistency estimates for the Form R ranged between .61 and .78. Inter-correlations between the subscales ranged from -.53 to .45. Additional validity evidence is provided through summaries or references to approximately 150 research studies. Many of these present convergent validity for the measure's 10 subscales.

Analyses

The data were analyzed using analysis of variance procedures (ANOVA), post-hoc comparisons of means, multiple analysis of variance procedures (MANOVA) and ordinary least squares multiple linear regression design (OLS). In this study, the seven subscales of interest on the FES are continuous independent variables and ethnicity or race is a categorical independent variable. These variables were coded into two "dummy variables", where Euro-American = 0 and Latino = 1 and where Euro-American = 0 and Black = 1. By including both of these dummy variables in the same regression analysis, Euro-American remained the comparison group.

Overall means were obtained for SDS total score and subscales, and FES mean scores for the seven subscales of interest. Mean comparisons were conducted between Euro-American, Latino and African-American students. These analyses addressed the first two research questions: (1) Do students who self-identify as Latino, African American, or Euro-American differ in levels of self-determination? and (2) Do students who self-identify as Latino, African American, or Euro-American differ in how they perceive their family environments?

A simultaneous multiple regression analysis was conducted, regressing SDS total score on the seven FES subscales of interest. This analysis addressed question (3): In what ways are students' perceived family environments associated with levels of self-

determination? An additional multiple regression analysis was conducted regressing SDS on the six FES subscales with the addition of two dummy variables (Latino/Euro-American dummy variable and African-American/Euro-American dummy variable) to retain Euro-American as the reference group. The purpose of these analyses was to determine if Latino group membership and/or African-American group membership contributed significantly to the prediction of levels of self-determination after controlling for the seven family environment variables. Finally, based on the finding that Latino but not African-American group membership was a significant predictor of self-determination, a final sequential regression analysis was conducted adding interaction terms combining Latino membership with each of the FES subscales to further investigate research question number (4): Is the association between perceived family environments and self-determination moderated by self-reported cultural identity?

Results

A preliminary analysis was performed comparing the mean scores of students identified with LD on the Self-determination Scale (SDS) to the mean scores of students in the remaining disability categories in the sample in order to determine whether the scores of students not identified as LD were statistically different from the students with LD. The analysis revealed no statistically significant difference between the two groups of students, suggesting that the inclusion of a small number of students not identified as LD in the sample did not significantly affect the results on the SDS (Total SDS; F (1, 185) = 1.91, p = .169, η^2 = .010).

Comparisons of Means on the Self-determination Scale (SDS) Based on Cultural Group Membership

The analyses described in this section address the research question, "Do Euro-American students differ from Latino or African-American students in their levels of self-determination?" Latino and African-American students scored higher in total SDS than Euro-American students. In order to further examine these differences, a one-way ANOVA was conducted to determine if the mean differences between the groups were statistically significant. These analyses are presented in Table 1. The results of the ANOVA indicated there were significant differences between the groups on at least one of the pairs of group comparisons (Total SDS; F (2, 182) = 3.06, p = .049, η^2 = .033).

In order to test for further differences among the three groups, a post-hoc analysis was conducted using Tukey's honest significant difference (HSD). The results revealed that the difference between the Latino and Euro-American means was statistically significant, whereas the comparisons between the means for Euro-American students and African-American students, as well as African-American students and Latino students, were not ($M_{Latino} - M_{Euro\text{-}American}$ = 10.30, p = .043; $M_{African\text{-}American} - M_{Euro\text{-}American}$ = 9.77, p = .102; $M_{Latino} - M_{African\text{-}American}$ = 0.53, p = .988.

Comparisons among the three groups on each of the four subscales of the SDS revealed significant differences on the Autonomy subscale (Autonomy; F (2, 182) = 5.75, p = .004, η^2 = .059).

Comparison of Means on Family Environment Subscales (FES)

A multivariate analysis of variance was conducted to address question two, "Do students who self-identify as Latino, African American, or Euro-American differ in how they perceive their family environments?" The results revealed no statistically significant differences among the means of the Latino, Euro-American and African-American student groups on any of the FES subscales, Wilks' Lambda F(12, 362) = .691, p = .798.

The Role of Cultural Identity as a Factor in the Relationship between Perceived Family Environments and Levels of Self-determination

In order to explore potential differences between self-determination and perceived family environments for each of the sub-groups, correlational analyses were performed examining the association between total SDS and the seven FES subscales for each sub-group. The results are presented in Table 2.

