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Spanish-English Bilingual Children with Psychopathology: Language Deficits and Academic Language Proficiency

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Background: The aim was to study the language profiles of a well-characterised sample ($n = 50$) of Spanish–English bilingual children consecutively referred to psychiatric services. **Methods:** Spanish and English language profiles were assessed with the Woodcock Language Proficiency Battery-Revised (WLPB). Profiles included language ability levels, deficits and dominance in five expressive and receptive/expressive domains, and academic (school-related) language proficiency levels. **Results:** General language ability was low for 69% in either language and for 51% in both. Language dominance data suggested that expressive skills were dominant in English. In 73% of the children, ability to function at school in the strongest language is 'limited', defined by the WLPB as incorrect responses to 50% of the items typically answered correctly by children of the same age. Classroom language demands, also according to the WLPB, would be 'extremely difficult' to 'impossible' for 40% of the children in at least one language, and for 19% in either language. **Conclusions:** Language deficits, present in many psychiatrically-referred bilingual children, ought to be suspected by the clinician. The typical language demands of schooling appear to be overwhelming for many of these children, with ensuing implications for psychosocial adaptation and educational attainment. Thorough language ability assessments of both languages are often necessary for the early detection of language deficits and for understanding how dual language abilities relate to psychiatric symptoms. Therefore, language assessment services need to be closely linked to programs serving psychiatrically-referred bilingual children. Other implications of this research for clinical practice are discussed.

Keywords: Bilingualism; psychopathology; language development disorders; impairment; cultural; immigrant; minority; child

Introduction

America is currently experiencing the largest wave of child immigration in its history (Suarez-Orozco & Suarez-Orozco, 2001), which also reflects on the demographic makeup of children referred for psychiatric services. According to the most recent US census estimates, ten million American children, mostly US-born children of immigrant parents, have English as a second language—representing 19% of the overall US child population (US Bureau of the Census, 2000). Most of these bilingual children are Hispanic and speak Spanish at home (US Bureau of the Census, 2000) with Hispanic children constituting the largest minority and the fastest growing segment of the US child population (Rothe, 2001). Many other nations around the world are experiencing a similar phenomenon. As a result, childhood bilingualism across the world is common and, in many regions, becoming more prevalent. The increasing preponderance of child bilingualism is also reflected in our clinical child populations. While it is common for some bilingual children of immigrant parents to have low abilities in areas of at least one of the languages (Hernandez & Charney, 1998), for those with psychopathology, the observation of reduced levels of first and/or second language abilities has important clinical implications. Children's language abilities involve a complex range of receptive and expressive areas: vocabulary, listening comprehension, verbal analogies. In this paper we argue that systematic studies of the language ability profiles of psychiatrically referred bilingual children are critical to understanding these clinical implications.

One such clinical implication is to establish whether the child also suffers from language deficits. Language deficits are very common among children referred to psychiatric services: prevalence estimates range from 30 to 75% (Cantwell & Baker, 1991), compared to general child population estimates of around 7.4% (Tomblin et al., 1997). Furthermore, both clinical and epidemiological studies support an association between observed deficits in linguistic competence and psychopathology in children (Beitchman, Cohen et al., 1996; Cantwell & Baker, 1991; Toppelberg et al., 2002; Toppelberg & Shapiro, 2000). Language deficits specifically predict both greater severity and increased prevalence

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of: attention deficit hyperactivity and externalising disorders; language-based learning disorders (e.g. dyslexia); and, depressive and anxiety disorders (Beitchman, Wilson et al., 1996a, 1996b). Receptive language deficits appear to be the strongest predictors of psychopathology, particularly of externalising outcomes (Beitchman, Wilson et al., 1996b; Toppelberg & Shapiro, 2000). Researchers have strongly advocated for the early detection of language deficits, in particular receptive impairments, as they are more likely to be overlooked than the often co-occurring expressive deficits (Beitchman, Cohen et al., 1996). Language impairments often go undetected or inadequately addressed by services (Cohen & Horodezky, 1998). While the previously cited studies have firmly established the relevance of language deficits to child psychopathology, most of these studies only examined English-speaking monolingual children, with no data available on children who are bilingual or whose primary language is not English (Toppelberg & Shapiro, 2000).

