



RURAL RESEARCH CAPACITY BUILDING PROGRAM

FINAL REPORT

Evaluating the effectiveness of a self directed learning package in increasing palliative care knowledge and confidence for health care workers in rural aged care facilities

PRINCIPAL RESEARCHER

Steven Pitman

Clinical Nurse Specialist, Palliative Care
Mercy Health Albury, Palliative Care
550 Poole Street, Albury
NSW 2640
Phone (02) 6042 1402
Mobile 0459 801 676
Email steven.pitman@gsahs.health.nsw.gov.au



ACKNOWLEDGEMENTS

The principal researcher would like to extend gratitude and thanks to the employees and management of the aged care facilities who participated in this research project. Participation in this project reflects but a small part of their continued commitment to quality improvement and dedication to achieving best practice palliation for the residents in their care.

Thanks to Michelle Daly (Area Manager MERIT Program, Drug and Alcohol Services, Lismore), for her mentorship and encouragement; your assistance provided important insights for piecing the project elements together.

Thanks to members of the former Greater Southern Area Health Service Human Research Ethics Committee, particularly to Alison MacTaggart and Sally Josh for their guidance and advice.

The principal researcher would like to thank the staff at the Health Education and Training Institute (HETI), rural directorate, and acknowledges the considerable input from guest lecturers and mentors. Thanks are attributed to Taylor Harchak for statistical advice and providing deeper data analysis. Particular thanks are attributed to Emma Webster, Linda Cutler and David Schmidt from HETI for their considerable support via the Rural Research Capacity Building Program.

TABLE OF CONTENTS

	Page Number
Abstract and Key Words	4
Executive Summary	5
Introduction	9
Literature Review	10
Study Aim and Research Question	14
Method	15
Results	22
Discussion	27
Limitations	29
Conclusion	30
References	32
Appendix One: Questionnaire	38
Appendix Two: Letter to Managers	44
Appendix Three: Participant Information Sheet	46
Appendix Four: Consent Form	52

ABSTRACT AND KEY WORDS

Title:

Evaluating the effectiveness of a self-directed learning package in increasing palliative care knowledge and confidence for health care workers in rural aged care facilities.

Aim:

To test the hypothesis that a self-directed learning package would increase palliative care knowledge and confidence for Residential Aged Care Facility employees in Southern Rural New South Wales.

Method:

Thirty Three employees in 3 Aged Care Facilities undertook the completion of 3 modules of a Palliative Care self-directed learning package. Participants also completed pre-post package knowledge and confidence questionnaires as well as six month follow up testing. The research data was then analyzed via paired two-tailed T-tests.

Results:

There was a statistically significant increase in knowledge (md 1.3; sd 2.4; t 3.11; p .003) and an increase in confidence (md 0.94; sd 1.52; t 3.55; p .001) after completion of the self-directed learning package. There was evidence that knowledge increases were retained after six months (md 2.1; sd 1.94; t 4.83; p .0001). Retention of confidence after six months was not demonstrated in the research findings (md 0.7; sd 2.53; t 1.23; p 0.232).

Conclusion:

This study provided evidence that a self-directed learning can play a role in increasing knowledge and confidence in palliative care for rural aged care workers. While knowledge increases were retained after six months, confidence increases were not retained, which raises questions regarding the role of ongoing support, education and mentoring.

Key Words: Palliative care, education, self-directed learning, aged care.

EXECUTIVE SUMMARY

Background:

The number of people aged 85 and over in Australia is expected to increase from 0.4 to 1.8 million between 2010 and 2050, effectively increasing demand for aged care services four fold over the next 40 years (Productivity Commission 2011).

The increasing demand for adequate care for an ageing population is dependent on a well resourced and adequately skilled workforce. Research suggests that amongst the 2007 workforce in Residential Aged Care Facilities (RACF), 19.8% had no formal post-secondary school education (Martin & King 2008). The high expectations of physically and emotionally demanding work roles with poor remuneration, inadequately defined training and inadequately defined career pathways creates issues of staff retention in the aged care workforce (Productivity Commission 2011).