The results indicate that while there is overlap among the three groups in the relationship between SDS and the FES subscales, there are also differences among the groups. For example, Intellectual/Cultural Orientation was significantly correlated with SDS among the Latino and African-American groups, but not in students from Euro-American backgrounds. In addition, Independence was significantly correlated with SDS among African-American students, but not among Latino or Euro-American students. Expressiveness had a small to moderate correlation with SDS among Euro-American and African-American student, but was unrelated to SDS among Latino students. Control was negatively correlated with SDS among Euro-American students, but unrelated to SDS among Latino students and slightly positively correlated with SDS among African-American students.

Table 1.

Comparison of Total Self-Determination Scores and Subscale Scores between Groups

Self-Determination Measure	*M*	*SD*	*n*
Autonomy			
Euro-American	55.41*	24.90	29
Latino	65.81	12.99	107
African-American	67.12	15.06	49
Self-regulation			
Euro-American	12.72	4.41	29
Latino	12.44	4.09	107
African-American	12.04	4.55	49
Psychological Empowerment			
Euro-American	14.41	1.86	29
Latino	14.30	2.16	107
African-American	14.45	2.15	49
Self-realization			
Euro-American	11.52	2.15	29
Latino	11.97	1.99	107
African-American	11.88	2.43	49
Total Self-determination			
Euro-American	94.41*	25.64	29
Latino	104.71	16.29	107
African-American	104.18	24.33	49

* *M* for Euro-American students significantly lower than *M* for both Latino and African-American students ($p < .05$). $R^2 = 0.06$.

An ordinary least squares (OLS) multiple regression (MR) design was used to further examine the ways in which cultural identity might play a role in the relationship between students' perceptions of their family environments and levels of self-determination. In order to address the question of whether perceptions of the family environment are associated with changes in levels of self-determination, a simultaneous MR was conducted, regressing total self-determination on the seven FES scales. The results of the regression analysis are shown in Table 3.

Table 2.

Pearson Correlations of Total SDS and FES Subscales by Cultural Group

Cultural Group	Total SD	Cohesive-ness	Expressive-ness	Indepen-dence	Achievement Orientation	Int. Cult. Orienta-tion	Organiza-tion	Control
Euro-American SD	1	-.013	.258	.163	-.097	.085	.068	-.221
Latino SD	1	.160	.012	.138	.174	.282**	.097	.089
African-American SD	1	.228	.211	.377**	.216	.294*	.197	.181
Total Sample SD	1	.140	.141	.204**	.130	.241**	.113	.043

*$p < .05$, two-tailed test; ** $p < .01$, two –tailed test

The results indicate that the seven FES subscales were statistically significant predictors of total self-determination score ($R^2 = .105$, F (7, 179) = 2.988, $p = .005$). The FES subscales Independence (β = .165, $p = .034$) and Intellectual/Cultural Orientation (β = .205, $p = .012$) were statistically significant individual predictors of total SDS, after controlling for the other FES subscales.

Table 4 shows the additional amount of variance explained by the addition of the categorical group membership variables for Latino and African-American group membership. This model (Model 2) consisted of adding dummy variables for Latino and African-American. For the first dummy variable, Latinos were coded as "1" and European-American and African-Americans were coded as "0." For the African-American dummy variable, African-American students were coded as "1" and Latinos and European-American students were coded as "0.". Therefore, the reference group was the group of European-American students. The addition of these variables approached but did not meet statistical

significance (ΔR^2 = .027, p = .069). This model explained 13.2% of the variance in self-determination and was statistically significant (R^2= .132, p = .003).

Table 3.

Simultaneous Multiple Regression of Total Self-determination on Seven FES Subscales

	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model	*B*	*SE*	β	t	Sig.	Tolerance	VIF
1 (Constant)	66.021	9.887		6.677	.000		
FES Cohesiveness	-.067	.930	-.006	-.072	.942	.672	1.488
FES Expressiveness	1.493	1.043	.116	1.432	.154	.768	1.301
FES Independence	2.091	.980	.165	2.134	.034	.833	1.200
FES Achievement Orientation	.055	1.066	.004	.051	.959	.775	1.291
FES Intellectual/ Cultural Orientation	2.322	.918	.205	2.531	.012	.762	1.312
FES Organization	.237	.863	.023	.274	.784	.725	1.378
FES Control	.792	.933	.067	.850	.397	.805	1.242
R^2	.105						
F	2.98						
P	.005**						

***p < .01*

Table 4.

