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Mothers of Children with Autism

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BY

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## Abstract

This archival study evaluated data gathered from 105 mothers of children with autism. Fifty-four of the mothers were Hispanic and 51 were Caucasian. Differences in parental burden were examined. This study also examined whether Hispanic mothers of children with autism would rate autism behaviors to be more severe than Caucasian mothers of children with autism. Lastly, the study examined whether Hispanic mothers of children with autism would view their children as less responsible for their behaviors than Caucasian mothers of children with autism. Independent samples *t*-tests were utilized to compare differences. No significant differences were found between Caucasian and Hispanic mothers in parental burden experienced or in severity of behaviors reported. However, results indicated that Caucasian mothers of children with autism reported higher attributions of behavior than Hispanic mothers of children with autism.

## Parental Burden and Severity of Behaviors Reported Among Mothers of Children with Autism

Research on autism has grown significantly since its first recognition in 1943. Kanner first to use the term “autism” when he presented 11 case histories of children with shared stereotyped, echolalia, and social remoteness behavior patterns (Croen, Grether, & Selvin, 2002). Autism may sometimes be referred to as early infantile autism, childhood autism, or Kanner’s autism (American Psychiatric Association [APA], 2004; Gibson, 1968). Today, pervasive developmental disorders (PDD) and autism spectrum disorders (ASD) have been used to describe a group of disorders with similar symptomatology (Croen et al., 2002).

Individuals with autism demonstrate communication, social and behavioral patterns which present challenges to families, educators, and service providers (Dyches, Wilder, Sudweeks, Obiakor, & Algozzine, 2004). Additionally there is often an associated diagnosis of mental retardation which can range from mild to profound. These symptoms of autism must be present before the age of 3 years (*DSM-IV-TR*, APA, 2004). Autism is so complex that it can be defined at three interdependent levels: a neurological disorder related to the brain development, a psychological disorder, and a relationship disorder (Kabot, Masi, & Segal, 2003). As a neurological disorder, autism has been associated with EEG abnormalities as well as neurological symptoms (*DSM-IV-TR*, APA, 2004). As a psychological disorder, autism has been described as a disorder that affects cognitive abilities, emotions, and behaviors. Lastly, autism has been defined as a relationship disorder due to the marked atypical social interactions among those with the disorder (Kabot et al., 2003).

### *Prevalence*

In the 1970s, the prevalence of autism was 1 in 2500; however, it has increased dramatically over the past 20 to 30 years (Kabot et al., 2003). In 2007, Centers for Disease Control and Prevention's (CDC) Autism and Developmental Disabilities Monitoring (ADDM) Network found that about 1 in 150 8-year-old children in several areas of the United States have an ASD. There is a boy-to-girl ratio of 4:1. The significant increase is attributed to heightened awareness of professionals and laypersons, more frequent physical checkups, and the possibility of unknown precipitating factors in the environment (Kabot et al., 2003). Parents have also been found to seek a diagnosis earlier when the symptoms are extreme rather than when they are mild (Dyches et al., 2004). Racial and cultural group comparisons have found disparities among children served under the title of autism. According to the United States Department of Education (2002), Blacks or Asian/Pacific Islanders were being served under the label of autism about twice as often as students who were American Indian/Alaskan or Hispanic.

### *Communication*

Children with autism all have communication deficits; therefore, a communication impairment is a central feature of autism (*DSM-IV-TR*, APA, 2004; Kabot et al., 2003). At an early age it may be evident that a child does not imitate sounds or gestures (Kanner, 1943). Furthermore, half of the individuals with autism do not develop functional speech (Dyches et al., 2004). At times, a child may only repeat what has been said to him or her (echolalia) (Charlop, 1983). They may also use speech for the purpose of self-stimulation instead of communication (Wahlberg, Obiakor, Burkhardt, & Rotatori, 2001). Most children with autism only communicate to indicate needs or to

deliver monologues (Downs & Smith, 2004). Unique behavioral patterns may also make it difficult to communicate with children with autism as they may not have adequate receptive language skills (*DSM-IV-TR*, APA, 2004).

### *Social*

Children with autism also demonstrate difficulties in forming relationships (Kabot et al., 2003). In a social setting, children with autism do not seek opportunities to share enjoyment of activities with others (Downs & Smith, 2004). Unique behavioral patterns may also make it difficult rarely respond to social overtures made by others. A lack of empathy is also prevalent (Downs & Smith, 2004).

### *Behavior*

Children with autism display restrictive, repetitive, or stereotyped patterns of behavior or interests. These behaviors may also be seen as purposeless motor movements. Some of these behaviors may be self-harming, such as head banging. Toe-walking, spinning, and rocking are other common motor behaviors found among children with autism (Kronenberger & Meyer, 2001). As a result of these motor behaviors, children with autism may be characterized by conduct problems (Lecavalier, Leone, & Wiltz, 2006) and a severe lack of cooperative behavior (Downs & Smith, 2004). Some of the uncooperative behavior may be linked to the resistance to change that they demonstrate. Often, children with autism are unable to disengage from familiar routines, such as taking a particular route to school or having a specific bedtime routine. These ritualistic behaviors are problematic for parents (Hardman, Drew, & Egan, 2005). Tantrums may also occur as a result of a change in environment or even for no apparent reason. Children



demonstrate such maladaptive behaviors, that numerous studies have addressed interventions to ameliorate these behaviors (Margolies, 1977).

