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Anglo-Latino differences in parental concerns and service inequities for children at risk of autism spectrum disorder

Jan Blacher[1,2], Katherine Stavropoulos[1] and Yasamine Bolourian[1]

Abstract

In an evaluation of Anglo and Latina mothers and their children at risk of autism, this study compared mother-reported child behavioral concerns to staff-observed symptoms of autism. Within Latina mothers, the impact of primary language (English/Spanish), mothers' education, and child age on ratings of developmental concerns was examined. Participants were 218 mothers (Anglo = 85; Latina = 133) of children referred to a no-cost autism screening clinic. Mothers reported on behavioral concerns, autism symptomology, and services received; children were administered the Autism Diagnostic Observation Schedule by certified staff. Results revealed that Anglo and Latino children did not differ by autism symptoms or classification. However, Anglo mothers reported significantly more concerns than Latina mothers. Within the Latina group, analyses revealed significant interaction effects of language and child age; Spanish-speaking mothers of preschoolers endorsed fewer concerns, while Spanish-speaking mothers of school-aged children endorsed more concerns. Despite these reports, Anglo children with a classification of autism spectrum disorder were receiving significantly more services than Latino children with autism spectrum disorder, suggesting early beginnings of a service divide as well as the need for improved parent education on child development and advocacy for Latino families.

Keywords

autism spectrum disorders, culture, screening

Little is known about ethnic differences in the reporting of autism spectrum disorder (ASD) symptoms and in the actual expression of ASD (Welterlin and LaRue, 2007). While some studies report few systematic differences in the prevalence of ASD among ethnically diverse children (Chaidez et al., 2012; Grinker et al., 2011), others have found a lower prevalence of reported ASD among Latino (Centers for Disease Control and Prevention (CDC), 2009), than Anglo (White, non-Latino) children (Zuckerman et al., 2015). Moreover, Latino parents have been found to report fewer overall concerns and fewer child behavior problems than Anglo parents (Blacher et al., 2014; Magana et al., 2013).

Beyond differences in the identification and diagnosis of ASD, Latino families may also seek fewer services primarily because they are less aware of autism screening and experience more limited access to services once ASD is identified (Zuckerman et al., 2014). The disparity in receipt of ASD-specific services is even more prominent for Latino families whose primary language is not English (Liptak et al., 2008; Mandell et al., 2009; St Amant et al., 2018). Emerging research has identified additional challenges with service use for minority families, such as financial and insurance barriers, lack of service provider knowledge regarding cultural norms, and limited access to quantity or types of services (Hidalgo et al., 2015; Nowell et al., 2015; Pickard and Ingersoll, 2016; Zuckerman et al., 2013). Thus, access to services requires further study, especially given the recent policy recommendations for earlier diagnosis and intervention (CDC, 2017).

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[1]University of California, Riverside, USA
[2]University of California, Los Angeles (UCLA), USA

Corresponding author:
Jan Blacher, Graduate School of Education, University of California, Riverside, Riverside, CA 92521, USA.
Email: jan.blacher@ucr.edu

This study was conducted in the context of an autism screening clinic, providing diagnostic and referral services to families at no cost. While open to everyone, the clinic was established to provide services to, and gain a better understanding of, low-income and/or Latino families. This clinic was established in light of the literature suggesting that it is usually only well-resourced (e.g. education, income) parents who are in a position of advocacy to demand services for their own children. For example, Ratto et al. (2016) found that Anglo mothers had higher education and income than Latina mothers, and both of these variables were significantly related to more knowledge of ASD and earlier time of diagnosis. In another study involving interviews with Latino parents, Zuckerman et al. (2014) reported difficulties accessing care as a result of poverty, lower education, limited English proficiency, lack of autism awareness, and, consequently, less ability to advocate. Furthermore, primarily Spanish-speaking mothers struggled to obtain diagnostic and therapeutic services for their child (Zuckerman et al., 2017).