Amount of Variance Explained in Sequential Regression of SDS on FES Subscales, Latino and African-American Cultural Identity

				Change Statistics			
Model	*R*	R^2	ΔR^2	F Change	df1	df2	Sig. F Change
1	.32	.105	.105	2.965	7	177	.006
2	.363	.132	.027	2.709	2	175	.069

Note: Model 1 predictors = Seven FES scales; Model 2 predictors = seven FES scales, cultural identity categorical variables; Both Model 1 and Model 2 were statistically significant; Model 1 (p = .006); Model 2 (p = .003).

Table 5 shows the individual contributions of each of the predictors. The addition of the Latino membership variable was statistically significant (β = .234, p = .021) but African-American group membership was not (β = .159, p = .117). In addition, Independence (β = .179, p = .022) and Intellectual/Cultural Orientation (β = .210, p = .012) were statistically significant predictors of self-determination, when other variables in the model were controlled for.

Table 5.

Sequential Regression of SDS on FES Subscales, Latino and African-American Cultural Identity

	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model	*B*	*SE*	β	*t*	Sig.	Tolerance	VIF
(Constant)	60.370	10.144		5.952	.000		
Cohesiveness	-.134	.943	-.012	-.142	.887	.654	1.528
Expressiveness	1.236	1.047	.096	1.180	.239	.754	1.327
Independence	2.262	.981	.179	2.306	.022*	.826	1.211
Achievement Orientation	-.139	1.072	-.010	-.130	.897	.761	1.314
FES Intellectual/ Cultural Orientation	2.376	.936	.210	2.537	.012*	.725	1.379
Organization	.205	.863	.020	.237	.813	.719	1.391
Control	.765	.936	.064	.817	.415	.804	1.244
Latino Membership	9.711	4.174	.234	2.327	.021*	.489	2.045
AA Membership	7.362	4.679	.159	1.573	.117	.487	2.052
$R^2_{Model\ 2}$	.132						
F	2.953						
p	.003						

*$p < .05$

Table 6 shows the variance explained in the final regression analysis, consisting of a sequential MR of SDS using the previous two groups of variables with the addition of seven interaction terms created as the cross-products of the Latino group dummy variable and the seven FES subscales, as described in Keith (2006), added as a third step. The interaction terms were included only for the Latino sub-group for two reasons. First, the main effects for each of the dummy variables entered in Model 2 were significant for the Latino sub-group but not the African-American subgroup. Second, the entry of a large number of independent

variables would greatly reduce the power of the analysis to detect an effect when there was one, particularly given the relatively small sample size.

Table 6.
Amount of Variance in SDS Scores Explained by each Regression Model in Final Model

				Change Statistics			
Model	*R*	R^2	ΔR^2	F Change	df1	df2	Sig. F Change
1	.278	.077	.077	1.535	7	129	.161
2	.377	.142	.065	4.849	2	127	.009
3	.452	.204	.062	1.330	7	120	.242

Note: Model 1 predictors = Seven FES scales; Model 2 predictors = seven FES scales, cultural identity categorical variables; Model 3 predictors = seven FES scales, cultural identity categorical variables and seven FES scales X Latino group interaction terms. Both Models 2 and 3 were statistically significant; Model 2 (p = .018); Model 3 (p = .024).

In the final model (Model 3), perceived family environments explained 7.7% of the variance in self-determination and was not statistically significant, $R^2 = .077$, F (7, 129) = 1.54, $p = .161$. The addition of the Latino and African-American group membership variables increased the amount of variance explained by 6.5% and this change was statistically significant, $\Delta R^2 = .065$, F (2, 127) = 4.85, $p = .009$. The addition of the Latino by family environment subscales increased the amount of variance explained by 6.2%, and this change was not statistically significant, $\Delta R^2 = .062$, F (7, 120) = 1.33, $p = .242$. Both Model 2 (p = .018) and Model 3 (p = .024) were statistically significant overall. The final model explained 20.4% of the variance in self-determination ($R^2 = .204$, F (16, 120) = 1.92, $p = .024$).

Table 7 displays the coefficients for the individual predictors in the final model. In this model, only African-American group membership was statistically significant when controlling for the other variables in the analysis ($\beta = .282$, $p = .010$). It should be noted that the interaction terms show considerable collinearity, since they all share Latino group membership as a component and are therefore highly correlated with each other. This collinearity is associated with high standard errors for each coefficient, which lower the F values and reduce the likelihood of demonstrating statistical significance for any one coefficient.