In a recent study, we reported high prevalences of language deficits (48%) and language disorders (41%) among Spanish-English bilingual children referred to a psychiatric clinic (Toppelberg et al., 2002), in contrast with estimates of 12.7% of Hispanic children being identified as speech or language impaired by the educational system (US Department of Education, 2001). To our knowledge, there are no prevalence studies of language impairment in the general bilingual child population. Our prior study reported prevalence figures of disorders and deficits that suggest that language impairments in many mentally-ill bilingual children go undetected, leading to no or inadequate services. However, this study did not examine detailed language profiles of psychiatrically referred bilingual children or whether these children are generally capable of handling the linguistic demands they face at school. The latter ability, known as Academic Language Proficiency (ALP), is essential for cognitively demanding language-based learning (Cummins, 1984). Weaknesses in ALP may lead to significant language-based learning difficulties, in some cases to the point of a learning disability. Comprehensive standards of these children's language abilities are absent and highly needed for both educational and treatment planning. Today, we know very little about what linguistic difficulties to expect and with which frequency, leaving policy decisions and service planning without the necessary empirical grounding. As children with mental health problems often have compromised school functioning, understanding their ALP profiles is of particular importance. The overall goal of the present study is to offer a comprehensive description of the Spanish and English oral language profiles of psychiatrically referred bilingual children. More specifically, to finely characterise these language profiles we aim to describe the children's expected levels of: language ability, deficits and dominance in five receptive/expressive and expressive domains (Aim 1); and, language ability for academic (or school-related) purposes (ALP, Aim 2). In connection with these two aims, the present study addresses the following research questions among Spanish-English psychiatrically-referred bilingual children:

(i) What are the language abilities and deficits of psychiatrically-referred bilingual children?

(ii) What is their language proficiency to respond to environmental language demands, such as school instruction?

To our knowledge, there are no previously published papers addressing these empirical questions. The current study is also unique in that it focuses on populations previously excluded from traditional child psychiatric research (Yan & Munir, 2004). The goal of the current study is primarily descriptive. We do not intend to compare monolinguals to bilinguals in terms of any potential advantages of each condition. We do not assume bilingualism to be a risk factor.

Methods

Subjects and recruitment procedure

Study participants were school age children ($n = 50$, 5–16 years, mean age = 9.4, $SD = 3.7$) consecutively referred to an outpatient Latino child psychiatry neighbourhood clinic in a public city hospital serving an urban population in the state of Massachusetts. All referred children ($n = 72$) and their families received bilingual invitation letters and follow-up phone calls within a standard period. Families that indicated refusal were not further contacted. Recruitment took place in a 30-month period. Human Studies Committees at two participating institutions approved the study. Written parental informed consent and verbal child assent were obtained; the consent process took place in the language of choice and was verbal for those parents who were illiterate. We used an *inclusion criterion* for language, i.e. caregivers communicated solely or mainly in Spanish, and *exclusion criteria* for severe neurodevelopmental disorders (autism, serious head injury, motor and sensory deficits including deafness and blindness). The referral sources included paediatricians, schools, the adult Latino mental health clinic and the state child protective services. An initial pool of 72 children was eligible according to the eligibility criteria. Of these, 8 (14%, mostly adolescents older than 12) refused to participate, and 14 children were unreachable, mostly due to moving out of the area. Children and parents who agreed to participate received a 2-hour evaluation either in the clinic or, if preferred, during home visits. Most evaluations were completed in the 13 months following March 1998. The interviewers were all bilingual; most were native Spanish speakers.

Type of bilingualism

Bilingual children present two prototypical language acquisition patterns, although there is much variation. *Sequential bilinguals* acquire a first language from birth and a second language later, while *simultaneous* or native bilinguals acquire both languages as first languages, e.g. when two languages are spoken to the child before age 3 by native speakers, for example one by the father and the other by the mother. A first language is one acquired during the period of rapid acquisition generally before age 3, while a second language is one mostly acquired after age 3 (McLaughlin, 1984). In most cases, our sample included sequential bilingual

children, and in this way it is representative of bilingual child populations in the US and possibly the world.

