

Evaluating Language Assessments with Members of the Travelling Community

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Abstract

Background and objective: The Irish Travelling Community is a cultural group using a unique dialect – Traveller English. It has been established that some standardized, norm-referenced language measures are biased against culturally and linguistically diverse populations. In this study, the achievement of Traveller children on standardized language measures and on processing-dependent measures is compared with achievement of children from the Settled community on the same measures.

Method: Twenty children aged 6–10 years, 10 each from Travelling and Settled communities, were assessed using the CELF-3 UK, and two processing-dependent measures to assess aspects of language development.

Results and conclusions: Results indicate that Traveller children scored significantly lower than Settled children on the standardized language measures. In contrast, the use of processing-dependent measures showed few inter-group differences. The recommendation is that processing-

dependent measures be used in addition to standardized measures to increase the validity of language assessment of Traveller children.

Key words: Travelling Community, language assessment bias, processing-dependent measures

Introduction

Ireland is a multicultural society, where speech and language therapists (SLTs) encounter a large range of cultures, languages and dialects. The Irish Travelling Community (TC or *Travellers* hereafter) comprises one of the largest ethnic minority groups, as well as being an indigenous part of Irish heritage. Travellers have values, customs, traditions and ancestry in common. Their core values include nomadism, importance of family, resourcefulness, self-employment, adaptability, and distinctive language patterns (Ní Shúinéar, 1994). Traveller children are from a lower socio-economic status, and therefore are at risk of slower-than-average language development (Locke, Ginsborg, & Peers, 2002). Other risk factors that influence Traveller children's language development include the Travellers' child-rearing practices, where parents view their children as "apprentices" of adult activities, and Travellers' nomadic lifestyle (Pavee Point, n.d.), both of which expose them to different vocabulary and concepts from the mainstream. In addition, their Traveller English dialect is culture-specific, with vocabulary and syntax features that generally are not used by mainstream speakers of English in Ireland.

Language used by Travellers and Traveller English

Cant (also called *Gammon* or *Shelta*) is the Travellers' ethnic mother tongue and identity marker (Kenny & Danaher, 2009). Some Cant words are commonly used by Travellers, such as those that appear in titles of publications, for example: *Pavee Beoirs an' Glokes* ("Older Traveller Women and Men"); *Our Geels* ("Our Community") (Pavee Point, 2008, 2010). Among the characteristics of Cant is a simplified version of Hiberno-English syntax, with part-Irish language vocabulary (Little, 2003); its preservation to ensure valuing cultural identity is encouraged (Kenny & Binchy, 2009). However, its role is weakening, and Traveller English (TE) is now predominant (Hayes, 2006).

TE is widely regarded as a recognizable dialect (O Baoill, 1994), and Ní Shúinéar (2002, p. 37) asserts that "any speaker of Hiberno-English can identify a speaker of Traveller English, even without the use of visual clues". Without detailed supporting data from linguistic and sociolinguistic perspectives, describing the distinctive features of TE is difficult. However, from longstanding therapy provision to Traveller children in Ireland, some patterns emerge in their use of TE – these include their use of restricted syntax, where function is communicated through use of content words; and their use of increased volume with distinctive vocal characteristics, perhaps associated with high prevalence of hearing loss (R. Curry, personal communication, 15 February 2011). An early study of Traveller children's language found that they used restricted vocabulary, indicating reduced ability to communicate detail, regarding a picture selected from three similar pictures (Acton & Davis, 1979).

In her study of speech and language therapy (SLT) service provision, Cregg (1997) reports that 80% of randomly selected Traveller children (aged 4;00–5;00) may require SLT intervention. Cregg's awareness of inadequate assessment tools for Travellers prompted her to ensure children's familiarity with test materials (e.g., picture and miniature objects), and adaptation for differences in vocabulary (e.g., 'board' for 'stick' or 'wood') and syntax (e.g., 'gona' as future tense marker). The main assessment procedures used in Cregg's study were based on UK normative data (with the exception of the *Renfrew Action Picture Test* 3rd Edition (Renfrew, 1988) which has normative data on subsets of Irish children, but not on Traveller children. In the absence of local normative data, the use of assessments standardized on the UK population has been the accepted practice in Ireland. However, using these standardized assessments for evaluating the language abilities of Traveller children may result in 'false positives', or over-estimation of disorder, due to elements of bias in the standardized measures.