Access to adequate resources and education in palliative care can be problematic in rural areas. This can be due to geographic isolation, limitations in workforce numbers to provide backfill for employees to attend education and inadequate access to providers of education (Fragar & Depczynski 2011; Fisher & Fraser 2010; Ricketts 2005; Productivity Commission, 2011). One possible solution to providing equitable access to education exists via self- directed learning packages that utilize information technology for delivery.

Study Aim:

This research project aimed to test the hypothesis that a self-directed learning package in palliative care could increase knowledge and confidence for rural residential aged care workers in Southern New South Wales.

Methodology:

Knowledge and confidence were measured via a combination questionnaire which included elements from the Rural Palliative Care Program Evaluation Toolkit, University of Wollongong (Eager et al. 2004), Palliative Care Quiz for Nurses, University of Ottawa (Ross, McDonald & McGuiness 1996), and the EndofLife Nursing Education Consortium (ELNEC) Test (Takenouchi et al. 2011).

The combination questionnaire was applied at three time intervals:

- Pre-education package test
- Post-education package test
- Six month follow up

The self-directed learning package was developed by Albury Wodonga Regional GP Network as a part of the Rural Palliative Care Project 2008-2011*. Three modules of the package were selected, including palliative care philosophy, pain assessment and bowel management. The self directed learning package was an adaption of the self-directed learning package for The Guidelines for a Palliative Approach in Residential Aged Care, utilized with permission from Palliative Care Australia (Palliative Care Australia 2006).

Research data was analyzed for normal distribution and then questionnaire results were compared for each participant via two-tailed paired T-tests. Also, comparisons were made with national demographic trends for employees in RACFs (Martin & King 2008).

Study Population:

Three RACFs within Southern New South Wales were approached to partake in the study. The response rate to the initial stages of the research was a sample of 33 employees, which reflects 36% of the study population. Of the original 33 employees within the first sample, 20 responded to the six month follow up questionnaire.

*The Rural Palliative Care Project 2008-2011 was funded by the Australian Government Department of Health and Ageing (DOHA) and was delivered under the auspices of the Australian General Practice Network.

The sample population had highly similar characteristics to the study population as well as national demographic trends for employees in RACFs. The sample was characteristic of a majority female workforce, majority age of 35-64 years old with the predominate position of employment being Patient Care Assistant (Martin & King 2008).

Results:

There was a statistically significant increase in knowledge from pre-education package results as compared to post education results (Mean Difference (md)1.3; Standard Deviation (sd)2.4; $t=3.11$; $p = .003$). There was also a statistically significant increase in confidence from pre-education results as compared to post education results (md 0.94;sd 1.52; $t 3.55$; $p .001$). There was evidence that knowledge increases were retained after six months (md 2.1;sd 1.94; $t 4.83$; $p .0001$). Six month retention was not statistically evidenced for confidence (md 0.7;sd 2.53; $t 1.23$; $p 0.232$).

Conclusion:

Self-directed learning can contribute to increases in knowledge and confidence for rural aged care workers with regards to palliative care service provision.

The future resourcing of self-directed learning packages in palliative care can play a role in ensuring equitable access to palliative care education for health care workers in rural and remote areas.

Research with more robust study designs are required to evaluate this evidence further. Future insights would benefit from analysis of the role of mentoring and continuing education in regards to the retention of confidence.

INTRODUCTION

This research project seeks to address questions in relation to equitable provision of palliative care education in rural Residential Aged Care Facilities. The productivity commission report *Caring for Older Australians* (Productivity Commission, 2011), highlighted the importance of adequate training and defining minimal skill sets as priorities that need to be addressed as society moves to an increasing aged population with possible increasing morbidity.