Measures

Language measures

The five Oral Language tests of the Woodcock Language Proficiency Battery- Revised (WLPB), and an adaptation of its language use questionnaire were used (Woodcock, 1991). The WLPB has published reliability, validity and Spanish and English norms. The WLPB measures oral language ability in both English and Spanish. The WLPB yields five ALP levels (Woodcock & Muñoz-Sandoval, 1995), which correspond to the levels of expected difficulty in the language demands of classroom instruction. ALP levels and cut-offs are determined based on the relative mastery index (RMI). The RMI is an index of mastery of tasks of average difficulty for peers. The RMI is based on the difference in *W* scores (equal interval, ability scale scores derived through raw score transformations) between a subject and her peer reference group. An RMI of 90/90 means that the child (numerator) is expected to demonstrate 90% mastery with tasks that average individuals of the same age would also perform with 90% mastery. In the same way, the five ALP levels ('advanced', 'fluent', 'limited', 'very limited', 'negligible') represent the expected percentage of correct responses to test items, compared to the percentage correct obtained by an average same-age child. For instance, while the 'fluent' (average) child responds correctly to 90% of the test items, children with 'limited', 'very limited', and 'negligible' ALP provide correct responses to 67 to 34%, 18 to 5%, and less than 2% of the items respectively. We also used the standard scores of the five oral language tests to cover expressive and receptive modalities. The tests (and their corresponding modality) were: picture vocabulary (expressive), memory for sentences and oral vocabulary (mixed receptive-expressive) and listening comprehension and verbal analogies (receptive). Combining the oral test scores yields a global, general language ability score called an Oral Language cluster score. Finally, we also reported on children's language dominance.

Other descriptive variables

Emotional and behavioural problems. Child Behaviour Check List (CBCL) (Achenbach & Edelbrock, 1991). We utilised the Spanish version of the CBCL that has been normed and extensively used in Puerto Rico and Latin American studies (Bird, 1996). In order to characterise the sample's psychiatric severity, we report *T* scores for total symptoms and for internalising and externalising symptoms. CBCL clinical cut-offs have good agreement with DSM diagnoses (Achenbach & Edelbrock, 1991; American Psychiatric Association, 1994).

Non-verbal intelligence. Test of Non-Verbal Intelligence, second version (TONI). The TONI is a culturally-fair measure of abstract/figural problem solving, appropriate for the intellectual appraisal of children for whom language impairment or second language barriers may confound test performance (Brown, Sherbenou, & Johnsen, 1990). Instructions can be entirely mimed and subjects may respond by pointing. The TONI has been normed including minority, Hispanic and non-English speaking individuals.

Sociodemographic, immigration and acculturation variables were collected at intake. We used questionnaires based on US Census methodology and the Hollingshead's Four-Factor Index (1975) for socioeconomic status and maternal education. Based on data about children's and parents' place of birth (abroad or the US), and children's age and age of arrival (if born abroad), children were classified into six immigration depth levels. For instance, depth 1 included immigrant children arrived after age 10, while depths 4–5 included US-born children with at least one parent born abroad. Proportion of lifetime resided in the US was also calculated. Acculturation information included language use - the child's relative use of Spanish and English in different settings and with different people, measured with a Likert scale adapted from Woodcock (1991). To implement our inclusion criterion, we verified that children's caregivers report communicating solely or mainly in Spanish in response to the item about language use 'between adults at home'.

Cross-cultural validity of our assessments. The validity of any psychological study conducted on immigrant minorities, including bilingual and language minorities, has been questioned over the years. A sad although extreme example is the research conducted on Ellis Island in the 1920s that found that around 50% of recent Eastern European immigrants were 'feeble-minded' (Gould, 1996). Important and well-founded scientific critiques have focused on flawed assumptions underlying the use of instruments and the application of constructs to immigrant groups. Overall, the tendency in much of the literature has been to overgeneralise, utilising constructs and instruments (such as IQ tests) derived from other populations. Recommendations from an expert panel (NIMH LOTE conference, 2004) state that assessments of immigrant minorities should use psychometrically sound instruments derived from the target populations or created through back- and forward translation (Brislin, 1986), tested for reliability and validity on the target populations. Our assessments are consistent with these recommendations.

Statistical analyses

We summarised sociodemographic, immigration, acculturation, IQ and clinical descriptives. We reported descriptive analyses of the children's language profiles, including ability, deficits, and language dominance (Aim 1) and ALP levels (Aim 2). Chi-square analyses were used to test whether a language dominance profile prevailed over others and binomial tests to examine the chance co-occurrence of deficits across languages. For all analyses, alpha was set at .05 and we estimated 95% confidence intervals.