How bias in standardized measures might affect Traveller children

Content bias occurs when test stimuli or procedures reflect an assumption that all children and cultures are exposed to similar concepts and vocabulary, or have similar life experiences (Laing & Kamhi, 2003). Travellers' nomadic lifestyle involves living in "wagons" (caravans or trailers) and moving between halting

sites where conditions are often 'harsh' and isolated, with limited facilities or services (Pavee Point, 2010). Such environments are not illustrated in test items in standardized assessments. Nomadic lifestyles impose limitations on children's access to educational environments, reducing a variety of potentially enriching experiences affecting children's social, emotional and cognitive development (Bradley & Corwyn, 2002). These different life experiences of Traveller children increase the likelihood of exposure to *content bias* when they are assessed using standardized procedures.

Linguistic bias occurs when test items reflect only one specific language style, often that of middle-class, Standard English speakers (Wyatt, 2002). Traveller children are exposed to a dialect, with lexicon elements from Cant, which is not reflected in standardized assessments. Linguistic bias within a procedure is compounded by cultural variables of both child and therapist. Inaccurate evaluations of performance that may result from the bias in standardized assessments can lead ultimately to disablement rather than empowerment of speakers of TE (Cummins, 2000). In US research, the consequences are empirically documented by over-representation of ethnic groups in SLT clinics (Washington & Craig, 2004), as children score below age levels on standardized assessments, leading to over-referral and misplacement in SLT and special education services. Similarly, the risk of over-identification (or 'false positives') of language disorder exists when using standardized assessments with Traveller children.

Towards possible solutions

Potential alternative assessment procedures appropriate for use with culturally and linguistically populations exist (Washington, 2009). These include language sampling, dynamic assessment, and criterion referenced assessments. Currently, all of these present restrictions for use with Traveller children because of limited information about what constitutes language competence in Traveller English. Therefore, evaluating language samples or using criterion referenced assessments regarding mastery of linguistic concepts would not be valid means of assessing this population. Dynamic assessment aims to evaluate potential for learning, rather than a snapshot of

skills. As an example of this, the test-teach-retest approach may be used to provide a phase of intensive therapy. However, dynamic assessments are still relatively new in the area of speech and language disorders and procedures are time-consuming and demanding (Hasson & Botting, 2010). Because of the time and intensity of input required, dynamic assessment would not have been practical for the sample size of the current study.

Processing-dependent measures focus on psycholinguistic operations that do not require prior knowledge or background information on specific language developmental trajectories or language competencies, levelling the playing field for all clients (Rodekohr & Haynes, 2001). Examples include non-word repetition tasks that are useful in identifying deficits in metalinguistic processes, thereby providing a good indication of even a mild language disorder (Ellis Weismer et al., 2000). Also, they are time efficient and readily available, with recent research advocating their use (Kohnert, Windsor, & Yim, 2006). The Competing Language Processing Task (CLPT) (Gaulin & Campbell, 1994) and the Non-word Repetition Task (NRT) (Dollaghan & Campbell, 1998) demonstrate evidence as culturally appropriate assessment procedures (Kohnert et al., 2006) and were chosen for this study.

Motivation for the study

Traveller children's variation in life experiences, socioeconomic status, exposure to a culture-specific language and dialect combine to make them vulnerable to bias in standardized language measures. The need for culturally appropriate evaluation of language skills of children from the Travelling Community has received some attention in governmental policies (Report of the Task Force on Travelling Community; Department of Justice, Equality & Law Reform, 1995), and from research surrounding the language skills of the TC (Cregg, 1997). However, for the SLT working with Traveller children, questions remain regarding the best possible means to assess their language abilities. This study addresses those questions by evaluating whether commonly-used standardized language measures are appropriate to assess the language skills of Traveller children, and whether processing-dependent measures can provide additional, alternative assessment information of TC children's language ability.