With difficulties in equitable access to education for rural facilities, this research project provides one alternative solution in the form of a self-directed learning package in palliative care. Therefore, this report is aimed at policy makers, managers and educators that are called upon to make critical decisions in regards to education provision. While further research is required in regards to multiple education modalities, self-directed learning potentially provides a viable learning alternative.

There is a gap in academic literature which explores self-directed learning in the context of complex learning needs. Complex knowledge encompasses a broader sphere of understanding than factual information. In health care, professionals are called to apply knowledge in the context of a critical examination of personal values and within the context of relationships with clients and patients, which requires proficient communication and learning abilities (Mikol 2005; Bankert & Kozel 2005; Earle & Myrick 2009). Therefore, this project is also directed at developers of palliative care education and registered training organizations as a pilot study for the potential use of self-directed learning packages for complex pedagogical needs.

LITERATURE REVIEW

A literature search was conducted to examine previous research into self-directed learning and palliative care. Research databases including Ovid, Proquest and Cinahl were utilized. Search terms in combination and independently included: palliative, education, access, rural, methods, self-directed, learning, aged care and nursing. Furthermore, key policy documents in regards to aged care, palliative care and palliative education were searched for online from government sources in the United Kingdom, United States of America, Canada and Australia. Policy documents were only included in this report if deemed relevant to the research project.

Resource provision and capacity building in rural areas

Rural health care professionals often provide multiple roles in delivering health care to their communities. This requirement for multi-skilled approaches can be due to minimal access to specialist services, isolation from resource opportunities and reduced capacity for rural infrastructure (Fragar & Depczynski 2011; Fisher & Fraser 2010; Ricketts 2005).

Provision of palliative care is one of the key elements of the multiple requirements placed upon many rural health care workers. The need to capacity build rural health professionals in palliative care is recognized within Australia as well as overseas rural communities (Noble et. al 2001; Kelley, Habjan & Aegard 2004).

Equitable access to education and resources in palliative care for rural and remote health care workers is problematic due to workforce shortage, geographic isolation, shortages of education providers and resources (McConigley, Kristjanson & Nikoletti 2001; Rosenberg & Canning 2004)

The question of how to meet the capacity building needs of health professionals in aged and palliative care is a considerable source of discussion in policy development contexts within western societies (Commission on Funding of Care and Support 2011; United States Senate 2008; Productivity Commission 2011).

With ageing populations encountering increasing burdens of chronic disease, the need for increased workforce development is recognized, which includes the unique needs of capacity building in rural contexts. The recent Productivity Commission Inquiry Report into *Caring for Older Australians in Australia* (Productivity Commission 2011) identified the need for foundational skill sets for patient care workers as a particular workforce need.

Aged care training needs

Targeted palliative care education exists as an important requirement in aged care facilities (Allen et al. 2008; Parker et al. 2005). In Australia, where the adoption of a palliative approach in aged care facilities is established in policy, there is evidence to suggest that there is a gap in transforming this policy stance into practice through lack of education provision and the lack of intentional support mechanisms (Allen et. al 2008; Andrews, McInerney & Robinson 2009).

The Guidelines for a Palliative Approach in Residential Aged Care (Palliative Care Australia, 2006) and its associated resource kit provided a foundation for national policy implementation and education for aged care facilities in Australia. There was some criticism identified of a lack of empirical evaluation and resourcing for implementation of the Guidelines and its associated resources (Allen et al. 2008). While the Guidelines for a Palliative Approach in Residential Aged Care (Palliative Care Australia, 2006) were generated by a review of evidenced based best practice in palliative care, it has not in itself being evaluated as a mechanism for education and for contributing to the delivery of a Palliative Approach.

One study provided an alternative model of introducing the palliative approach into residential aged care facilities by providing intentional forums for employees to critically examine approaches to palliative care. This research project utilized an action research based model that determined some positive evaluated outcomes in regards to staff empowering families with palliative care information after the forums were implemented (Andrews, McInerney & Robinson 2009).