Results

General description: sociodemographics, IQ, psychiatric symptom severity

We provide here a brief summary to provide context to our main findings related to Aims 1 and 2, as detailed

information has been published elsewhere (Toppelberg et al., 2002). In terms of sociodemographics (SES, immigration and acculturation), household SES based on the Hollingshead Four Factor Index (1975) was low in 68% of the sample. Less than half (47%) of the mothers had completed high school. Most of the children (98%) had both parents born outside the continental US (El Salvador 34%, Puerto Rico 18%, and Dominican Republic 14%). A majority (72%) were US-born with both parents born outside the continental US (immigration depth 4). Most children (94%) had been living in the US for a minimum of 2 years. Language use was predominantly Spanish at home and predominantly English outside the home.

IQ was in the low average range, with six children (12.2%) scoring below 70. Psychiatric symptom severity was high as indicated by *T* scores for total CBCL (mean = 62; *SD* = 12), internalising (mean = 61; *SD* = 12) and externalising (mean = 56; *SD* = 11). The psychiatric syndromes that most commonly reached clinical significance were: internalising (66%), externalising (38%), problems with attention (36%), anxiety/depression (34%), followed by aggressiveness (32%) and social problems (30%).

Aim 1: Language ability and deficits; language dominance

Language abilities and deficits are summarised for each language. Table 1 presents data on WLPB standard scores, presence/absence of low language ability and language deficits, and, language dominance profiles. Areas of low language ability were defined by standard scores of 81 or lower (1.25 *SD* below the mean or 11th percentile) (Leonard, 1998). Children with language deficits were those with general language ability that is low in both Spanish and English (i.e. cluster scores ≤81). The assumption here was that a primary linguistic deficit, namely, a deficit in the basic competence to acquire language (any language) would result in significant weaknesses in both languages. In contrast, limited opportunity to learn a language (e.g. due to recent arrival or limited exposure or instruction) would result in weaknesses mainly in one language. More than 69% had low general language ability in either language and 51% in both (Table 1). On individual domains, 33% to 75% had low ability in one language and 20% to 50% in both. The typical score was around or below our cut-offs of 81.

We operationalised language dominance as a sizable (>1SD) difference in language ability between languages. We categorised children with no difference or a small difference (<1 *SD* of the normative population, i.e. 15 standard score points) as 'balanced' bilinguals. In contrast, we classified children with a large difference (>1 *SD*) as dominant in either English or Spanish and, therefore, 'dominant' bilinguals. Balanced bilinguals constituted the most prevalent group in all domains with a receptive component (Table 1). For the single purely expressive domain (picture vocabulary) there was no significant difference in the proportion of balanced to dominant bilinguals. Spanish was more common as the dominant language in a purely receptive test (listening comprehension), while English-dominance was more common in purely or predominantly expressive tests (picture vocabulary and memory for sentences).

Table 1. Language ability: scores, low language ability, and language dominance ($n = 50$)

		Spanish		English		Spanish/English	Language dominance (%)[b]			
								Dominant bilingual[d]		
Domain	Test score	Standard score Mean (*SD*)	Low language ability (%)[a]	Standard score Mean (*SD*)	Low language ability (%)[a]	Language deficit (%)	Balanced bilingual	English dominant	Spanish dominant	Difference in prevalence *p*[c]
General language ability	Oral language cluster	68 (20)	**71**	70 (22)	**69**	51	**51 [38,66]**	31 [18,44]	18[7,29]	$p = .018$
Expressive	Picture vocabulary	59 (26)	**72**	69 (24)	64	43	34 [21,47]	43* [28,57]	23[13,36]	$p = .264$
Mixed receptive-expressive	Memory for sentences	72 (16)	**74**	75 (19)	**68**	55	**53 [38,68]**	32* [19,45]	15[6,26]	$p = .004$
	Oral vocabulary	80 (17)	49	85 (19)	40	24	**60 [47,73]**	27 [13,40]	13[4,24]	$p = .001$
Receptive	Listening comprehension	78 (19)	51	69 (23)	**69**	40	**47 [33,62]**	16 [7,27]	38* [24,51]	$p = .028$
	Verbal analogies	84 (15)	33	87 (18)	42	18	**67 [53,80]**	18 [7,29]	16[7,27]	$p = .001$

[a]Defined as children with standard scores ≤81. Percentages that exceed by at least 30% what can be expected in the general bilingual population are shown in bold.
[b]Language dominance groups (balanced and dominant bilinguals) are based on each subject's similarity in language ability (standard scores) across languages. Children with similar abilities (<15 points discrepancy = one standard deviation) are considered balanced. Children with dissimilar abilities (>15 points discrepancy) are labelled dominant. Results for dominant groups that are significantly more prevalent appear bolded. Square brackets represent 95% confidence intervals for the population prevalence.
[c]Chi-square test, testing whether the proportions of children in the three language dominance groups are equal.
[d]Asterisks represent significantly ($p \leq .05$) different proportions of children in the English-dominant vs. Spanish-dominant groups.

