

## LETTER TO THE EDITOR

# Factors affecting performance in cross-cultural neuropsychology: From a New Zealand bicultural perspective

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Of the many factors affecting test validity, ethnicity has received comparatively little attention. This has changed recently with a call for alternative norms or assessment measures that are appropriate for different cultural contexts and for examination of the impact of the variables of culture, ecological demands, primary language, and educational background (Ardila, 1995; Robinson, 1988; Sachdev, 1989; Se-gall, 1986).

The Maori population of New Zealand (representing 12% of the total population) is one of a number of ethnic groups worldwide that have been identified as having particular difficulties in educational achievement. Maori are English speaking (although a small proportion are bilingual), attend the same schools as non-Maori (New Zealanders of European ancestry), and are integrated within the general population, yet Maori children perform less well than non-Maori on standard cognitive measures (McCreanor, 1988) and gain proportionally fewer passes on national examinations. Moreover, Maori are overly represented in negative social indicators such as having low standard of income, education and housing, and high unemployment, crime involvement, injury, and accident figures (Department of Statistics New Zealand, 1994) and are proportionately younger than the non-Maori population (62.5% under 30 years compared to 45.6%; Te Puni Kokiri, 1993). These factors are among the strong predictors for traumatic brain injury (TBI) which Maori sustain more *per capita* than non-Maori (Barnfield, 1995). It could be argued that these factors impact negatively on test scores of any group regardless of ethnicity. In two recent studies after head injury however, Maori, matched for age, education, and socioeconomic status, performed at lower levels on measures of neuropsychological functioning than

their non-Maori counterparts (Barnfield, 1995; Grimmer, 1994).

To begin exploring the sources of this discrepancy we conducted a pilot survey to determine how the neuropsychological examination experience was perceived. In consultation with recent Maori clients, we designed a questionnaire of satisfaction with our service. The 69 items covered demographics (adapted from Ratima et al., 1995), degree of identification with Maori culture (Prigatano & Leatham, 1991), preassessment anxiety and overall perception of neuropsychological assessment (Bennett-Levy et al., 1994), general satisfaction [Client Satisfaction Questionnaire (CSQ-31); Larsen et al., 1979] and the degree to which the service was considered appropriate for Maori.

Of 20 questionnaires sent out from our clinic, 15 were returned. Two participants now advised that they had decided not to continue after perusing the items, and the remaining three who said that they would return the questionnaire, either chose not to or forgot.

Of the 15 respondents, 7 identified as Maori and 8 as non-Maori (9 male, 6 female). Their average age was 37 years (range 23–56). Half the sample had resided locally (Manawatu–Horowhenua) when they were seen initially. Ten of the respondents did not acknowledge an involvement with Maori community life, including 2 of the Maori sample. Of the 5 Maori who were involved, most acknowledged involvement with *marae* (communal meeting place) activities, *kohanga reo* (Maori language kindergarten), *iwi* (tribe), and *whanau* (extended family). Nine of the respondents (including 4 non-Maori) had attended at least one *tangi* (traditional Maori funeral) in the previous 12 months and 2 had consulted with a *tohunga* (spiritual healer) in that period. This level of Maori cultural activities would suggest a reasonable understanding of the needs of Maori people. There was no measure of *whakama* (the tendency to hold back), rather it was assumed to be an inherent tendency in those

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who both identified as Maori and adopted Maori cultural practices.

Half of the clients had been referred to the clinic by A.C.C. (insurers) and 23% by their medical practitioner. Previous research (Bennett-Levy et al., 1994) has suggested that educating referral agents to prepare clients for the assessment can enhance the experience for the clients. In the current study, most felt they had not been given adequate information by the referral agent to prepare them for the assessment. Bennett-Levy et al. (1994) also suggest that providing rationale for the tests, adequate feedback and inviting clients to bring a relative can make the experience less anxiety provoking. Respondents in the present study made similar suggestions. All clients, with 1 exception, acknowledged being anxious about the prospect of assessment.

Maori were less satisfied overall (especially those for whom Maori culture was part of their everyday lives) with the service than the non-Maori respondents, especially in the areas concerning current Maori cultural practices, physical surroundings, type of service, and quality of service. Many found the clinic difficult to travel to as well as uncomfortable and intimidating. Some had to make special arrangements to attend the appointment (e.g., transport, child care, accommodation, and financial). Some suggestions were made about making the clinic more aesthetic, and making a different venue available closer to home. There would obviously need to be a balance between the advantages (e.g., client less tired, less anxious, and more comfortable) and the drawbacks to this for the clinician (e.g., time constraints, funding, and having to test in conditions that may be less than ideal).

The discomfort could be further diminished by having the client properly prepared by the referral agent prior to the appointment, by offering choices at the outset that incorporate elements of Maori culture [e.g., *whanau* (family involvement), opportunity for a sharing of background, and *karakia* (blessing or prayer)]. It was considered essential for staff to be aware of the Maori health model (good health is a balance between spiritual, family, cognition as well as physical elements) and to understand the practices and behaviors that define the structure of Maori society.

There was complete satisfaction with only four items: *receptionist friendly, made us feel comfortable on first visit, clinician competency, and how appropriate the service was*. The item concerning “things about the assessment that made the client uncomfortable” resulted in vague “everything” responses to specific features about the venue such as “lighting too bright” (fluorescent); agency procedures “difficult to get a referral”; cultural input “concentrated a lot on the ‘thinking’ problems and not too much on other areas,” “not Maori enough, so much Pakeha talk”; and anxiety “felt disoriented and embarrassed,” “a feeling of failure as unaware of what level of achievement (expected of me).”

In conclusion, the present survey sought to examine the satisfaction of Maori and non-Maori TBI clients with a service in neuropsychology. It was thought that although clients would be satisfied with some aspects of the services

they had received, some areas for improvement would be identified. This assumption was supported by literature that suggest that ethnic minority clients may be adversely affected by the assessment experience because of cultural differences in their expectations, perceptions of the testing environment and performance of neuropsychological assessment components. Attention to situational, procedural, and interpersonal variables should then facilitate an assessment process that is more appropriate and would yield more valid results. Effort in these areas followed by an evaluation of the effect on assessment performance should precede change to test instruments themselves.

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