Arguably, aged care education should be based on empirically based needs assessment as demonstrated in one Canadian study (Kortes-Miller et al. 2007). This study demonstrated a considered and evidenced based process for establishing gaps in palliative care knowledge for aged care workers and developing appropriate curriculum accordingly.

Palliative care education and methods in rural areas

Two literature reviews were identified which examined education approaches in palliative care (Adriaansen & Achterberg, 2008; Bugge & Higginson, 2006). Both studies identified limited research into education that was palliative care specific. From research that was identified in these reviews, teaching approaches that utilized multiple techniques were identified as being the most effective at meeting learning needs. Both reviews did not identify any research that specifically examined the role of self-directed learning for palliative care. Both studies advocated for further research into palliative care education.

Research studies into education methods that were specific to palliative care in rural areas were identified (Reymond et al. 2005; Kelley, Habjan & Aegard 2004; Guigni 2006). These pilot studies demonstrated positive knowledge outcomes from targeted educational experience that were specific to rural health professionals. While these studies adopted multi-faceted education approaches, the teaching methods did not incorporate a self-directed learning component.

A combination of didactic teaching and work experience in palliative care was evaluated via pre-post testing in one pilot study. This resulted in positive outcomes in regards to increasing knowledge as well as allowing participants a process for self examination in regards to attitudes towards death and dying (McClement, Care, & Dean 2005).

Alternative learning methods and self directed learning

Part of the possible solution to providing accessible capacity building opportunities for rural health care workers is the utilization of alternative learning methods, including self-directed learning. Alternative learning methods for health care staff, which depart from traditional didactic teaching paradigms, have been researched, both in Australia and overseas and from both qualitative and quantitative designs.

Three studies examined palliative care education which utilized group based discussion groups (Guigni 2006; Landmark, Wahl & Bohler 2004; Ronsen & Hanssen 2009). Group education models included clinical supervision and case-study based learning methods. These studies identified efficacy with these methods of learning when compared or added to didactic learning methods. The sharing of clinical experiences was identified as a particular benefit in learning complex care requirements.

Evaluations of self-directed learning methods such as computer based learning and problem based learning against the traditional didactic teaching methods provide a useful comparison (Bloomfield, Roberts & While 2010; Horiuchi et al. 2009; Leasure, Davis & Thievon 2000; Feeg, Bashatah & Langley 2005). These comparative studies provided support for the notion that alternative education methods and self directed learning methods can be as effective, if not more effective in providing information dissemination, knowledge transfer and increase in confidence as compared to more traditional forms of education.

The ability and readiness of learners to engage and benefit from alternative teaching methods is an important consideration in developing curricula. A body of evidence was identified that empirically validated tools to successfully measure participant preparedness for utilizing self directed learning opportunities effectively (Fisher & King 2010; Klunklin et al. 2010; Chen et al. 2010).

Self-regulated learning

Self-directed learning can also encompass education that requires self-regulation. In this paradigm, learning resources do not include a self directed learning package for participants to follow; rather the expectation is that learners will seek their own questions and answers independently in relation to solving certain problems. Studies have identified some difficulties with self-regulated learning in coordinating multiple learning objectives to the detriment of the collective learning experience. (Chen et al. 2009; Lekalakala-Mokgele 2010; Ozturk, Muslu & Dicle 2007).

Complex Pedagogy

Self-directed learning in health care has been utilized for mandatory education or fact-based learning requirements such as the reading of electrocardiographs and hand-washing. Studies reviewed in relation to self-directed learning applied to factual knowledge that arguably require minimal variability in regards to individual practice and approach. (Jang et al. 2005; Bloomfield, Roberts & While 2010).