Table 2. Language ability: academic language proficiency (ALP) levels ($n = 50$)

	Advanced (very easy)		Very limited (extremely difficult)	
	Fluent (manageable) %	Limited (difficult) %	Negligible (impossible) %	Not tested due to lack of language proficiency %
Spanish	13 [5,24]	47 [33,60]	40 [28,54]	0 [0,7]
English	17 [8,29]	43 [29,56]	28 [17,42]	12 [5,24]
Proficiency in strongest language	27 [16,40]	54 [41,68]	19 [10,31]	0 [0,7]

(): In parentheses: expected difficulty with classroom language demands.
[]: Brackets indicate 95% confidence intervals for the population prevalence.

Aim 2: School-related language ability (ALP)

For simplicity-sake and policy relevance, we collapsed the five ALP levels into three categories: 'advanced/fluent', 'limited', and 'very limited/negligible', as many educational decisions hinge on whether the child's ALP is 'fluent' or better, or 'limited' or poorer (Table 2). In addition, we split those children falling on intermediate levels (e. g. 'limited to fluent', 'very limited to limited') equally between the immediately lower and higher levels. In the child's strongest language, ALP (Table 2, Figure 1) was 'limited' in 54% of the children and lower than 'limited' in 19%. ALP was lower than 'limited' for Spanish in 40% of the children and for English in 40% (counting children with English proficiency so low that testing could not be conducted).

Children that presented low ALP in one language did not tend to necessarily present low ALP in the other. For instance, lower than 'limited' ALP in both languages was present in 19% of our sample (CI: 10, 31; Table 2);

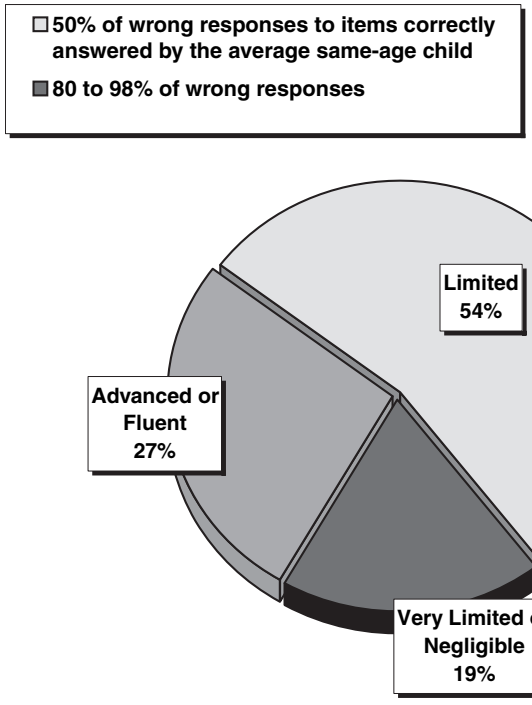

Figure 1. Academic language proficiency (ALP) for the child's strongest language ($n = 50$). The shading denotes levels of concern. For the child with 'very limited' to 'negligible' ALP (in dark grey in the graph), the expected language demands of the classroom will be 'extremely difficult' to 'impossible'

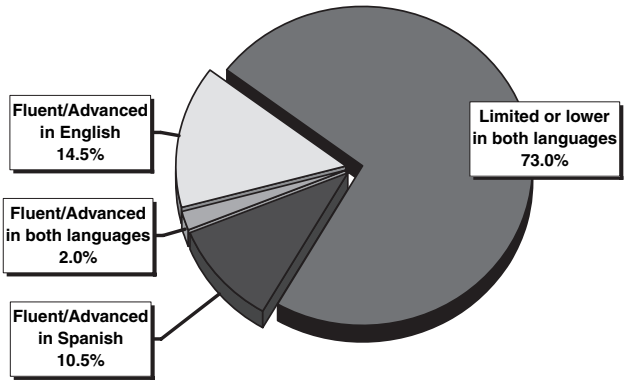

Figure 2. Academic language proficiency (ALP) for both languages ($n = 50$)

this is not significantly different (binomial test, NS) from the expected proportion of children (16%) that should have this low ALP level based on the chance overlap of having lower than limited ALP in either language (Table 2), i.e. 40% = 16%. The same occurred with ALP that was 'limited' or lower (83% in English and 87% in Spanish, overlapped in our sample in 73%, not different from chance overlap: 72%, binomial, NS).

