

Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

**Registered Nurses' Experiences with, and Feelings and  
Attitudes Towards, interRAI-LTCF in New Zealand in 2017**

A thesis presented in  
partial fulfillment of the requirements for the degree of  
Master of Philosophy in Health

at Massey University,  
Albany,  
New Zealand

**Minna Vuorinen**

**2017**

# **Abstract**

## **Background**

The International Resident Assessment Instrument for Long Term Care Facilities (interRAI-LTCF) is a web-based assessment tool designed to comprehensively assess older adults (>65 years) living in aged residential care. InterRAI-LTCF is used in over thirty countries, but in 2015 New Zealand (NZ) was the first country where it was made mandatory in all facilities. No previous research about Registered Nurses' (RN) views on interRAI-LTCF in NZ has been conducted. The purpose of this study was to explore RNs' experiences, feelings and attitudes towards interRAI-LTCF, and what they believed would improve their experiences.

## **Methods**

The study was qualitative, using an exploratory and descriptive approach. Twelve interviews were conducted 18 months after interRAI-LTCF became mandatory in NZ. The interview questions were based on a United Theory of Acceptance and Use of Technology (UTAUT) model with some modifications. Findings were analysed thematically.

## **Results**

The findings reveal that RNs of all ages embrace technology, and have mostly positive attitudes towards interRAI-LTCF as a standardised and comprehensive assessment tool. Limited value however is seen in dementia and end of life care. RNs report good experiences with trainers and venues, but inconsistency between training courses. Negative feelings towards interRAI-LTCF were caused by insufficient time to complete assessments, often due to duplication of data entry and insufficient RNs trained. RNs also feel apprehensive about the annual Assessment & Intelligence Systems, Inc. (AIS) competency tests. RNs believe the development of automated care plans and an automated password retrieval system would improve their experience. They also suggested that specific cultural considerations for Māori residents should be reviewed.

## **Conclusion**

Overall RNs supported the use of interRAI-LTCF as a comprehensive assessment tool. Duplication in data entry, insufficient training, and the annual AIS tests caused most stress and negative feelings. Recommendations were made to rectify this.

## **Key Words**

Older adults, interRAI-LTCF, Registered Nurses, aged residential care, UTAUT

## Acknowledgements

Heartfelt thanks to all participants in this study. I am very grateful to all the Registered Nurses who gave their time for the interviews. It was a pleasure to meet you all. I appreciate your interest in this study, the time you were willing to devote, and your honesty during the interviews.

Also a very special thanks to the management of each facility participating in the study. It was great to see Clinical Quality Managers and Facility Managers being so supportive towards research, and encouraging their RNs to participate. I hope I have motivated more nurses to become interested in research.

I am grateful to the Residential Aged Care Integrated Programme (RACIP) team leader, Janet Parker, who assisted me in getting my research invitations through to the appropriate people, and arranged for me to talk about my research plan at the regional meetings. Without this help it would have been very hard to get this project started.

My thanks also go to Dr Vivien Rodgers, my supervisor, for supporting me through this learning process. You gave me useful feedback, and I very much appreciate your knowledge and encouragement during the last two years.

During my journey I met many people who showed their interest in my study. One of them was Cathy Headon. Thank you Cathy for your 'interRAI Love Affair' poem! It turns out the poem provides fitting final words for my thesis!

Last but not least, I thank my son Tommi, my biggest motivator. Thank you Tommi for your encouragement over the past years and getting me through this rather large amount of work! Love you.

# Table of Contents

ABSTRACT.....	i
ACKNOWLEDGEMENTS.....	ii
Table of Contents.....	iii
Table of Abbreviations.....	viii
List of Tables.....	x
List of Figures.....	xi
<b>CHAPTER ONE – INTRODUCTION.....</b>	<b>1</b>
1.1 Mandatory interRAI-LTCF.....	1
1.2 Growing and ageing population in New Zealand.....	2
1.2.1 Population statistics.....	2
1.2.2 Increase in people needing long-term care in New Zealand.....	3
1.2.3 Health care needs, cost and quality of care in New Zealand.....	5
1.2.4 The New Zealand health strategy.....	6
1.2.5 The workforce in aged care sector and interRAI.....	7
1.3 InterRAI-LTCF.....	8
1.3.1 interRAI-LTCF training and competency.....	11
1.3.2 InterRAI assessments in LTCFs.....	13
1.3.3 InterRAI-LTCF in New Zealand.....	14
1.4 Use of technology.....	15
1.5 Rationale for the study.....	16
1.6 Research aim.....	17
1.7 Chapter conclusion.....	17

<b>CHAPTER TWO – LITERATURE REVIEW</b>	<b>19</b>
2.1 Introduction	19
2.2 Literature search strategy	19
2.3 History of interRAI in the United States and New Zealand	20
2.4 Reliability, validation and comparisons to other assessments	24
2.5 Literature on staff views on interRAI	27
2.6 Previously used concepts	31
2.7 Methodology and methods used in previous studies	32
2.8 Summary	34
 <b>CHAPTER THREE – METHODOLOGY</b>	 <b>35</b>
3.1 Introduction	35
3.2 Methodology: Qualitative – Explorative and descriptive	35
3.3 Theoretical framework: The United Theory of Acceptance and Use of Technology	38
3.4 Theoretical concepts: Experiences, feelings and attitudes	44
3.4.1 Experiences	44
3.4.2 Feelings	44
3.4.3 Attitudes	45
3.4.4 Concept use in the study	49
3.5 Sample	50
3.5.1 Participants	50
3.5.2 Purposive sampling	50
3.5.3 Sample size	51
3.5.4 Ethical considerations	53