Health care domains, such as palliative care, arguably have a broad palette of skill sets required. For example, pain assessment may require a rudimentary understanding of pain physiology, yet also a critical understanding of personal values in regards to pain as well as adequate communication skills. The multi-factorial learning that exists in some domains of health care arguably requires complex approaches to curriculum development and pedagogy (Mikol 2005; Bankert & Kozel 2005; Earle & Myrick 2009). There was a gap in the literature reviewed in regards to self-directed learning packages that provide multi-factorial

knowledge requirements that deviate from the purely factual. Therefore, there was no literature identified that examined whether self-directed learning resources are indeed applicable for complex learning needs.

STUDY AIM AND RESEARCH QUESTION:

The aims of this study were to investigate the impact of a self-directed learning package on rural aged care workers knowledge and confidence in the provision of palliative care. Investigating the role of self-directed learning could impact on the potential to provide equitable access to palliative care education for workers in rural areas.

This study sought to answer the following research question:

“Can a self-directed learning package increase rural aged care workers knowledge and confidence in palliative care and will that knowledge and confidence be retained after six months?”

The null hypothesis was therefore that the self-directed learning package would have no impact on aged care workers palliative care knowledge and confidence.

METHOD

Intervention:

As a part of the Rural Palliative Care Project 2008-2011* under the auspices of Albury Wodonga Regional GP Network, a self-directed learning CD-Rom was developed for rural health care workers. The content of this self-directed learning package was based on a self-directed learning package for The Guidelines for a Palliative Approach in Residential Aged Care developed by Palliative Care Australia (Palliative Care Australia 2006); utilized and adapted with permission. Adaption was minimized to removal of aged care references in order that the packages could be accessible to health care workers in other contexts such as rural community nursing. This adapted CD-Rom based, self-directed learning package was selected for the purposes of this study.

Due to time and resource limitations, three modules of the self-directed learning package were selected for participants to complete, namely Palliative Care philosophy, pain assessment and bowel management. These components of the education package encompassed factual knowledge, critical analysis of personal values to the topics and the importance of communication with residents and colleagues.

Ethics Approval:

Ethics approval for this research was received from The Human Research Ethics Committee of the former Greater Southern Area Health Service on 14th April 2011 (project reference HREC/10/GSAHS/53).

*The Rural Palliative Care Project 2008-2011 was funded by the Australian Government Department of Health and Ageing (DOHA) and was delivered under the auspices of the Australian General Practice Network.

Sample:

Staff at three dedicated aged care facilities in three different towns were approached via a letter to managers and potential participants. These facilities incorporated a mixture of low care and high care residential aged care services. The total study population for the three services was 93 aged care employees.

Aged care facilities within the southern catchment area of the former Greater Area Health Service, New South Wales, Australia were considered as potential sites to approach for sampling. Facilities in towns with a Rural, Remote and Metropolitan Areas (RRMA) classification of R3 were selected as they reflected areas that potentially had similar limitations in regards to resourcing as those identified within the literature review (Australian Institute of Health and Welfare 2012). A RRMA classification of R3 indicates a population <10,000.

Many of the facilities considered had multi-purpose services in regards to the provision of health care. Such facilities incorporated aged care in with acute care services. Multi-purpose services often utilize the same staff in their acute care facilities as in the aged care facilities and therefore potentially had exposure to higher levels of education. In order to retain the focus on staff with dedicated aged care employment, towns that had multi-purpose health care services were excluded.

Study Procedure and Measure:

The study was undertaken incorporating the following steps:

- Participants completed a pre-education knowledge and confidence questionnaire in palliative care (appendix 1: Questionnaire).
- Participants completed three modules of the self-directed education package in palliative care.
- Participants completed a repeat of the same knowledge and confidence questionnaire.

- Participants were invited to repeat the knowledge and confidence questionnaire 6 months after initial participation.