There is ample evidence that ethnicity correlates with ASD-related services received, whether the focus is on the diagnosis itself, the diagnostic process, general care, or disability services (Zuckerman et al., 2014), or school services in the form of the Individualized Educational Program (Harstad et al., 2013). In one study involving White and Black parents of young children from 18 to 40 months, parents of Black children reported significantly fewer concerns about autism-related behaviors, but not significantly different concerns about non-autism-related behaviors, for example, disruptive behavior and developmental concerns (Donohue et al., 2017). The authors concluded that lower reporting of autism-specific concerns may hinder the ability of providers to recommend additional screening, evaluation, and services. Receipt of services has also been linked to child age; specifically, there is some evidence that Latino children may be diagnosed 2.5 years later than Anglo children, and that diagnostic delay hinders service access (Mandell et al., 2002; Zuckerman et al., 2013). Clearly, there is a need for better study of what variables account for the relationship between race/ethnicity and the receipt of services.

Some secondary analyses of large datasets have important, broad-scale findings, but the autism samples are often not well characterized (Liptak et al., 2008; Zuckerman et al., 2015). In a large study using the National Survey of Children's Health, the characteristics of being Black, Latino, and/or poor were associated with decreased access to services (Liptak et al., 2008). However, the only question about autism on the survey was "Has a doctor or health professional ever told you that your child had autism?" Clearly, we need more culturally sensitive screening and case confirmation (Rice et al., 2012). There remains a need to study community samples of low-income families, more thoroughly assess parents' specific developmental concerns, conduct valid assessments, and assess within-Latino family variables.

The overall purpose of this study was to understand better the inequities in ASD identification and allocation of services in Inland Southern California. We examined variables in diagnostic screenings of a community sample of Anglo and Latino families. The specific research questions were as follows: (1) Are there differences in (a) the number and type of developmental concerns that Latino and Anglo caregivers report concerning their children prior to ASD screening and (b) the ASD classification and symptoms of their children on standardized measures? (2) Is there a difference between Latino and Anglo families in the services received by the child with ASD and/or the family?

Methods

Participants

Participants were 218 parents, self-identified as Anglo (85) or Latino (133), of children referred to an autism screening clinic at a university research center. The clinic is in an urban area within a large (2.4 million population) urban and rural county; Latino families constitute 48.4% of the region (Bureau, 2016).

An earlier study included 83 of these families (Blacher et al., 2014). In order to confidently combine data from the two samples, all demographics (described below) were compared using t-tests, with the exception of family income and marital status which were not assessed earlier. There were no significant differences on demographic variables between samples (p's > 0.05), and thus they were pooled for the current analyses.

Measures

Demographic information

Intake Form. The Intake Form was adapted from the Child History/Information Questionnaire utilized by the Early Childhood Partial Hospitalization Program at University of California, Los Angeles (UCLA), a program for young children with ASD or other developmental disabilities (UCLA Intake Form, 2010). Information from the Intake Form relevant to this study included ethnic background, current behavioral concerns, and child services. Since respondents were almost all mothers, maternal age and education were used in analyses. Ethnicity was recorded as an open-ended response, which was later aggregated into categories (i.e. African American, Asian, Caucasian, Latino/Hispanic, Native American, and other). The current concerns (about the child) section included 22 checklist items, coded 0 = not a concern or 1 = yes, a concern. Examples of items were depressed/anxious, difficulty following directions, distractibility, language difficulties, motor skills, self-help skills, and nervousness/worrying. The 22 items and total score were analyzed for contrasting perceptions of child symptomatology between Anglo and Latino mothers. The current child services section included five: speech therapy, physical therapy, social skills, occupational therapy, and applied behavior analysis. Services were coded as 0 = not received or 1 = received, and summed to yield a total score.