### *Cognitive Functioning*

Children with autism have uneven intellectual profiles (Baker-Ericzen, Brookman, & Stahmer, 2005), but some researchers have suggested that children with autism can be categorized according to intelligence levels (Newsom, & Rincover, 1989). Autism has been found to coexist with mental retardation in about 75% of the cases (Dyches et al., 2004), with 60 to 75% of these children in the severely to profoundly retarded range of intelligence (Kronenberger & Meyer, 2001). Those children with greater levels of mental retardation experience greater deficits across other areas such as communication and adaptive functioning (Morgan, 1990). Realistic goals for these children include self-care skills, following instructions, basic communication, and basic social skills. In contrast, those individuals with autism within the mildly retarded or higher ranges of intelligence may not be as negatively impacted in other areas and may be able to function at a nearly normal level (Kronenberger & Meyer, 2001).

### *Adaptive Functioning*

Research indicates a relationship between cognitive functioning and adaptive functioning among children with autism (Liss, Harel, & Fein, 2001). Adaptive functioning may be defined as the degree to which a child functions and cares for him or herself adequately, independently, and effectively in a variety of environments (Kronenberger & Meyer, 2001). Adaptive behavior is usually considered relative to a child's age. Toileting difficulty, for example, is a major problem behavior among children with autism (Dalrymple & Ruble, 1992). Although older individuals with autism

may show some mild improvements in specific areas, such as social skills and language, these minimal improvements are seldom sufficient for independent living (Rutter, 1970).

### *Assessment*

The assessment of autism involves a complex process which takes several hours to complete. An autism assessment involves a multidisciplinary evaluation of social behavior, language, nonverbal communication, adaptive behavior, motor skills, atypical behaviors, and cognitive status by a team of professionals. Several assessment instruments have been designed to diagnose autism (Kabot et al., 2003). For example, the Gilliam Autism Rating Scale (Gilliam, 1995) is a norm-referenced assessment of severity of autistic symptoms based on a national sample of individuals with autism. Items are based on the definitions of autism adopted by the Autism Society of America and the *DSM-IV*. Behaviors are grouped into four subtests including stereotyped behaviors, communication, social interaction, and developmental disturbances. Validity and reliability of the instrument are high (Baker-Ericzen, Brookman, & Stahmer, 2005).

### *Attribution*

Maladaptive behaviors, communication deficits, and socialization difficulties are independently sufficient to warrant concern from a parent; however, parents of children with autism experience difficulties across these three areas. Parenting the average child is different from parenting a child with autism who experiences the extremes of behavioral deficits in communication and behavioral excesses in maladaptive behaviors. According to Weiner's theory of motivation and emotion (1986), whether a child is judged to be responsible for his or her behavior directly affects the parent's negative emotions and behavioral reactions towards the child (Chavira, Lopez, Blacher, & Shapiro, 2000).

Chavira et al. found that mothers of children with developmental disabilities or mental retardation who attributed a high degree of responsibility were significantly more likely to report negative emotions like anger or frustration and to report that they respond in aggressive ways than those who attributed a low degree of responsibility. These mothers were also more likely to assign higher responsibility to a child when the problem was characterized as a behavioral excess than as a behavioral deficit. This becomes a complex question with autism as behavioral excesses and behavioral deficits may coexist.

### *Caregiver Stress*

Research on autism and other disabilities has recently expanded from the study of the individuals experiencing the disorder to those around them (Dyches et al., 2004). Other disabilities affecting caretakers include Alzheimer's disease (Cox & Monk, 1993), disruptive disorders (Calzada, Eyberg, Rich, & Querido, 2004), developmental disabilities (Wolf, Noh, Fisman, & Speechley, 1989), and developmental delays (Feldman, Hancock, Rielly, Minnes, & Cairns, 2000). Autism, among other disabilities, has promoted an increased interest in caregiver stress and burden. A stressor is "a demand placed on the family that produces, or has the potential of producing, changes in the family system" (McCubbin et al., 1998, p. 6). Burden may be best described as the patient's effect on the family or the effect that living with the patient has on the family's daily routines and even health (Angold et al., 1998). These terms are often used interchangeably as they both emphasize a change-promoting effect on the family.

*Personal well-being.* Empirical studies have suggested that parenting children with developmental disabilities has negative effects on the well-being of parents or caregiver, experienced as stress or burden (Keller & Honig, 2004; Wolf et al., 1989;).

Studies on caregiver burden have found that the amount of burden increases due to factors such as lack of time for oneself and the belief that one could be doing a better job as a caregiver (Cox & Monk, 1993). Depression, spousal problems, limitations placed on family opportunities (Koegal et al., 1992), and social isolation are other negative outcomes identified among parents of children with autism (Blacher, 1984; Dunn, Burbine, Bowers, & Tantleff-Dunn, 2004). Other studies have also explored the negative effects of caregiving on work performance, and career choices (Freeman, Litchfield & Warfield, 1995). Even the delayed or forfeited goals of caretaker are a concern (Kohut, 1966).