Considering both languages together, while ALP was fluent or higher in only one child (2%), it was limited or lower in 73% of the children (Figure 2).

Discussion

The present study of psychiatrically referred bilingual children strongly suggests that many have serious limitations in multiple domains of both languages. Between one-third to three-quarters of the children in the study presented with low abilities in the various domains of receptive language in both English and Spanish. This is important as some of the problematic behaviours may indeed be contextually triggered by the child's comprehension difficulties. Reduced language abilities may in some cases be related to more extensive developmental and cognitive delays. This appears to be the case for the children (12%) with significantly low IQ (<70). Our sample is, in this regard, similar to other psychiatric samples, in which low IQ and developmental delays are commonly observed.

How do our sample's language ability levels compare with what we know about bilingual children in general, absent control data from a non-referred bilingual group? Compared with published results from a large

community-based study of several groups of Spanish home-speaking bilingual fifth-graders in Miami, Florida (Oller & Eilers, 2002) show English scores that generally appear to be higher and to have narrower variation than those from our sample in a non-systematic comparison (i.e. not including possible confounds, such as SES, acculturation, etc). This large study used three of the same oral WLPB tests. The Miami study average group means (*SD*) for picture vocabulary, verbal analogies and oral vocabulary were 87(12), 96(14) and 96(13), compared to means (*SD*) from our sample of 69(24), 87(18) and 85(19) respectively.

In terms of language dominance, expressive abilities were stronger in English, while Spanish dominated in one receptive domain. This pattern suggests first language attrition (as expressive skills tend to be lost first, before receptive abilities) or lack of exposure, and is typical of subtractive bilingualism, in which a second language is acquired at the expense of the first language. This pattern of bilingualism, quite prevalent in the US, is considered to be less desirable as it puts communication within the family at risk and may result in losing the cognitive, communicative and cultural benefits ascribed to additive bilingualism, in which mastery of both languages is attained (Hakuta, 1986).

In terms of ALP (Aim 2), the children's generally low levels in one and, in most cases, both languages and inability to perform optimally given a typical classroom's language demands is of major concern. While more than 50% of normal monolingual children would be fluent or advanced (responding correctly to at least 90% of the items), only 10.5% and 14.5% of the children in our sample were fluent or higher in Spanish and English exclusively and only 2% in both. Our findings suggest that most of these children have limited or lower ALP in both languages. In fact, ALP in both languages was 'limited' or lower in 73% (Figure 2). We therefore propose that in addition to appropriate language placement, early and remedial interventions are called for to address co-occurring psychiatric and language problems.

The present findings suggest that school language assessments based on only one language (e.g. English) can miss part of the picture. One reason is that a priori assumptions that somehow functioning in one language could be guessed based on assessment of functioning in the other language is incorrect - as one out of 5 to 6 children who present with low ALP in one language are fluent in the other, and practically all the children who are fluent in one language are not fluent in the other. Because almost half of the sample is comprised of 'dominant' bilinguals, who by definition have proficiency levels in one language that are very different from their proficiency levels in the other, competence in one language cannot be inferred from competence in the other, making dual language assessments necessary. In psychiatrically ill children, a mainstream English-as-an-additional-language placement without a full bilingual assessment may be ill-advised, as it would delay, in many cases, identification of an existing language disorder and beginning of necessary remedial services. In cases of language deficits, a detailed assessment is also needed to individualise educational and therapeutic interventions. If an assessment of the minority language was not possible due to resource limitations or because language tests in a given home language are not available, a conservative approach would dictate considering low community language proficiency as a potential sign of language impairment, requiring follow-up, monitoring and, in some cases, services.

There is a need for future studies in other settings such as schools and residential programs, to support the generalisability of our conclusions. Instructional language demands must be tailored to the child's ability (Cummins as cited in Echavarria & Graves, 1998); otherwise, further language and emotional/behavioural difficulties may result. The present research also has important policy implications in terms of language assessment and intervention capabilities, as well as integration of knowledge about linguistic functions in treatment and educational plans and in staff training.