Table 7

Results of Full Model Regression of SDS on Perceptions of Family Environments, Cultural Identity Variables, and Latino- Family Environment Interaction Terms

		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	Model	*B*	*SE*	β	t	*p*	Tolerance	VIF
Model 3	(Constant)	68.217	13.112		5.203	.000		
	Cohesiveness	-3.298	2.419	-.340	-1.364	.175	.106	9.399
	Expressiveness	5.027	2.848	.413	1.765	.080	.121	8.269
	Independence	3.035	1.992	.264	1.524	.130	.220	4.541
	Achievement Orientation	-.037	3.464	-.003	-.011	.992	.080	12.468
	Intellectual Cultural Orientation	.013	3.206	.001	.004	.997	.071	14.103
	Organization	2.399	2.276	.267	1.054	.294	.104	9.649
	Control	-1.509	2.226	-.139	-.678	.499	.159	6.298
	Latino Membership	20.418	13.371	.441	1.527	.129	.080	12.577
	AA Membership	45.059	17.168	.282	2.625	.010*	.573	1.744
	Cohesiveness ethnicity interaction	3.707	2.662	.584	1.393	.166	.038	26.478
	Expressiveness ethnicity interaction	-4.969	3.112	-.619	-1.596	.113	.044	22.694
	Independence ethnicity interaction	-2.310	2.284	-.336	-1.011	.314	.060	16.652
	Achievement ethnicity interaction	-.027	3.657	-.004	-.007	.994	.020	48.902
	Model	B	*SE*	β	t	*p*	Tolerance	VIF
	Intellectual/Cultural ethnicity interaction	1.889	3.408	.257	.554	.580	.031	32.437
	Organization ethnicity interaction	-2.935	2.554	-.445	-1.149	.253	.044	22.579
	Control ethnicity interaction	2.074	2.556	.270	.812	.419	.060	16.630
	$R^2_{Model\ 3}$	.204	*F*	1.924	*p*	.024		

* $p < .05$

Discussion

The findings from this study provide some support for the idea that family environments are associated with levels of student self-determination. Students' perceptions of their family environments, based on descriptions that are conceptually related to Deci and Ryan's concepts of autonomy, relatedness and competence, were related to higher levels of self-determination for the sample as a whole. However, these associations also appear to be moderated by factors involving cultural identity.

One possible explanation for the finding that Latino students demonstrated higher levels of self-determination than Euro-American students may lie in the research that explains academic motivation in recent immigrants. Some research has suggested that students who are immigrants, or the children of recent immigrants (second generation), report a strong desire to do well academically due to guilt associated with their parents' sacrifices in immigrating to the US (Suarez-Orozco, 1989; Suarez-Orozco &Suarez-Orozco, 1995). It is possible that this undercurrent of motivation also explains these Latino students' perceptions of their self-determination. Latino students may want to perceive themselves as self-determined in order to believe they are going to meet their parents' expectations of success. On the other hand, these factors cannot be said to operate among students of African-American backgrounds, who showed similarly high levels of self-determination compared to their Euro-American counterparts.

However, there is another potential explanation for the higher self-determination scores among both Latino and African-American students. The higher self-determination scores for Latino students may also have to do with the demographics of the community from which the sample was drawn. Within the public school system, 64% of the population is Latino, 25% is African American, 9% is white of non-Latino origin, and 2% is multi-racial/other (Miami Dade County Public Schools, 2009). Within this context, both Latino and African-American students represent the majority and Euro-American students are in the minority. Teachers and administrators reflect this distribution as well. It may be that in this particular environment, students from Euro-American backgrounds encounter fewer opportunities to become self-determined as they are, in this case, the minority in a literal sense. Latino and African-American students may be able to more readily access available community and school resources that can support their goals if those resources are more tailored to the majority of students in the school system.

The Relationship between Perceptions of the Family Environment and Level of Self-determination

The regression of SDS on the seven FES subscales yielded a statistically significant effect size, suggesting that perceptions of the family environment are associated with variability in levels of self-determination. This finding supports Deci and Ryan's theoretical model, as well as other research suggesting that environments that promote *autonomy,*

relatedness and competence nurture the development of self-determination. However, the relationship between these perceived family environments and self-determination changed considerably when cultural identity was taken into consideration.

While the patterns of correlations between FES variables and self-determination provide some support for the idea that family environments that foster autonomy, relatedness and competence may enhance self-determination, these vary according to cultural background. As predicted by SDS theory, family environments that encourage Independence were associated with increased self-determination, but this association was stronger among African-American students. Similarly, environments that foster an Intellectual/Cultural Orientation were also positively associated with self-determination, but the relationship did not hold for students of Euro-American backgrounds. The notion that environments that are less controlling should foster self-determination only held true for students of Euro-American descent. This is consistent with the idea that for students of Western European decent, self-determination is associated with individualism. This relationship did not hold true for members of Latino or African-American descent, however.