*Severity of impairment.* The severity of impairment has been found to be an important predictor of parental stress (Tobing & Glenwick, 2002). The level of impairment has been found to substantially contribute to the amount of parental burden experienced by parents of children with psychiatric disorders (Angold, 1998; Tobing & Glenwick, 2002). Dependency needs of the patient have also been found to affect the parent caretaker and the child's high demands and need for care has been found to be related to maternal stress (Cox & Monk, 1993).

*Severity of behaviors.* The severity of behaviors is another contributing factor to parental stress levels (Feldman, Hancock, Rielly, Minnes, & Cairns 2000; Keller & Honig, p. 337; Baker-Ericzen et al., 2005). The demands of managing extreme problem behaviors affect parental stress levels (Ellis, 2002). Baker and Heller (1996) found that parents of children with moderate and high levels of disruptive behaviors experience more stress and a lower sense of parenting efficacy. Parents have also indicated that behavior problems are strongly associated with stress (Lecavalier, Leone, & Wiltz, 2006).

Overall, research has also found that parents of children with ASD experience higher levels of stress than parents of typically developing children (Baker-Ericzen et al., 2005).

In addition to the impairment level and severity of behaviors, various studies have examined the relationships between specific autism behaviors and stress (Baker-Ericzen et al., 2005; Brookman, & Stahmer, 2005; Bebko, Konstantareas, & Springer, 1987; Kasari & Sigman, 1997; Lecavalier et al., 2006). Results have been inconsistent as to which autism behaviors cause the most stress for parents. Parents who reported greater stress had children who were less responsive in social interactions with others (Kasari & Sigman, 1997). Social impairments among children with autism have been found to cause the most maternal stress (Baker-Ericzen et al., 2005). Bebko and colleagues (1987) found that language and cognitive abilities to be the most severe and stressful autism features. Lecavalier et al. (2006) found that conduct problems are associated with parental stress and suggested that externalized behaviors are the more strongly associated with parental stress. Which autism symptom elicits most stress remains unknown; however, most features of autism are stressors.

*Other challenges.* Children with autism are born without any indications of abnormalities, so expectations are of the average child. After time, parents of children with autism may experience greater stress because parents also have to deal with losing their previously “normal” child. Because children with autism live with the disability for life, the long-term care foreseen by caretakers can be a challenge as it involves a variety of interventions for the disabled individual (Baker-Ericzen et al., 2005).

*Parental stress and health care attitudes.* Levels of stress or burden have been found to affect parental attitudes about seeking care for their children. Research has indicated that burden is a predictor of initial service use by parents of children with disorders (Angold et al., 1998). Research has also emphasized the effects of parental stress on the well-being of the disabled child (Plienis, Robbins, & Dunlap, 1988). Stress levels have been linked with participation in interventions. Parents with less stress have been found to participate in interventions more often than those with higher stress levels (Koegel, Bimbela, & Shreiberman, 1996). Research implies children with autism benefit when parents demonstrate lower stress levels.

#### *Culture and Caretaking Behavior*

Hispanics are currently underrepresented in the area of autism, as research indicates that fewer Hispanic children are served under the label of autism. The U.S. Census Bureau (2003) found that Hispanic and American Indian students with autism are served under the label of autism less frequently than students within other racial groups including White, Asian, and Black. It is speculated that this is due to the lack of services sought by Hispanics. Health-care-seeking behavior is higher among individuals with greater parental burden (Angold et al., 1998); however, although Hispanics experience many strains associated with caregiving, they do not seek formal assistance (Carolle & Monk, 1993). European Americans have been found to seek formal health care sooner than Hispanics when faced with a mental illness (Guarnaccia & Parra, 1996). Even when awareness of support groups has been present, Hispanics demonstrate differences in help-seeking behaviors (Carolle & Monk, 1993). Researchers suggest that differences in the family structure are a possible reason for this trend. Filial obligation differences do exist

between Caucasian caregivers and other minority groups. For example, Hispanics and Black caregivers have been found to endorse more strongly held beliefs about filial support (Connell & Gibson, 1997).

Minority families have social support networks that include more kin than those of European-American families, indicating that support networks differ among ethnic groups (Guarnaccia, Peter, & Parra, 1996). Familism and collectivism are two commonly used terms when referring to family dynamics within Hispanic families. Familism is a term used to describe a strong family cohesion found among Hispanics. Familial cohesion may circumvent the use of professional services if family values conflict with the standards of majority culture (Dyches et al., 2004). Furthermore, familism has been found to cause the underutilization of formal services (Purdy & Arguello, 1992). Conversely, familism has been correlated with lesser caregiver burden among Hispanics within the United States caring for individuals with dementia (Losada et al., 2006).

Collectivism is another cultural dimension which that describes the relationship of the individuals to their social groups. High levels of empathy and willingness to make personal sacrifices for the group are characteristic of a collectivistic society. Within the Hispanic culture, the family is considered the collective group which many times includes extended family (Lobato, Kao, & Plante, 2005).

Difference in help-seeking behaviors among Hispanics is also explained by their reluctance to share familial problems with outsiders or admit that caring for a family member is too demanding (Carolle & Monk, 1993). This resignation has been seen as an obstacle to interventions within the Hispanic community (Carolle & Monk, 1993).