Method

Participants

Ethical approval from the Faculty of Health Science Committee, Trinity College Dublin, was granted, and recruitment of participants was instigated. Two schools in South West Dublin were designated as appropriate for the study, as children from the Settled community (SC) and Travelling Community (TC) were integrated in the same classes. Children aged between 6;10 to 10;10 years from SC and TC were recruited for this study; children who are referred, assessed, or currently attending SLT because of familiarity with assessment procedures, and possible diagnoses of atypical speech and language were excluded from the study. Information packages detailing the aims and procedures of the study were sent to school Principals. Interest in participation was received from the two Principals, who in turn distributed consent forms and information leaflets to the parents of children who fitted the inclusion and exclusion criteria. Signed consent forms from parents of potential participants were returned to the authors via the school Principals. In order to ensure the same number of boys and girls in each group, five boys and five girls each from the SC (n=10) and TC (n=10) were randomly selected among the volunteers who gave consent to participation.

Materials and procedure

Instruments administered to each participant comprised of two processing-dependent measures of language performance and one standardized, norm-references language measure.

The Competing Language Processing Task (CLPT), where respondents evaluate the truth of 42 statements, at increasing difficulty levels. Concurrently, participants are asked to recall the last word of each sentence following presentation. Sentence length, grammatical complexity and vocabulary level are constant across levels of the task. Participants' responses were recorded live by the researcher. Percentages of statements evaluated correctly – Percent Correct Yes/No (PCY) – and percentages of words

recalled correctly – Percent of Words Recalled (PWR) – were calculated. For consistency, stimuli from CLPT were presented on audiotape via a cassette recorder (Sony TCM-150) through headphones.

The Non-Word Repetition Task (NRT) consists of 16 phonotactically legal nonsense words, four each at different syllable lengths (1–4 syllables long), defining different levels of difficulty. Participants' responses were recorded through live phonetic transcriptions and audio recorded for later broad phonetic transcription. Percentages of total correct phonemes, and correct phonemes for each syllable set were calculated. For consistency, stimuli from this task were presented on audiotape via a cassette recorder (Sony TCM-150) through headphones.

The CELF-3 UK (Semel, Wiig, & Secord, 1995) provides differentiated measures of selected receptive and expressive language skills in morphology, syntax, semantics and memory. This test yields norm-referenced scores in receptive language (RLS), expressive language (ELS) and total language composite score (TLS) and six subtest scores. The CELF-3 UK was the version available at the time of the study and was then one of the most widely-used language assessment procedures in Ireland. Therapists are advised to administer the latest version of the CELF (CELF-4 UK) in assessment. Despite its wide use, Ballantyne, Spilkin and Trauner (2007) have cautioned that later versions of the CELF may under-classify language disorders and minimize the severity of children's language deficits.

All of the assessments were administered to each participant in a quiet room in the school, in the order of CLPT, NRT and CELF-3 UK. Assessments were completed within one session (approximately one hour). For the NRT, participants' responses were recorded onto a microcassette recorder (Sanyo TRC-615M) for broad phonetic transcription. The recording instrument remained in a fixed position, approximately 30cm from the mouth of the participant.

Data analysis and results

Statistical analysis of the data (using SPSS version 12) compared means and standard deviations of test scores achieved by the two groups of participants

from the Traveller and Settled communities in the study. Independent sample t-tests were carried out to determine if significant differences emerged between their test scores.

The CLPT results

Table 1 presents means and standard deviations for the two scores – percent correct yes/no (PCY) and percent of words recalled (PWR) – of CLPT for the two groups. Levene's test of homogeneity of variance ($p = 0.178$) for the percent of words recalled (PWR) showed that the distributions of scores for the two groups were comparable and the t-test predictably showed no difference between groups on this variable ($t(18) = 0.900$; $p = 0.380$). Regarding the percent correct yes/no (PCY) scores, Levene's test of homogeneity showed that the mean scores were not distributed comparably ($p < 0.05$), indicating that there was a significant variance in homogeneity between the two groups on this variable, and the t-test underscores this difference between the groups on this variable ($t(18) = 2.14$, $p < 0.05$).

Table 1 Group differences for CLPT scores between Travelling Community and Settled Community.

Test	TC (n=10)		SC (n=10)		t (18)	p-value
	M	SD	M	SD		
Percentage correct Yes/no (PCY)	85.90	10.671	93.80	4.686	-2.14	0.046
Percentage words Recalled (PWR)	45.70	14.430	50.60	9.407	-0.900	0.380

The NRT results

The second area of analysis dealt with the groups' scores on the Non-Word Repetition Test (NRT), looking at both the total percent of phonemes correct (TPPC) and each level of difficulty. Table 2 shows means and standard deviations and differences between the groups' TPPC and individual syllable level scores. Levene's test of homogeneity of variance for the total percent of phonemes correct (TPPC) showed that the distributions of mean scores

for the two groups were comparable and the t-test predictably showed no difference between the groups ($p = 0.264$).

