Diagnostic Accuracy of the 10/66 Dementia Assessment Protocol in Māori, Fijian-Indian, Samoan and Tongan Elders with Memory Problems Living in South Auckland, New Zealand
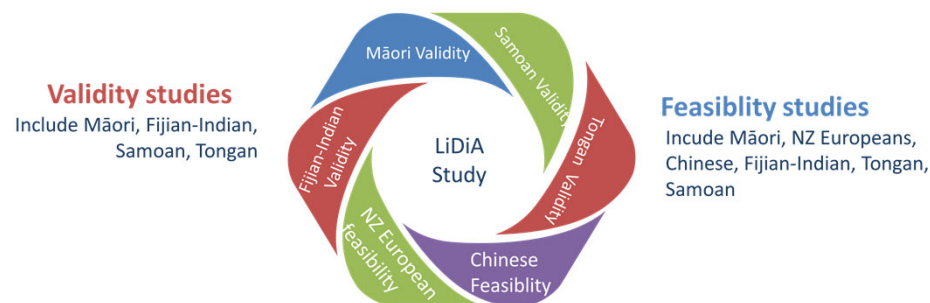
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INTRODUCTION

Background: New Zealand (NZ) is recognized officially as a bicultural country comprised of NZ Europeans and Indigenous Māori. It is also one of the most multicultural countries in the world and there are more ethnicities in NZ than there are countries in the world, which brings challenges if we aim to conduct a dementia prevalence study that is representative of the whole of NZ population. The 10/66 dementia assessment tool was developed for use in non-English speaking communities in order to accurately measure the prevalence of dementia. It is a language-fair, scientifically rigorous questionnaire used in epidemiological studies of dementia. It has been translated and adapted into a language fair instrument for use with Māori, Fijian-Indian, Samoan and Tongan elders living in New Zealand (NZ) (Fig. 1).

Fig 1. Living with Dementia in Aotearoa study phases.

Validity studies
Include Māori, Fijian-Indian, Samoan, Tongan

LiDiA Study

Feasiblity studies
Incude Māori, NZ Europeans, Chinese, Fijian-Indian, Tongan, Samoan

Māori Validity | Samoan Validity | Tongan Validity | Chinese Feasiblity | NZ European feasibility | Fijian-Indian Validity

METHODS

Methods: The translated and adapted 10/66 instrument versions were administered in the selected ethnicities. The results of the 10/66 dementia assessment are been tested in older people with and without dementia who have received a clinical diagnosis (gold standard) assessment in a local memory service in South Auckland. Each ethnic group included 15 subjects with dementia and 15 subjects without dementia

RESULTS

Results / Progress so far: Data are still being collected and analyzed. The preliminary results for the Fijian-Indian (Table 1, 2 and Fig. 2) group showed that the 10/66 dementia assessment has a sensitivity and specificity above 90% (ROC ≥ 0.85). Along with three Fijian Indian participants, Māori, Tongan, and Samoan data are still being collected and analyzed.
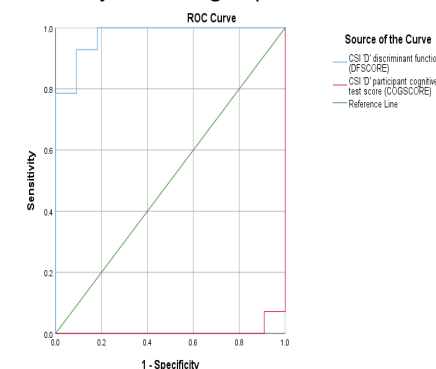
Table 1. Clinical diagnosis vs 10/66 diagnosis Fijian-Indian group					
			Clinical diagnosis		
			Dementia	No dementia	total
	Dementia	n=	11	1	12
Diagnosis 10/66		%	91.7%	6.7%	44.5%
	No dementia	n=	1	14	15
		%	8.3%	93.3%	55.5%
	Total		12	15	27
		%	100%	100%	100%

Table 2. Reliability analysis Fijian-Indian group			
	Cronbach's Alpha	Cronbach's Alpha based on Standardized Items	N of Items
CSID-Informant	0.976	0.979	27
CSID-Participant	0.896	0.949	31

Fig 2. ROC curve analysis. Fijian-Indian group.

ROC Curve

Source of the Curve
CSI 'D' discriminant function (DFSCORE)
CSI 'D' participant cognitive test score (COGSCORE)
Reference Line

Sensitivity

1 - Specificity

CONCLUSIONS

Conclusions: We will test the diagnostic accuracy of the 10/66 dementia assessment protocol by using a scientifically rigorous method in an inter-ethnic community that includes Māori, Fijian-Indian, Samoan and Tongan elders living in NZ. Preliminary results in the Fijian Indian group suggest the 10/66 diagnosis is a reliable tool for the diagnosis of dementia in the community. If appropriate, this instrument can later be used in a population based study to calculate the prevalence of dementia in NZ.

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