Although a filial support system may seem beneficial and research has suggested its benefits for child-rearing and caretaking (Lobato, Kao, & Plante, 2005), dealing with a child with a disability and family simultaneously may bring on additional stress due to additional anxiety, overprotection, rigidity, lower levels of coherence, and less control within the family (Heiman, 2002).

Another possible reason for reluctance to receive formal services among the Hispanic population is the lack of culturally sensitive interventions for the Hispanic population. One study found that greater awareness and use of services among Latino parents of children with disabilities was associated with greater dissatisfaction with services. These individuals indicated dissatisfaction due to issues which could be described as culturally specific. Issues included negative interactions with doctors and other health professionals who would not take time to explain their child's condition, therapists who were perceived to not do a good job with therapy on their children, feelings of discrimination, lack of accessibility to services or the information needed, and the lack of written and oral communication in Spanish through the system (Bailey, Skinner, Rodriguez, Gut, & Correa, 1999).

Hispanic mothers of children with autism may also feel more challenged due to differences in school cultures. One study found that school complaints appeared to be a strong motivator for help-seeking among Hispanic mothers (Arcia & Fernandez, 2003). Other research has found that Hispanics have a greater respect for and give more credibility to educators and the school system than do Caucasians. Because children with autism usually demonstrate symptoms before they begin school, Hispanic mothers may



see atypical symptoms as normal until they are called to their attention by the child's school. Hence, time may elapse and symptoms may worsen.

#### Rationale for the Current Study

The aim of this study was to examine differences in parental burden among Caucasian and Hispanic mothers of children with autism. Numerous studies have been conducted on how families adapt to having children with disabilities; however, little research exists regarding family adaptation to autism in terms of cultural perspectives (Tomanik, Harris, & Hawkins, 2004; Dyches et al, 2004). Identifying cultural differences results in more culturally tailored interventions. Mothers were examined in this study, because mothers have been found to take on most of the daily responsibilities for the care of their children with handicaps (Marcenko, & Meyers, 1991, Tomanik et al., 2004).

This study also examined whether Hispanic mothers of children with autism rated autism behaviors to be more severe than Caucasian mothers of children with autism. Cultural obstacles are encountered by Hispanics in the U.S.; Hispanic families wait longer to seek formal services than Caucasian families, causing the problem behaviors to intensify. Over time, the autism behaviors of Hispanic children may intensify due to the delay in seeking formal services. Hispanic mothers may generally wait longer to seek formal services due to their strong filial networks, familism values, and hence, their access to informal support systems (Dyches et al., 2004; Guarnaccia & Parra, 1996).

This study also explored which autism behaviors are rated as most severe by Hispanic and Caucasian mothers of children with autism. Consequently, interventions for Hispanics may be modified if Hispanics have greater difficulty dealing with specific behaviors within autism. Current literature emphasizes the need for intervention

development and cultural adaptation research; therefore, this study would advance research in this area (Bernal, 2006; Betancourt & Lopez, 1993, Connell & Gibson, 1997).

Last, this study examined whether Hispanic mothers of children with autism view their children as less responsible for their behaviors than Caucasian mothers of children with Autism. Evidence has been found that family members' attributions of control or responsibility are related to their behavioral responses to the disabled or ill relative (Chavira et al., 2000). Additionally, when illness is attributed to the person rather than the illness, resentment increases (Williamson et al., 2005). Therefore, this study assessed whether parental burden was greater when parents believe their children with autism are in greater control of their behaviors. Addressing the attribution theory among Caucasians and Hispanics may also examine the generalizability of the Anglo-American attribution theory on diverse cultures (Betancourt & Lopez, 1993).

Specific hypotheses:

H1: Hispanic mothers would experience greater parental burden than Caucasian mothers.

H2: Hispanic mothers would rate behaviors to be more severe than Caucasian mothers of children with autism.

H3: Hispanic mothers of children with autism would view their children as less responsible for their behaviors than Caucasian mothers of children with autism.

## Method

### *Sample*

Six hundred mothers from a mailing list of subscribers from the Center of Autism and Related Disabilities in Southeast Florida were invited to participate in the study. The sample was composed of 105 mothers of children (aged 2 to 7 years) with an autism diagnosis. Of these, 105 mothers responded. Fifty-four of the mothers were Hispanics and fifty-one were Caucasian. Seventy-Five percent of the participants had a college education.

### *Measures*

*Demographic information.* Information gathered from the participants included background and demographic information. The demographic questionnaire assessed the child's age, race, gender, diagnosis, and mother's demographic information.

*Parental burden.* The Parental Burden Scale consisted of 15 items which assessed the burden experienced by parents when dealing with their children's developmental tasks (Hastings & Johnson, 2001). Task examples included difficulty experienced when dressing the child and difficulty controlling the child's public behavior. Scale items assessed mothers' perceived difficulty in dealing with the tasks regardless of who handled the task. (1= *no difficulty*; 5= *severe difficulty*). Kendall's Coefficient of Concordance or *W* is .95 (Hastings & Johnson, 2001).