3.5.5 Recruitment.....	55
3.6 Data collection.....	56
3.6.1 Interviews.....	55
3.6.2 Questions.....	58
3.6.3 Piloting the interview questions.....	59
3.7 Data analysis.....	62
3.7.1 Thematic analysis.....	62
3.7.2 Epistemological issues affecting analysis.....	63
3.8 Rigour.....	64
3.8.1 Rigour before beginning the study: The pilot interviews.....	65
3.8.2 Rigour in selecting participants.....	65
3.8.3 Rigour during interviews.....	65
3.8.4 Rigour during analysis.....	66
3.9 Summary.....	67
<b>CHAPTER FOUR – FINDINGS.....</b>	<b>68</b>
4.1 Participant characteristics.....	68
4.2 Data analysis.....	70
4.2.1 Theme 1: Attitudes towards interRAI-LTCF.....	70
4.2.2 Theme 2: Lack of time to complete assessments.....	82
4.2.3 Theme 3: Engagement with technology.....	88
4.2.4 Theme 4: Training experiences and needs.....	94
4.2.5 Theme 5: Relevance of interRAI-LTCF in aged residential care.....	104
4.3 Summary.....	106

<b>CHAPTER FIVE – DISCUSSION</b>	<b>107</b>
5.1 Introduction	107
5.2 Discussion of findings compared to previous knowledge	107
5.2.1 Mostly positive views	107
5.2.2 Negative experiences	109
5.2.3 Time restrictions	110
5.2.4 Positive about computers	112
5.2.5 Helpdesk and IT support	113
5.2.6 Training	113
5.2.7 AIS	114
5.2.8 Relevance in Dementia and end of life	115
5.2.9 Cultural aspects	115
5.2.10 Relationship between experiences, feelings and attitudes	116
5.2.11 Study findings related to the UTAUT model	117
5.3 Summary of discussion	122
<b>CHAPTER SIX – CONCLUSION</b>	<b>123</b>
6.1 Summary of findings	123
6.2 Limitations and strengths	124
6.3 Recommendations	127
6.3.1 Recommendations for theory	127
6.3.2 Recommendations for practice	127
6.3.3 Recommendations for further research	130
6.4 Concluding statement	131
6.5 Final words	133



<b>REFERENCES</b>	<b>135</b>
-------------------	------------

<b>APPENDICES</b>	<b>151</b>
-------------------	------------

Appendix 1 Participant information sheet	151
--	-----

Appendix 2 Participant consent form – Individual	152
--	-----

Appendix 3 Baseline check – Info about the participant	153
--	-----

Appendix 4 Final interview questions	154
--------------------------------------	-----

Appendix 5 Ethics notification	156
--------------------------------	-----

Appendix 6 After the pilot interview questionnaire	157
--	-----

## Table of Abbreviations

AIS	Assessment & Intelligence Systems, Inc. (interRAI annual competency test)
ARC	Aged Residential Care
ARCF	Aged Residential Care Facility (e.g. resthome, private hospital, dementia unit)
ARRC	Age-Related Residential Care (services agreement)
BEL-RAI	Belgian Resident Assessment Instrument
CAP	Clinical Assessment Protocols
CHES	Changes in Health, End-stage disease, Signs and Symptoms
DHB	District Health Board
DRS	Depression Rating scale
EE	Effort Expectancy
FC	Facilitating Conditions
HC	Home Care
HCA	Health Care Assistant
HCI	Human-Computer Interaction
interRAI	International Resident Assessment Instrument
ICR	Internal Consistency Reliability
IOM	Institute of Medicine
LTCF	Long Term Care facility
MDS	Minimum Data Set
MDS-RAI	Minimum Data Set Resident Assessment Instrument

MOH	Ministry of Health
NASC	Needs Assessment and Service Coordination services
NZ	New Zealand
NZACA	New Zealand Aged Care Association
OBRA	Omnibus Budget Reconciliation Act
OECD	Organisation for Economic Co-operation and Development
PE	Performance Expectancy
RAI	Resident Assessment Instrument
RN	Registered Nurse
SE	Self Efficacy
SI	Social Influence
SNA	Support Needs Assessment
TAS	Technical Advisory Centre
UTAUT	United Theory of Acceptance and Use of Technology

# List of Tables

## Chapter 1

<b>Table 1.</b> Population aged 65 years and over 1981-2068 .....	3
<b>Table 2.</b> InterRAI-LTCF Minimum Data Set .....	9
<b>Table 3.</b> InterRAI-LTCF Client Assessment Protocols .....	10
<b>Table 4.</b> InterRAI Outcome Measures .....	11

## Chapter 4

<b>Table 5.</b> Participant demographics and background .....	68
---	----

# List of Figures

## Chapter 3

<b>Figure 1.</b> Original UTAUT model.....	39
<b>Figure 2.</b> Adapted UTAUT model.....	42