Limitations

Our findings need to be considered in the context of a number of limitations. The present study was descriptive in nature and involved a referred population of children without a non-referred comparison group. It is as yet unclear if the observed generally low language ability level in our sample is specific to psychopathology. At-risk populations, such as poor, low SES, minority individuals are more likely to have low language ability and low educational attainment (Toppelberg & Shapiro, 2000). Lacking a non-psychiatrically referred bilingual control group, we cannot draw conclusions about whether the findings are specific to a psychiatric sample. Further elucidation requires analytical and controlled investigations involving representative samples. The low language and intelligence scores may in part themselves result from psychiatric symptomatology interfering with a given child's capacity to adequately perform in a testing session and not entirely reflect her true underlying ability. Performance is mitigated in a highly controlled setting such as that of the testing session and may in fact be even more compromised in the real world of multiple competing demands and distractions of the classroom or home settings.

Conclusion

There is a pressing need for analytical studies involving bilingual children and psychopathology. More complex and ambitious studies will hopefully spring out of the preliminary data generated by this and other descriptive work. Despite its limitations the present research points to the following conclusions. First, mental health clinicians ought to consider any communicative or linguistic difficulties in psychiatrically ill bilingual children as potential indicators of language impairment, as the tendency not to do so may have important adverse implications. Second, these children's ability to respond to the language demands of school instruction may be significantly limited. Third, the identified language difficulties may themselves have important implications for assessment and treatment (e.g. verbally-mediated psychotherapies) and ought to guide the design of targeted therapeutic and remedial strategies. Fourth, reduced language competence in bilingual children with psychopathology ought to shape policy, with

service planning closely linked to assessment of language and provision of support services. The established need for well-coordinated psychiatric and language services applies to monolingual as much as it does to bilingual children, but the current reality of services for children with psychiatric problems is, unfortunately, a far cry from this ideal.

Servicing for bilingual children with psychopathology, in all cases, ought to provide a rich linguistic environment. Language learning children are more likely to respond with significant gains in vocabulary and language comprehension spurs if they are given the chance for intense exposure (McLaughlin, 1995). In addition to the child-based psychopathology, a whole host of associated risk factors such as low SES, parental psychopathology (e.g. maternal depression), as well as a given child's classroom placement can get in the way of necessary exposure to linguistically-rich environments.

For those who are diagnosed as having a developmental language disorder (specific language impairment), appropriate language services may involve formalised remedial intervention provided by language therapists and learning specialists. When remedial services or a special educational placement are recommended, language re-assessment on a regular basis (e.g. yearly) is necessary to document progress, relate it to change in psychological symptoms, and decide either exit from or adjustments to the current plan. We recommend that in most cases, considerations of language proficiency again ought to shape mental health treatment. Ideally, child psychotherapy should be delivered in the language of greatest mastery; mental health clinicians should monitor the child's comprehension and minimise linguistic and cognitive demands in order to maintain and improve communication. Once the relation is established and any crises are overcome, psychotherapy is an important medium to provide additional rich linguistic experiences, through gradually challenging and expanding the child's cognitive-linguistic capacity. This approach follows a model similar to Vygotsky's zone of proximal development (Vygotsky, 1978) and Fischer's dynamic skill theory (Fischer & Bidell, 2006), in which the presence of scaffolding support optimises learning. Ongoing therapy may be particularly helpful to promote adaptive outcomes through supporting language development in emotionally and/or behaviourally compromised domains. As it has been known in the field of child psychotherapy for a long time, developing an emotion based vocabulary helps deal with troubling feelings, and acquiring language skills to accurately interpret and navigate challenging situations may prevent physical aggression.

From both a clinical and educational perspective, there is a need for systematic language screenings in bilingual children with psychopathology. Language deficits need to be suspected in psychiatrically referred bilingual children. Delayed bilingual development is highly prevalent in children with clinical psychopathology; our findings call for increased awareness and screening. From clinical and educational viewpoints, language skills need to be assessed in both languages, always including appropriate assessment of receptive language, before making decisions about intervention, school placement and special needs. To our knowledge, the present study is also unique in suggesting that the demands of language instruction may be extremely difficult or impossible for many bilingual children receiving psychiatric services. For optimal clinical care, a close association between child mental health and language services is as important for bilingual as it is for monolingual children. Helping bilingual children with psychopathology involves early detection of language problems, empirically supported policy and service planning, and conceptually driven research, all necessary to appropriately serve the growing diversity of our clinical populations.

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