Autism classification and symptomology

Autism Diagnostic Observation Schedule, Second Edition. Autism Diagnostic Observation Schedule, Second Edition (ADOS-2) is a semi-structured, standardized clinical observation tool composed of two domains: Social Affect and Restricted, Repetitive Behavior (Lord et al., 2012). The ADOS-2 module used (1, 2, or 3) depended on the child's level of development and language. Each consists of standard activities that allow the examiner to observe communication skills, social interaction skills, and stereotyped behaviors or restricted interests. Scoring results in a classification of "non-autism," "autism spectrum," or "autism." For the purposes of this study, ASD classification was collapsed into no ASD (non-autism) or ASD (autism spectrum/autism). To simplify, ADOS-2 will be referred to herein as the ADOS.

Social Responsiveness Scale. The 65-item Social Responsiveness Scale (SRS) assesses severity of social impairment associated with autism (Constantino and Gruber, 2005). The parent report, which has preschool (ages 2.5–4.5) and school-age (ages 4–18) forms, was utilized. Respondents rate each item from 1 (not true) to 4 (almost always true), yielding a total score and five symptom domain scores: Social Awareness, Social Cognition, Social Communication, Social Motivation, and Autistic Mannerisms. Interpretation of the total score reflects severity of social deficits. Total T-scores of 59 or below are considered to be within typical limits, whereas scores of 60 or higher are considered borderline to clinically significant and indicate impairments in reciprocal social behavior that may interfere with everyday social interactions. Thus, higher scores indicate greater symptom severity associated with ASD. Internal consistency, inter-rater reliability, and test–retest reliability are strong (Achenbach, 2000).

Procedure

All procedures were approved by the university's Institutional Review Board. Children were referred from local schools, community mental health centers, and regional centers that provided services to persons with disabilities, as well as other families whose children had been screened at the center; parents could also self-refer. Parents indicated their preferred language (English, Spanish) during the initial phone call, and this was used for consent forms and all parent-completed measures. The ADOS was administered to the child, while caregivers completed the Intake Form and all questionnaires. Parents indicated whether the child communicated in English or Spanish so that the ADOS could be administered accordingly. Assessments were conducted by doctoral students and postdoctoral fellows from school psychology, special education, or clinical psychology; several were bilingual. All assessors were extensively trained in the administration of the ADOS. Clinic supervision was provided by the autism center director and licensed assistant director, as well as an affiliated licensed and bilingual psychologist.

Data analysis

The "current concerns" and "current services" items on the Intake Form, each scored 0 or 1, were summed to provide total concerns and services scores. These scores had a positive but low correlation ($r = 0.19$, $p = 0.01$). Differences in reported concerns and types of services between Anglo and Latino caregivers were examined using chi-square analyses for individual items that were categorical and t-tests for total scores that were continuous. Listwise deletion was used for complete case analysis and comparability across analyses.

Child age was dichotomized into preschool aged (<6 years of age) and early school aged (⩾6 years of age). A two (ethnicity) by two (age) analysis of variance (ANOVA) were conducted to examine the main and interacting effects of these two variables on the current concerns total score. A second ANOVA using ethnicity and ADOS classification examined the main and interacting effects of the total number of types of services received. Demographic variables that differed between the Anglo and Latino groups were correlated with outcome variables; if significant, they were entered into analyses as covariates. Analyses reporting "classification" of ASD versus non-ASD were based solely on the results of the ADOS.

Results

Sample characteristics

Table 1 shows sample characteristics for Anglo and Latino children and mothers. Children's age at referral, enrollment in school, and ADOS-2 classification did not differ by ethnicity. The Latino sample was under-resourced in comparison to the Anglo sample; more Latina mothers reported having a high school degree or below (52.2%), compared with 18.3% of Anglo mothers. While percent employment outside the home did not differ by ethnicity, fewer Latino families fell in the higher income bracket.

Those demographic variables that differed significantly between ethnicity groups (i.e. child gender, maternal age, maternal education, household income) were correlated with outcomes of interest (i.e. SRS total score; parent-reported behavioral concerns and total services from the

Table 1. Sample characteristics (N = 218).