Cultural Differences in the Relationship between Perceptions of the Family Environment and Self-determination

While perceived family environments showed a small but significant effect on self-determination, the addition of the cultural group membership variables in the regression equation further explored the question of whether cultural background may have an additional effect independent of family environments. Before considering the interactions between Latino membership and perceived family backgrounds, Latino background alone was a statistically significant predictor of self-determination.

The addition of the interaction terms for Latino background and perceived family environments reveal that compared to Euro-American students, the kinds of family environments that may enhance self-determination for Latino students may be different. Examination of the standardized β coefficients for the interaction terms reveals that Latino group membership may serve as a moderator of the relationship between perceived family environments and self-determination. The Expressiveness term, for example, was negatively associated with levels of self-determination in Latino students, whereas Expressiveness was a positive predictor of self-determination in the comparison group, the Euro-American students. Similarly, Cohesiveness was a negative predictor of self-determination for the Euro-American students but interacted with Latino background in a positive direction. For Latino families, it appears that more structured, cohesive environments serve to enhance self-determination, whereas the opposite would seem to hold true for Euro-American students.

Similarly, the positive association between Independence and self-determination was reversed for students from Latino backgrounds, as evidenced by the negative interaction between Latino group membership and Independence. Here again, family environments that foster independence may not necessarily be as conducive to enhancing self-determination

among Latino students as they are among African-American or Euro-American students with disabilities.

Finally, while perceived low control in the family environment was associated with self-determination in Euro-American students, it was positively associated with self-determination among Latino students, as evidenced by the negative interaction term. These differences, while not statistically significant, may still reflect a possible moderating effect of cultural identity as the lack of robustness in the findings may also reflect the caveat noted by Oyserman et al. (2002) that cultures may reflect elements of both individualistic and collectivistic practices and values.

The findings described in this paper support the general theoretical position posited by Deci and Ryan (1985, 2000, 2007) that perceived conditions in the family that support needs associated with autonomy, relatedness and competency may promote increased levels of self-determination among student with disabilities. However, the findings also suggest that cultural background may be a variable of interest in evaluating the conditions that support self-determination. Thus, schools may need to be sensitive to the possibility that conditions that foster self-determination and successful transition among Latino students may differ from school-related normative expectations. Latino students' self-determination may be enhanced, for example, by continuing to live with their families after graduation, since cohesive family environments may be more associated with self-determination in this population.

Limitations of the Study

This study had several limitations that must be taken into consideration when drawing conclusions from the data and generalizing to a broader population. First, the analyses were run with a specific sample of Latino, African-American and Euro-American students with disabilities. Generalizations made from the data are limited to these groups as the population was drawn from a community where Latinos and African-American students are the de-facto majorities compared to students from Euro-American backgrounds. Second, generational immigration status must be considered a potential confound when interpreting findings related to differences reported for the Latino group.

Third, as with any research on cultural differences, the grouping of individuals from a variety of different countries, each with its own nuances, into a categorical grouping blurs what may be real differences between these cultures. Finally, other factors known to be associated with self-determination, such as age, gender, and school environments, were not taken into consideration in this study. The addition of these variables into the regression equations may have altered some of the correlations and effect sizes, and coefficients obtained from the analyses.

Implications for Further Research

Much of the research on psychological constructs such as self-determination is conducted without regard to the potential effects of cultural identity. This study suggests that cultural background may be associated with levels of self-determination, and that it may moderate the impact of other factors, such as family environment, on self-determination.

One direction for future research is to conduct a follow-up study with a larger sample of students that takes into account the variables of gender, age, and immigrant generational status. Another area for further research is to conduct qualitative studies with students, parents and teachers to identify factors they may consider important in the development of self-determination that may not have been previously considered relevant.

Perhaps most importantly, the question remains as to whether self-determination is equally important to the successful transition of all students with disabilities, irrespective of cultural background. Even though Latino students perceived themselves as more self-determined, it does not necessarily follow that self-determination is an important cultural value for Latino students. Further research is needed with students with learning disabilities from other cultural backgrounds to examine possible differences in the meaning of the concept of self-determination among people from different backgrounds. This research can also examine potential differences in perceptions of the conditions that support the development of self-determination.

Additional cross-cultural research is critical to a meaningful continuation of self - determination research inquiry and an expansion of qualitative research is also needed to identify cultural beliefs about what parents and students consider important for "successful" academic achievement and post-school transition. If the concept of self-determination is to have meaningful implications for students across a variety of countries and cultures, schools must be sensitive to the meaning self-determination has for students in those cultures. Finally, the relative importance of providing conditions that nurture autonomy, relatedness and competence may also vary if culture has a moderating effect on the conditions that enhance self-determination.

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