*Autism severity.* The Gilliam Autism Rating Scale (GARS) is a standardized test designed to assess autism symptoms and other severe behavioral disorders for individuals aged 3 to 22 (Gilliam, 1995). Items on the GARS are based on the definitions of autism adopted by the Autism Society of America and the *DSM-IV-TR* (APA, 2004). The GARS

Behavioral Checklist consists of 4 subscales evaluating stereotyped behaviors, communication, social interaction, developmental, and autism quotient. The assessment also evaluates the severity of the autism behavior.

The behaviors on this measure are assessed using objective, frequency-based ratings. The entire scale takes about 5 to 10 minutes to complete. Behaviors are rated based on the frequency of each behavior on a 4-point scale, from “*Never Observed*” to “*Frequently Observed*.”

Internal consistency of the GARS is high: Coefficients alpha of .90 for Stereotyped Behaviors; .89 for Communication; .93 for Social Interaction; and .96 for the Autism Quotient. Test-retest and interscorer reliability in the .80s and .90 have also been reported (Gilliam, 2005).

The validity of the GARS was demonstrated by confirming that the test items of the subtests are representative of the characteristics of autism and that the subtests are strongly correlated with each other and to performance on other tests that screen for autism. Lastly, the GARS performance discriminates persons with autism from persons with other severe behavioral disorders such as emotional disturbance, mental retardation, speech and language disorders, and other disabling conditions.

*Attribution of responsibility.* The following three attributional dimensions were assessed: responsibility (“Is the child responsible for the way he/she behaved?”; “Is he/she to blame for what he/she did?”), intentionality (“Did he/she mean to act this way?; “Did the child behave this way on purpose?”), and controllability (“Could the child have acted in a different way?”) (Chavira et al., 2000). A Cronbach alpha of .75 demonstrated

reliability of this measure. The responses are on a 6-point Likert scale (1 = *strongly disagree* and 6 = *strongly agree*).

## Results

Independent samples *t*-tests were utilized to compare differences between Caucasian and Hispanic mothers of children with autism. Seventy-five percent of the mothers were college educated, indicating that test results could not be attributed to differences in exposure to education. With a *t*-test for groups of 54 and 51, there is a power of .8 to detect a medium effect ( $d = .5$ ) effect

To test the first hypothesis, that Hispanic would experience greater parental burden than Caucasian mothers, an independent samples *t*-test was used to compare the mean levels of parental burden experienced in Hispanic ( $m=40.18$ ,  $sd=8.75$ ) and Caucasian ( $m=39.42$ ,  $sd=9.07$ ) mothers. No significant differences were found between the two groups  $t(98) = .43$ .

To test the second hypothesis, that Hispanic mothers of children with autism rated behaviors to be more severe than Caucasian mothers, an independent samples *t*-test was used to compare the mean behavior severity levels endorsed among Hispanic ( $m=51.24$ ,  $sd=20.59$ ) and Caucasian ( $m=45.94$ ,  $sd=17.48$ ) mothers. No significant differences were found between the two groups  $t(103) = 1.42$ .

To test the third hypothesis, that Hispanic mothers would view their children as less responsible for their behaviors than Caucasian mothers of children with autism, an independent samples *t*-test was utilized to compare attribution levels between Caucasian and Hispanic mothers. Results indicated that Caucasian ( $m=14.16$ ,  $sd=4.15$ ) mothers of

children with autism reported significantly higher attributions of behavior than Hispanic mothers ( $m=11.68$ ,  $sd=4.91$ ) of children with autism  $t(102) = 2.77$ ,  $p = .007$ .

### Discussion

One aim of this study was to determine whether Hispanic mothers would experience greater parental burden than Caucasian mothers. Although familism has been correlated with lessened caregiver burden among Hispanic caretakers (Losada et al., 2006), familism has also been found to cause the underutilization of formal services (Purdy & Arguello, 1992). Higher levels of autism symptomatology have also been associated with higher stress levels (Hastings & Johnson, 2004). Additionally, dealing with a child with a disability and family simultaneously may bring on additional stress due to additional anxiety, overprotection, rigidity, lower levels of coherence, and less control within the family (Heiman, 2002). As a result, it was hypothesized that parental burden would be greater among Hispanic parents due to their minimal use of formal services, the exacerbation of behavioral symptoms over time and the stress of simultaneously dealing with a family and a disabled child. Findings did not support previous research and found no differences in parental burden between Hispanic mothers and Caucasian mothers of children with autism. Because the analyses had sufficient power, results suggest that parental burden among mothers of children with autism is experienced across cultures. Additionally, behaviors are perceived to be similarly severe across Caucasian and Hispanic mothers. Therefore, interventions and programs should be developed to assist mothers experiencing this burden across cultures.

This study also examined whether Hispanic mothers of children with autism rated autism behaviors to be more severe than Caucasian mothers of children with autism.

Previous research has indicated that Hispanic mothers generally wait longer to seek formal services due to their strong filial networks, familism values, and hence, their access to informal support systems (Dyches et al., 2004; Guarnaccia & Parra, 1996). It was hypothesized that over time, the autism behaviors of Hispanic children would intensify and that Hispanic parents would rate their children's behaviors as more severe than Caucasian parents. No significant differences were found between the severity of behaviors reported by Caucasian mothers and Hispanic mothers; therefore, findings did not support previous research.