Variable	Anglo (n = 85)	Latino (n = 133)	χ^2 or t
Child characteristics			
Age in years (M/SD)	5.74 (2.33)	5.24 (2.58)	1.46
Gender (%male)	65.9^{a}	80.5^{b}	5.84*
ADOS autism classification (%)	58.8	62.4	0.28
School (%enrolled)	70.4	59.2	4.66
Caregiver characteristics			
Maternal age in years (M/SD)	35.68 (8.33)	32.26 (6.97)	2.99*
Maternal education (%)			
High school or less	18.3^{a}	52.2^{b}	31.70***
Some college	38.0^{a}	36.3^{a}	
BS/BA or more	43.7^{a}	11.5^{b}	
Maternal employment (%)	46.3	42.1	0.30
Household income (%)			
$35,000 or less	44.0^{a}	67.3^{a}	6.73*
$35,000–75,000	20.0^{a}	21.2^{a}	
$75,000 or more	36.0^{a}	11.5^{b}	
Married/living with a partner (%)	84.8	80.6	0.50

SD: standard deviation; ADOS: Autism Diagnostic Observation Schedule.
Sample size is lower for some variables due to missing data. Means with different superscripts are significantly different.
^{a,b}Means with different superscripts differ significantly from each other.
*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Intake Form). Results of the Pearson correlation revealed a significant negative association between child sex and the total number of services ($r = –0.17$, $p = 0.02$); female children received more services. Results of the Spearman correlation revealed a significant positive association between maternal education and the total number of services received ($r = 0.16$, $p = 0.04$), such that mothers who had more education indicated that they received more services. These were entered into analyses as covariates.

Ethnic differences: Anglo and Latino families

ADOS classification and autism symptomology. Overall, 39.0% of 218 children in the combined sample did not meet criteria for ASD on the ADOS. There were also no differences between ethnic groups in terms of meeting criteria ($\chi^2 = 0.28$, df = 1, $p = 0.60$). In the Anglo sample, 41.2% of children did not meet criteria, 58.8% classified as having ASD. In the Latino sample, 37.6% did not meet criteria, 62.4% classified as ASD. On the SRS total and subscale scores, t-tests on caregiver-reported autism symptoms indicated no differences by ethnic group ($p > 0.05$), lending more confidence that the children in the two ethnic groups did not differ by autism status or symptom severity.

Current behavioral concerns. Parent-reported concerns on the intake form were scored as No or Yes. The number of concerns ranged from 0 to 21 (M = 8.25; SD = 4.30). Anglo mothers endorsed a significantly higher number of items (M = 10.02; SD = 3.69) than Latina mothers (M = 7.34; SD = 4.32) ($t(191) = 4.28$, $p < 0.001$). The 22 concerns were then examined individually by ethnic group. Table 2 shows all items, including the seven items on which there was a statistically significant ethnic group difference ($p < 0.05$); all seven were endorsed more by Anglo mothers.

A two-way ANOVA was conducted to examine current concerns by child ethnicity and age. There were significant main effects of both ethnicity (Anglo > Latino, $F(1, 192) = 18.36$, $p < 0.001$) and child age (6+ years > under 6 years, $F(1, 192) = 8.35$, $p < 0.01$). The ethnicity-by-age interaction for the reported current concerns was not significant.

Ethnic differences by types of services received. Five types of current services received were assessed (speech therapy, physical therapy, social skills, occupational therapy, and applied behavior analysis). While there was no significant difference in the total number of services received by ethnicity, results from chi-square analyses of the specific types of services revealed that a larger percentage of Anglo children (21.1%) received occupational therapy than Latino children (8.9%) ($\chi^2 = 5.76$, df = 1, $p = 0.02$). There were no other meaningful service differences by ethnicity observed.

A 2 × 2 analysis of covariance (ANCOVA) assessed total types of services received by ethnicity and ADOS classification, controlling for child sex and maternal education. As shown in Table 3, there was a significant

Table 2. Descriptive statistics of current concerns: percent of caregivers endorsing concerns on Intake Form.