Table 2 Group differences for NRT scores between Travelling Community and Settled Community.

Test	TC (n=10)		SC (n=10)		t (18)	p-value
	M	SD	M	SD		
1PPC	68.3	13.929	82.30	10.822	-2.51	0.022
2PPC	74.00	17.288	85.50	9.846	-1.82	0.084
3PPC	68.70	17.727	78.70	12.257	-1.06	0.160
4PPC	68.20	12.744	66.90	17.854	-0.187	0.853
TPPC	69.60	10.157	75.00	11.363	-1.15	0.264

To determine if syllable length might affect non-word repetition performance in both groups, an analysis of separate scores for syllables was performed. Percent of phonemes correct (PPC) was calculated for each of the 4-syllable sets. The t-tests showed no significant difference between groups for three of the four syllable sets: 2-syllable, $t(18) = 1.82$, $p = 0.08$; 3-syllable, $t(18) = 1.46$, $p = 0.16$; 4-syllable, $t(18) = 0.187$, $p = 0.85$. There was, however, a significant difference between groups for the 1-syllable non-word (1PPC), $t(18) = 2.51$, $p < 0.05$, with the mean score for Traveller children (TC) being 68.3, and the mean score for Settled children (SC) being 82.3.

The CELF-3 UK results

The final analysis was conducted between the two groups' RLS, ELS and TLS on the CELF-3 UK. The means and standard deviations and the differences between groups on the CELF-3 UK, RLS, ELS and TLS appear in Table 3. Levene's test of variance showed the distributions of mean scores for these groups were not comparable ($p = 0.914$, $p = 0.496$, $p = 0.613$). The t-tests revealed a significant difference between the groups regarding cultural and linguistic diversity, with the Settled children (SC) scoring significantly higher than the Traveller children (TC) in the TLS, $t(18) = 4.17$, $p < 0.001$. Further t-tests were completed on the CELF-3 UK, and they revealed a significant

difference between Traveller children and Settled children on both the RLS, $t(18) = 4.37, p < 0.01$ and the ELS, $t(18) = 3.48, p < 0.01$. Therefore, all three composite language scores on the CELF-3 UK showed significant differences between the two groups.

Table 3 Group differences for CELF-3 composite scores between Travelling Community and Settled Community.

Test	TC (n=10)		SC (n=10)		t (18)	p-value
	M	SD	M	SD		
CELF-3 UK - RLS	75.50	13.599	102.00	13.466	- 4.37	0.000
CELF-3 UK - ELS	71.50	15.204	93.30	12.667	-3.48	0.003
CELF-3 UK - TLS	72.10	14.130	97.10	12.583	-4.17	0.001

Discussion

The current study considered the appropriateness of standardized language measures for use with Traveller children. In addition, we considered whether processing-dependent measures can provide additional, alternative assessment information of Traveller children's language ability.

Statistical analysis of the results of the Traveller children and children from the Settled community on the CELF-3 UK revealed a significant difference in performance between the two groups. This suggests that content and linguistic bias are present in standardized measures and that they should not be used as the sole means of evaluating the language skills of Traveller children. The results also revealed comparable scores from the TC and SC in the two processing-dependent measures used, the Non-Word Repetition Task and Competing Language Processing Task. Both processing measures have been shown to be useful in diagnosing language disorder (Graf Estes, Evans, & Else-Quest, 2007; Oetting, Cleveland, & Cope, 2008) and would serve as adjunct procedures when evaluating the language skills of Traveller children.

Traveller children scored significantly lower than their Settled peers on the CELF-3 UK measures of receptive and expressive language, and their total language scores. Two subtests of the CELF-3 UK – *semantic relationships* and *sentence assembly* – rely heavily on literacy skills. This impacted on the results

obtained by at least 40% of Traveller children, as the discontinue rule was achieved early, or they were simply unable to do the task at hand. Assessment of reading performance of Traveller children is advised prior to using language measures that require proficiency in literacy development. The fact that the t-tests showed a significant difference in the composite CELF-3 UK scores does not necessarily suggest that the TC had language disorder, but only that they performed at a significantly lower level on the procedure.