As hypothesized, Hispanic mothers of children with autism viewed their children as less responsible for their behaviors than Caucasian mothers of children with autism. The findings support the research by Chavira et al. (2000), in which Latina/Hispanic mothers viewed their child with a developmental disability as not being responsible for their problem behaviors. Results from this study may be considered a contribution to research on the attribution theory and previous research by Chavira.

Socioeconomic Status (SES) levels have been found to affect attribution styles across individuals (Phillipson, 2006). However, in this study, significant differences in attribution styles could not be attributed to differences in education exposure. This is because most of the sample (75%) had been exposed to a college education, making it a predominantly homogenous sample.

Significant differences in attribution styles could also not be accounted by differences in parental burden or differences in the severity of behaviors across Hispanic and Caucasian groups. This is because no differences were found in parental burden or severity of behaviors across Hispanic and Caucasian groups. This further supports the

third hypothesis. Findings also imply that attributional style may not be similar across immigrant groups. One study (Mah & Johnston, 2007) found that Chinese immigrant mothers of children with ADHD saw their children as less responsible for prosocial behavior than Euro-Canadian mothers. Knowing about differences in attribution style across cultures could be beneficial when creating interventions. Attributional style may be an important variable to consider when targeting intervention effectiveness. Hispanics are less likely to react harshly and may not seek services in general because the child is accepted more for his or her behavior and the child is not viewed to have the ability to improve; therefore, it may be beneficial to educate Hispanic parents on the effectiveness of interventions and the improvements that can be made.

Unlike similar research in this area, in which samples have been collected from comprehensive community settings (Mandell, Walrath, Manteuffel, Sgro, & Pinto-Martin, 2005), this sample was obtained from a homogenous autism population. Therefore, the characteristics of these children and the services they received were similar to those of a general population of children with autism. Additionally, the data were collected to study children with autism and included measures of behavior that are common among children with autism, such as the GARS.

Additional studies are needed to replicate and extend the results presented. One extension may be to examine the role of the severity of the core features of autism on caregiver stress. Additionally, because the use of prayer, faith and religion has been found to be a coping mechanism among Hispanic caretakers (Connell & Gibson, 1997), attributions of behavior and spirituality among Hispanic parents may be investigated.



Although results from this study cannot be generalized to lower SES groups, this study may also be expanded to include lower SES levels and explore those differences.

Several limitations in the current study must be noted and addressed in future studies. A more extensive sample could assess the possible effects of other culture related variables such as acculturation levels, language choice, and nativity (Pina & Silverman, 2004). The children in this study were also gathered from individuals who were on the mailing list of a local center for autism, meaning that these children had already been diagnosed and perhaps had sought services at the center. Furthermore, characteristics of children with autism receiving treatment may be different from those not currently seeking treatment. Data were also based primarily on caregiver report; therefore, recall and caregiver bias could have influenced responses. Age of children varied and was not accounted for. Research has demonstrated that varying levels of stress among parents of children with autism have been associated with the age of the child (Dewey, 1999). Further research can explore how the age of a child with autism affects parental attributions of behavior.

## References

- Angold, A., Messer, S. C., Stangl, D., Farmer, E. M., Costello, E. et al (1998). Perceived parental burden and service use for child and adolescent psychiatric disorders. *American Journal of Public Health, 88*, 75-80.
- American Psychiatric Association. (2004). *Diagnostic and statistical manual of mental disorders* (4<sup>th</sup> ed; test rev.; DSM-IV-TR). Washington, DC.
- Arcia E., & Fernandez, M. C. (2003). Presenting problems and assigned diagnoses among young latino children with disruptive behavior. *Journal of Attention Disorders, 6*, 177-185.
- Bailey, D., Skinner, D., Rodriguez, P., Gut, D., & Correa, V. (1999). Awareness, use, and satisfaction with services for Latino parents of young children with disabilities. *Exceptional Children, 65*, 367-381.
- Baker, B., & Heller, T. (1996). Preschool children with externalizing behaviors: Experience of fathers and mothers. *Journal of Abnormal Child Psychology, 24*, 513-532.
- Baker-Ericzen, M., Brookman-Fraze, L., & Stahmer, A. (2005). Stress levels and adaptability in parents of toddlers with and without autism spectrum disorders. *Research and Practice for Persons with Severe Disabilities, 30*, 194-204.
- Bebko, J., Konstantareas, M., & Springer, J. (2005). Parent and professional evaluations of family stress associated with characteristics of autism. *Journal of Autism and Developmental Disorders, 17*, 565-576.
- Bernal, G. (2006). Intervention development and cultural adaptation research with diverse families. *Family Process, 45*, 143-152.