Variable	Anglo (n = 66)	Latino (n = 127)	χ^2
Argumentative	56.1	23.6	20.16***
Difficulty with transitions	39.4	12.6	18.32***
Inattentive/impulsive	63.6	33.9	15.63***
Social skills (lack of)	77.3	50.4	13.03***
Darting off	48.5	29.9	6.48*
Temper tantrums	78.8	61.4	5.96*
Aggression	56.1	40.2	4.43*
Nervousness/worrying	47.0	33.9	3.16^{t}
Self-help skills (lack of)	57.6	44.1	3.16^{t}
Motor skills	34.8	23.6	2.75^{t}
Difficulty following directions	63.6	52.0	2.40
Language difficulties	60.6	70.9	2.08
Ritualistic behaviors	37.9	28.3	1.83
Distractibility	68.2	58.3	1.81
Self-stimulatory behavior	53.0	44.1	1.39
Depressed/anxious	27.3	20.5	1.14
Pulls out own hair	10.6	6.3	1.12
Eats things that are not food	24.2	19.7	0.54
Biting	27.3	22.8	0.46
Self-injury	24.2	22.0	0.12
Peculiar interests	18.2	18.1	0.00

$^{t}p < 0.10$; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table 3. Two-way analysis of covariance of total services received by ethnicity and classification as ASD controlling for child sex and maternal education.

Source	df	Sum of squares	Mean square	F	p
Child sex	1	2.33	2.33	3.35	0.07
Maternal education	2	6.98	3.49	5.02	0.01**
Child ethnicity	1	0.55	0.55	0.79	0.38
ADOS	1	0.07	0.07	0.09	0.76
Child ethnicity × ADOS	1	5.84	5.84	8.39	0.004**

ASD: autism spectrum disorder; ADOS: Autism Diagnostic Observation Schedule.
*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

interaction ($F(1, 154) = 8.39$, $p < 0.01$), indicating that among Anglo children those with ASD received more services, while among Latino children those with no ASD received more services (Figure 1).

Exploratory analyses and results: sample of Latino families only

Based on the ethnicity findings above, separate analyses were conducted to explore the outcomes of interest (i.e. SRS, total types of services, and parent-reported behavioral concerns) within the Latino families. Specifically, we aimed to explore if primary language would impact Latina mothers' reports of autism status and symptoms, behavioral concerns, and access to services.

Sample characteristics. Within the Latino sample, 46 families were primarily Spanish speaking. While this is a modest percentage (34.6%) of the total sample, these families represent a relatively underserved population, an important consideration of this study. Child variables, such as age, gender, and school enrollment, did not differ by primary language. However, there were differences in maternal demographic variables such as maternal age, with Spanish-speaking Latina mothers being significantly older ($M = 34.32$, $SD = 7.55$) than English-speaking Latina mothers ($M = 31.28$, $SD = 6.57$; $t(117) = 2.23$, $p < 0.05$). In addition, Spanish-speaking Latina mothers reported less education, with 78.1% having a high school degree or below, compared to 42.0% reported by English-speaking Latina mothers ($\chi^2(1) = 12.01$, $p < 0.01$). Marital status and percent employment outside the home did

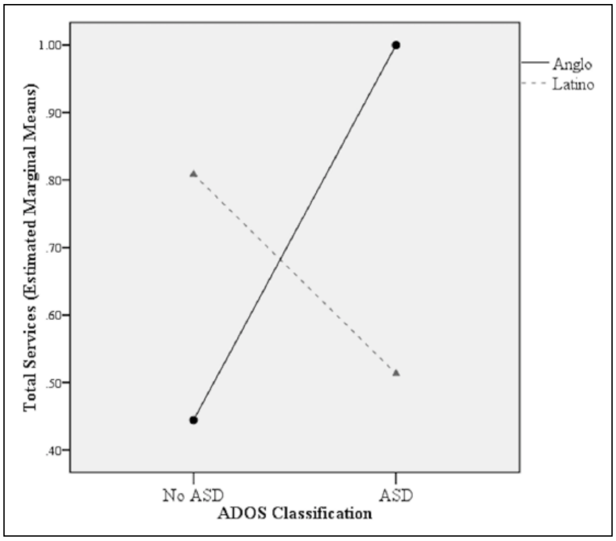

Figure 1. Interaction between classification on the ADOS (no ASD vs ASD) and total number of services received by Anglo and Latino families.