In contrast to the CELF-3 UK, the scores obtained on the majority of the processing-dependent measures – NRT-TPPC and the CLPT-PWR – showed no significant differences between the Traveller and Settled children, indicating that these measures helped bring the two groups on a par. One major advantage of these measures is that the participants did not have to take part in any tasks that required proficiency in literacy skills.

The broad findings from this study were consistent with previous research (Campbell, Dollaghan, Needleman, & Janosky, 1997) in that the Traveller children – a minority group in Ireland – and the Settled children groups achieved similar scores in the processing-dependent measures. The similarity in the pattern of results reinforces the use of processing-dependent measures with minority groups, and in particular their potential for use with Traveller children. The discrepancy between the results on the standardized language measures and processing-dependent measures reveal that, when used alone, standardized language measures are inadequate for assessing Traveller children. Cregg (1997) made relevant adjustments to standardized procedures to allow for some recognition of the cultural differences of Traveller children. However, these alterations did not prevent the over-estimation of language disorders in the Travelling Community. In comparison, our results on the processing-dependent measures suggest that these should be used *in addition* to standardized language measures when assessing for children's psycholinguistic difficulties. This could reduce the possibility of over-identification of language disorder, which instead may be a case of language difference related to diverse culture, dialect and reduced literacy skills (Campbell et al., 1997). However, the results of our study vary from Campbell et al.'s (1997) results in that Campbell et al.'s (1997) two groups of participants achieved more comparable scores in the processing-dependent measures. Possible reasons include: the difference in age groups, with Campbell et al.'s (1997) participants being up to four years older; a larger sample size; and the

variation in distinct cultural influences and dialects – Campbell et al.'s (1997) participants were members of African American, Asian and Native American Communities. This difference in results between Campbell et al.'s (1997) study and this study illustrates that, while processing-dependent measures are useful with individuals who are culturally and linguistically diverse, the varied range of skills and experiences of different minority communities must also be considered. Therefore, processing-dependent measures should not be assumed to be completely free of all the cultural biases found in standardized, norm-referenced tests, and their efficacy should be evaluated on the minority group with whom they are used.

A major limitation of this study is the small sample size. In addition, the timing of assessments may have influenced the findings, in that the most demanding assessment was the last one administered. A further limitation is the lack of research into the contrastive features (including phonological and morphosyntactic characteristics) and non-contrastive features (including use of past tense copula and auxiliary verbs) of Traveller English. In clinical terms, account should be taken of some disadvantages inherent in the processing-dependent measures. These measures do not pinpoint specific areas of language such as syntax, semantics and morphology, which have implications for academic success. However, they effectively differentiate between psycholinguistic difficulties and language difference.

Clinical implications and conclusion

The major implication arising from the study is that processing-dependent measures be used in addition to standardized measures to increase the validity of language assessment of Traveller children. Until processing-dependent measures have been fully developed and refined for use with the Travelling Community, both processing-dependent and standardized language measures should be used alongside each other to ensure that a thorough language profile is achieved. However, it is also recommended that therapists consider the use of alternative assessment procedures (for example, language sampling) in order to develop data on the linguistic features of Traveller English. Further research is also needed to establish the utility of processing-dependent measures in evaluating Traveller children's language ability.

When assessing Traveller children, therapists should attempt to obtain

information on the factors which lead to the client being susceptible to content and linguistic bias in standardized language measures. In particular, therapists should be mindful of information regarding Traveller children's language acquisition environment, including, for example, the parents' or caregivers' levels of education, their views on their role in language development and their child's exposure to Cant and Traveller English. This will help the therapist identify if the effects of lower socioeconomic status on language development is probable (Locke, Ginsborg, & Peers, 2002) and if content and linguistic bias found in standardized language measures may have affected their results (Laing & Kamhi, 2003).

Part of the speech and language therapist's work is to empower the client. By assessing Traveller children in a manner that takes account of their life experience and culture, we can prevent over-identification of language disorder and implement interventions that acknowledge their cultural influences. Showing respect for Traveller values and culture by being aware of the variations in their language use and development may help preserve the language differences in Traveller English that serve to strengthen their cultural identity.

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