- Betancourt, H. & Lopez, S. (1993). The study of culture, ethnicity, and race in American psychology. *American Psychologist*, 48, 629-637.
- Blacher, J. (1984). Attachment and severely handicapped children: Implications for Interventions. *Journal of Developmental & Behavioral Pediatrics*, 5, 178-183.
- Calzada, E. J., Eyberg, S. M., Rich, B., & Querido, J. G. (2004). Parenting disruptive preschoolers: Experiences of mothers and fathers. *Journal of Abnormal Child Psychology*, 32, 203-213.
- Chavira, V., Lopez, S.R., Blacher, J., & Shapiro, J. (2000). Latina mothers' attributions, emotions, and reactions to the problem behaviors of their children with developmental disabilities. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 41, 245-252.
- Charlop, M. (1983). The effects of echolalia on acquisition and generalization of receptive labeling in autistic children. *Journal of Applied Behavior Analysis*, 16, 111-126.
- Connell C., & Gibson, G. (1997). Racial, ethnic, and cultural differences in dementia caregiving: Review an analysis. *Gerontologist*, 37, 355-364.
- Cox, C. & Monk, A. (1993). Minority caregivers of dementia victims: A comparison of Black and Hispanic. *Journal of Applied Gerontology*, 9, 340-354.
- Cox, C., & Monk, A. (1996). Strain among caregivers: Comparing the experiences of African American and Hispanic caregivers of Alzheimer's relatives. *International Journal of Aging & Human Development*, 43, 93-106.
- Croen, L. A., Grether, J. K., and Selvin, S. (2002). Descriptive epidemiology of autism in a California population: Who is at risk? *Journal of Autism and Developmental*

*Disorders, 32, 217-224.*

- Dalrymple, N., & Ruble, L. A. (1992). Toilet training and behaviors of people with autism: Parent views. *Journal of Autism and Developmental Disorders, 22, 265-275.*
- Dewey, J. (1999). Child characteristics affecting stress reactions in parents of children with autism. *Dissertation Abstracts International Section: Humanities and Social Sciences, 60, 388.*
- Downs, A., & Smith, T. (2004). Emotional understanding, cooperation, and social behavior in high-functioning children with autism. *Journal of Autism and Developmental Disorders, 34, 625-635.*
- Dunn, M., Burbine, T., Bowers, C., & Tantleff-Dunn, S. (2006). Moderators of stress in parents of children with autism. *Community Mental Health Journal, 37, 39-52.*
- Dyches, T. T., Wilder, L. K., Sudweeks, R. R., Obiakor, F. E., & Algozzine, B. (2004). Multicultural issues in autism. *Journal of Autism and Developmental Disorders, 34, 211-212.*
- Ellis, J. T., Luiselli, J. K., Amirault, D., Byrne, S., O'Malley-Cannon, B., Taras, M., Wolomgevicz, J., & Sisson, R. W. (2002). Families of children with developmental disabilities: Assessment and comparison of self-reported needs in relation to situational variables. *Journal of Developmental and Physical Disabilities, 14, 191-202.*
- Feldman, M. A., Hancock, C. L., Rielly, N., Minnes, P., & Cairns, C. (2000). Behavior problems in young children with or at risk for developmental delay. *Journal of Child and Family Studies, 9, 247-261.*

- Freedman, R., Litchfield, L., & Warfield, M. (1995). Balancing work and family: Perspectives of parents of children with developmental disabilities. *Families in Society, 76*, 507-514.
- Gibson, D. (1968). [Early Infantile Autism: Symptom and Syndrome](#). *Canadian Psychologist/Psychologie Canadienne, 9*, 36-39
- Gilliam, J. (1995). *The Gilliam Autism Rating Scale Manual*.
- Guarnaccia, P. & Parra, P. (1996). Ethnicity, social status, and families' experiences of caring for a mentally ill member. *Community Mental Health Journal, 32*, 243-260.
- Hardman, M., Drew, C., Egan, M., Wolf, B. (2005). *Human Exceptionality: School, Community and Family* (8th Edition). Boston: Allyn and Bacon.
- Hastings, R.P. & Johnson, E. (2001). Stress in UK families conducting intensive home-based behavioural intervention for their young child with autism. *Journal of Autism and Developmental Disorders, 31*, 327-336.
- Heiman, T. (2002). Parents of children with disabilities: Resilience, coping, and future expectations. *Journal of Developmental and Physical Disabilities, 14*, 159-171.
- Kasari C., & Sigman, M. (1997). Linking parental perceptions to interactions in young children with Autism. *Journal of Autism and Developmental Disorders, 27*, 39-57.
- Keller, D., & Honig, A. S. (2004). Maternal and paternal stress in families with school-aged children with disabilities. *American Journal of Orthopsychiatry, 74*, 337-348.
- Kabot, S., Masi, W., & Segal, M. (2003). Advances in the diagnosis and treatment of

autism spectrum disorders. *Professional Psychology: Research and Practice*, 34, 26-33.

Kanner, L. (1943). [Autistic disturbances of affective contact](#). *Nervous Child*, 2, 217-250.

Koegel, R.L., Schreiberman, L., Loos, L. M. Dirlich-Wilhelm, H., Dunlap, G., Robbins, E., and Plienis, A. J. (1992). Consistent stress profiles in mothers of children with autism. *Journal of Autism and Developmental Disorders*, 22, 205-216.

Kohut, H. (1966). Forms and transformations of narcissism. *Journal of the American Psychoanalytic Association*, 14, 243-272.

Kronenberger, W., Causey, D., & Carter, B. Validity of the inpatient behavior scale in an inpatient psychiatric setting. *Journal of Clinical Psychology*, 57, 1421-1434.