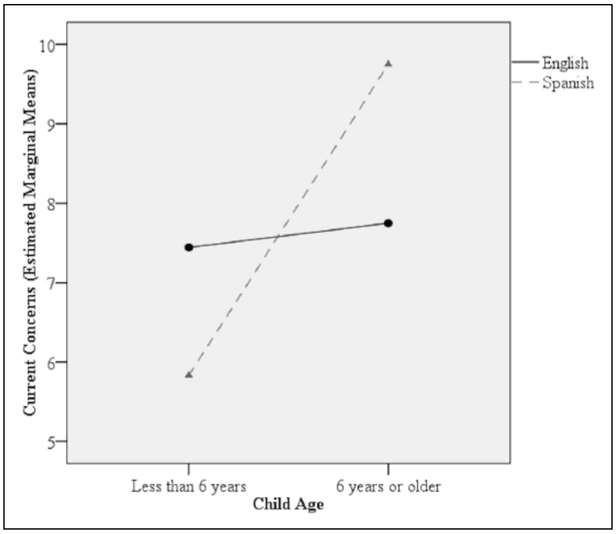

Figure 2. Interaction between child age (less than 6 years of age vs 6 years or older) and total number of current concerns by primary language (English vs Spanish) for Latino families only.

not differ by primary language. However, all Spanish-speaking Latina mothers reported an income of $35,000 or less, compared to only 56.4% of English-speaking Latina mothers who reported this lowest category of income ($\chi^2(1)=6.97, p<0.01$).

Differences on ADOS classification or autism symptomology by primary language. We examined whether ADOS classification differed by primary language spoken. Among English-speaking Latino children, 34.5% of children did not meet criteria on the ADOS and 65.5% did meet classification as ASD. Among Spanish-speaking Latino children, 43.5% of children did not meet criteria on the ADOS, and 56.5% did meet classification as ASD. These distributions did not differ significantly by primary language ($\chi^2=1.04$, df=1, $p=0.31$).

We examined SRS autism symptomology reports by Latina mothers who were Spanish versus English speaking. On the SRS total score, Spanish-speaking mothers reported greater autism severity ($M=81.3$) than English-speaking mothers ($M=74.7$, $t(48)=2.08$, $p=0.04$). On the SRS subscales, Spanish-speaking mothers reported significantly greater problem severity for Social Cognition ($t(30)=2.83$, $p<0.01$) and Social Motivation ($t(30)=2.34$, $p=0.03$).

Differences on current concerns. Within the Latino sample, the total number of current parent-reported concerns did not differ significantly by primary language spoken (English: $M=7.53$, $SD=4.11$; Spanish: $M=6.95$, $SD=4.75$) ($t(125)=0.71$, $p>0.05$). A two-way ANOVA examined current concerns by primary language and child age, finding a significant interaction ($F(1, 127)=4.15$, $p=0.04$). For preschool-aged children, Spanish-speaking mothers endorsed fewer concerns than English-speaking mothers, while for school-aged children Spanish-speaking Latina mothers endorsed more current concerns than English-speaking Latina mothers (see Figure 2).

Differences on types of services received. Results from chi-square analyses of the specific types of services received revealed that a larger percentage of English-speaking Latino children (65.1%) received speech therapy than Spanish-speaking Latino children (42.5%) ($\chi^2=5.63$, df=1, $p=0.02$). There were no other meaningful service differences by ethnicity observed. A 2 × 2 ANOVA assessed total types of services received by primary language and ADOS classification, and revealed no main or interaction effects ($p>0.05$).

Discussion

This study of Anglo and Latino families with a child referred for autism screening served as a replication of earlier findings (Blacher et al., 2014) and an extension of knowledge about differences in parent concerns, patterns of symptoms, and services received. However, it is important to note some of the ways in which Latino and Anglo children and mothers did not differ. Notably, overall observational assessment of children's behaviors using the gold-standard ADOS (Lord et al., 2001, 2012) did not reveal ethnic group differences in the percent of children meeting diagnostic criteria. Furthermore, on the SRS, Latina and Anglo mothers did not report different total autism symptom severity scores.

In contrast, there were ethnic differences on the intake screening, where parents were asked to express their current concerns about their child's behaviors (e.g. aggression, language difficulty). Anglo mothers expressed broader concerns than Latina mothers, especially for children older than age 6. As there were no differences in ratings on the SRS, a possible reason for this is that the SRS requires parents to rate each symptom, whether a given statement is true or not for their child, whereas the intake form requires parents to endorse or select overall concerns that they have. Our results suggest that when asked about specific behaviors (the SRS), Latina and Anglo mothers do not differ, but when asked about broad areas of concern (the Intake Form), differences were observed. This has implications for how measures are worded, because caregivers might be aware of symptoms without necessarily being concerned about them (Richards et al., 2016).

The specific area of concern on the Intake Form is also of importance to consider. Overall, temper tantrums were reported as the greatest concern by Anglo mothers, and language difficulties were reported as the greatest concern by Latina mothers. Indeed, types of concerns have been shown to vary among families from different ethnic backgrounds, which reflects differences in cultural norms (Nowell et al., 2015). These findings suggest that professionals involved in screening or diagnosis, along with other service providers, need to be attuned to the possibility that mothers of Latino children at risk of ASD may be more likely to focus on their child's language problems rather than on other obvious red flags for autism.

The ethnic group difference in concerns may also be explained, in part, by the difference in maternal education. Anglo mothers, with significantly higher education, were more aware of the "red flags" for ASD (CDC, 2015) and focused their descriptions accordingly. Many Latina mothers may have been aware that something was amiss, but lacked the vocabulary or referent for what it was. This suggests that there needs to be a more concerted effort to bring awareness of ASD characteristics and developmental milestones into Latino communities to facilitate earlier identification and access to appropriate services.

For children who met criteria for ASD on the ADOS, Latina mothers reported receiving significantly fewer services for their children than did Anglo caregivers. Interestingly, this pattern was reversed for children who did not meet criteria for ASD (e.g. Latina mothers reported receiving more services for their children than Anglo caregivers). Although this study cannot directly speak to the reason behind these differences, this represents an important area for future research. For example, this finding might be due to service setting (e.g. perhaps Latino children who met criteria for ASD were receiving services in school that were not being "counted" or reported by caregivers). Future research should also explore the role of insurance on the types of services received. For example, it is possible that families with state-sponsored insurance (e.g. Medi-Cal in California) received fewer services than families with private insurance. This issue of a service divide by family ethnicity is one that should be followed across the childhood years. One approach could be to offer well-designed programs to increase knowledge of ASD to kindergarten-first grade teachers, which could help lead to more accurately reported parent concerns, earlier diagnoses, and better access to services.

The importance of increased ASD awareness in Latino communities is further underscored by our exploratory findings related to primary language and child age. Interestingly, while Spanish-speaking Latina mothers of preschool-aged children endorsed fewer concerns than English-speaking Latina mothers, this pattern was reversed for school-aged children, where Spanish-speaking mothers endorsed more concerns than English-speaking mothers. In addition, in this study, there was a relationship between mother's primary language and child age which may be due to knowledge of ASD gained upon entry to schools. The increased concern reported among Spanish-speaking mothers of school-aged children may occur in part because elementary school personnel shared their concerns with the mothers. Prior to their child attending school, Spanish-speaking Latina caregivers may not have had access to professionals who observed their children and brought up concerns about ASD.