Lecavalier, L., Leone, S., & Wiltz, J. (2006). The impact of behaviour problems on caregiver stress in young people with autism spectrum disorders. *Journal of Intellectual Disability*, 50, 172-193.

Liss, M., Harel, B., & Fein, D. (2001). Predictors and correlates of adaptive functioning in children with developmental disorders. *Journal of Autism and Developmental Disorders*, 31, 219-230.

Lobato, D. J., Kao, B. T., & Plante, W. (2005). Latino sibling knowledge and adjustment to chronic disability. *Journal of Family Psychology*, 19, 625-632.

Losada, A., Shurgot, G., Knight, B., Márquez, M., Montorio, I., Izal, M. et al. (2006). Cross-cultural study comparing the association of familism with burden and depressive symptoms in two samples of Hispanic dementia caregivers. *Aging & Mental Health*, 10, 69-76.

Mah, J. & Johnston, C. (2006). Cultural variations in mothers' attributions: Influence of

child attention-deficit/hyperactivity disorder. *Child Psychiatry and Human Development*, 38, 135-153.

Marcenko, M. & Meyers, J. (1991). Mothers of children with developmental disabilities. *Journal of Applied Family & Child Studies*, 40, 186-190.

Mandell, D., Walrath, C., Manteuffel, B., Sgro, G., & Pinto-Martin, J., (2005). Characteristics of children with autism spectrum disorders served in comprehensive community-based mental health settings. *Journal of Autism and Developmental Disorders*, 35, 313-321.

Margolies, P. (1977). Behavioral approaches to the treatment of early infantile autism: A review. *Psychological Bulletin*, 84, 249-264.

Matson, J. Benavidez, D., Compton, L., Padawkyj, T., & Baglio, C. (1996). Behavioral treatment of autistic persons: A review of research from 1980 to the present. *Research in Developmental Disabilities*, 17 (6), 433-465.

McCubbin, H. I., McCubbin, M. A., Thompson, A. J., & Thomsom, E. A. (1998). Resiliency in ethnic families: A conceptual model for predicting family adjustment and adaptation. In H. I. McCubbin, E. A. Thompson, A. I. Thompson, & J. E. Frommer . Resiliency in Native American and immigrant families (pp. 3-48). Thousand Oaks, CA: Sage.

Morgan, S. & Okwumabua, T. (1990). Child and adolescent disorders: Developmental and health psychology persepective. (pp. 3-45). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Newsom, Crighton; Rincover, Arnold; *In: Treatment of childhood disorders*. Mash, Eric J.; Barkley, Russell A.; New York, NY, US: Guilford Press, 1989. pp. 286-346.

- Phillipson, S. (2006). Cultural variability in parent and child achievement attributions: A study from Hong Kong. *Educational Psychology, 26*, 625-642.
- Pina, A. & Silverman, W. (2004) Clinical phenomenology, somatic symptoms and distress in Hispanic/Latino and European American youths with anxiety disorders. *Journal of Clinical Child and Adolescent Psychology, 33*, 227-237.
- Pinquart, M. & Sorenson, S. (2005). Ethnic differences in stressors, resources, and psychological outcomes of family caregiving: A meta-analysis. *Gerontologist, 45*, 90-106.
- Plienis, A., Robbins, F., & Dunlap, G. (2005). Parent adjustment and family stress as factors in behavioral parent training for young autistic children. *Journal of Developmental and Physical Disabilities, 1*, 31-52.
- Purdy, J., & Arguello, D. (1992). Hispanic familism in caretaking of older adults: Is it functional? *Journal of Gerontological Social Work, 19*, 29-43.
- Rutter, M. (1970). Autistic children: Infancy to adulthood. *Seminars in Psychiatry, 2*, 435-450.
- Tobing, L. E., & Glenwick, D. S. (2002). Relation of the child good autism rating scale-parent version to diagnosis, stress, and age. *Research in Developmental Disabilities, 23*, 211-223.
- Tomanik, S., Harris, G. E., & Hawkins, J. (2004). The relationship between behaviors exhibited by children with autism and maternal stress. *Journal of Intellectual and Developmental Disability, 29*, 16-26.
- United States Department of Education (2002). *Twenty-third annual report to Congress*



*on the implementation of the individuals with Disabilities Education Act.*

Washington DC.

Wahlberg, T., Obiakor, F., Burkhardt, S., & Rotatori, A. F. (2001). *Autistic spectrum disorders: Educational and clinical interventions*. Oxford, England: Elsevier Science Ltd, pp. 133-150.

Weiner, B. (1986). *An attributional theory of motivation and emotion*. New York: Springer.

Wolf, L. C., Noh, S., Fisman, S. N., & Speechley, M. (1989). Brief report: Psychological effects of parenting stress on parents of autistic children. *Journal of Autism and Developmental Disorders, 19*, 157-166.

Williamson, G. M., Dooley, W. K., Martin-Cook, K., Weiner, M. F., Svetlik, D. A., Saine, K., et al. (2005). Caregiver resentment: Explaining why care recipients exhibit problem behavior. *Rehabilitation Psychology, 50*, 215-223.