Another factor contributing to the reticence of Latino parents to endorse autism-related concerns could be cultural. As noted above, Spanish-speaking Latino parents are more likely to have an immigrant experience and hence more likely to be less acculturated than English-speaking Latino parents (Cohen and Miguel, 2018; Zuckerman et al., 2014). One manifestation of this could be disability stigma, and/or denial of autism symptoms in early childhood by parents, hoping that their concerns will resolve on their own. Zuckerman et al. (2014) have suggested this as a reason that parents may delay raising any concerns until later.

Finally, many of the children who came to the clinic were already receiving services, in the absence of any diagnosis, similar to a finding reported by Richards et al. (2016), who also screened children for ASD. The receipt of services, even before receiving a diagnosis, validated somewhat the parents' concerns (Richards et al., 2016). It is notable, however, that more English-speaking Latino families received speech therapy than Spanish-speaking families, because this is a service families in California often receive when their child is showing signs of a developmental delay.

When weighing the implications of these findings, there are some sample and methodological characteristics to consider. First, this was a self-selected sample; families came of their own accord to the clinic. Thus, we do not know how representative participants were of other families in this portion of Inland Southern California. Second, data on health insurance were not collected since it is unnecessary in the context of a no-cost screening clinic. However, insurance may be an important consideration in research of ethnic disparities and access to services. In other words, minority families, who are less likely to have health insurance (Barnett and Berchick, 2017), may not use as many types of services for ASD, developmental disabilities, or behavior problems. Future research on ethnic disparities could control for insurance. Third, as a methodological point, although psychometrically valid instruments were used for this study, there is limited knowledge about their cultural nuances as used with a Latino population (Harris et al., 2014). Fourth, unlike large survey studies that benefit from statistical power, our sample was relatively small. However, epidemiological studies (Zuckerman et al., 2015) assessed ASD status with a single question: "Has your child ever been diagnosed with autism?" We utilized the findings of the ADOS and the SRS, highly reliable measures of social ability, yielding a well-characterized sample. Fifth, this was an under-resourced group of families who were demographically representative of the broader community in which they resided. Previous studies suggested that there may be some demographic differences in autism samples, supported by socioeconomic status (SES) inequality in reported ASD prevalence (Durkin et al., 2010). Yet, similar autism profiles of children in Anglo and Latino families are frequently reported (Blacher et al., 2014; Chaidez et al., 2012), leaving us with a difficult question: If autism profiles are similar, why are there inequities in some studies regarding age of identification and services received?

Conclusion

Going forward, we must identify and begin intervention earlier for children at risk for ASD. One promising effort in South Carolina involved statewide collaboration among agencies, healthcare systems, universities, and others that resulted in greatly increased early identification and intervention (Rotholz et al., 2017). In order to advocate for services for one's child, parents must be able to recognize the early signs and symptoms of autism (Burke et al., 2016).

Perhaps, a "cultural lens" is necessary (Cohen, 2013), whereby researchers, advocates, medical professionals, and interventionists view autism from the perspective of under-resourced families. For example, Cohen and Miguel (2018) found that cultural beliefs and causes may be linked to some of the differences in ASD found between, and among, ethnic groups. Notably, these authors restricted their work to immigrant Mexican families with children with ASD, underscoring the fact that Latino families are not a homogeneous group. Clinical practitioners, in particular, need to be mindful of the cultural environment of the families in which children and parents reside, to foster advocacy in their communities and in their own language (Norbury and Sparks, 2013). Such programs are now in effect, though currently only on a small scale (Burke et al., 2016). To ensure equitable access to early diagnosis and intervention for all children with ASD will require reducing the barriers of parent language and finances, increasing effective ways to inform parents, and facilitating access to the education and healthcare systems. Only then will the service divide result in equal portions.

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ORCID iD

Jan Blacher https://orcid.org/0000-0001-8643-5651

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