The knowledge and confidence questionnaire was constructed utilizing components of three validated tools, utilized with permission from the respective institutions:

- 1: Rural Palliative Care Program Evaluation Toolkit, University of Wollongong was utilized for the collection of demographic information and measurement of confidence levels.
- 2: Palliative Care Quiz for Nurses, University of Ottawa
True and false questions from the PCQN pertinent to the content of the self-directed learning packages were utilized to measure knowledge.
- 3: EndofLife Nursing Education Consortium (ELNEC) Test
Multiple choice questions from the ELNEC test pertinent to the content of the self-directed learning packages were utilized to measure knowledge.

Measurement of confidence levels was comprised of a 4 point self-rating score utilizing the following choices:

1. Need further basic instruction.
2. Confident to perform with close supervision / coaching.
3. Confident to perform with minimal consultation.
4. Confident to perform independently.

The self-rating of confidence was applied by participants to the three domains of:

1. Describing what palliative care is.
2. Reacting to reports of pain from the patient.
3. Reacting to and coping with reports of constipation.

Measurement of knowledge was comprised of twenty two questions, ten questions requiring a true or false response and 12 questions utilizing a multiple choice format, providing four possible responses to key statements and

questions from a palliative care context. The combination questionnaire was peer reviewed by 2 Clinical Nurse Consultants in Palliative Care. The combination questionnaire itself was not empirically validated and may create some limitations in regards to strength of evidence.

Data Collection:

Participants were presented with the following resources:

- Participant information sheet
- Consent form
- Questionnaire
- Access to the self-directed learning package during the pre-post questionnaire time interval only

Each participant was assigned a de-identified project identification number that allowed for tracking of the same participant's results over time, inclusive of pre-test, post-test and six month follow up questionnaires. Questionnaires were paper based and provided back to the researcher on completion of each phase of the study. The researcher then added confidence scores together and added correct knowledge responses on each of the questionnaires for each of the participants.

The following demographic information was also collected:

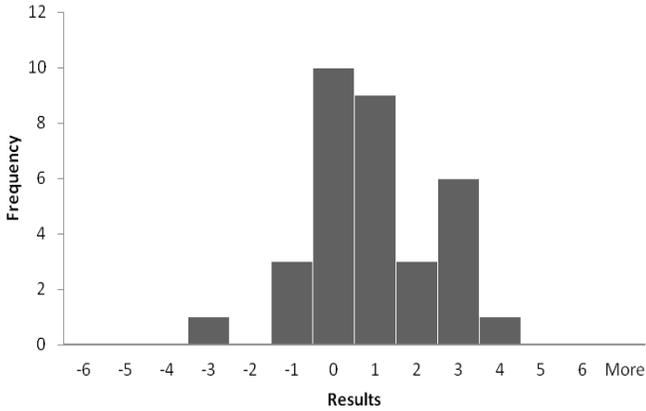
- Gender
- Age
- Discipline
- Previous palliative care training

Previous palliative care training was divided into four selections including specialist qualification, short courses or other formal training, on the job training and no training.

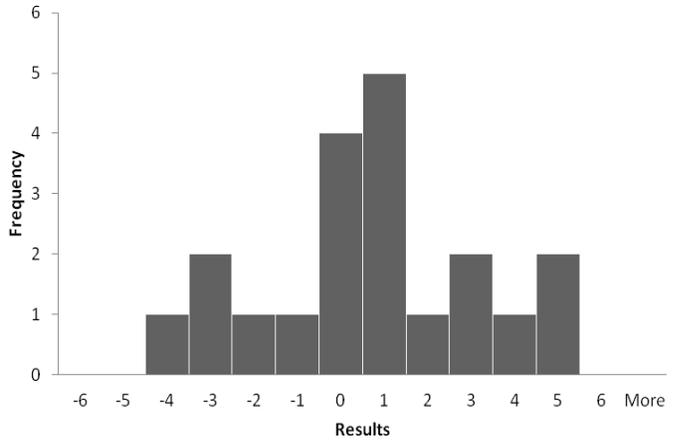
Data Analysis:

Score differences between testing periods were analyzed in regards to distribution via histograms (See Graphs 1-4):

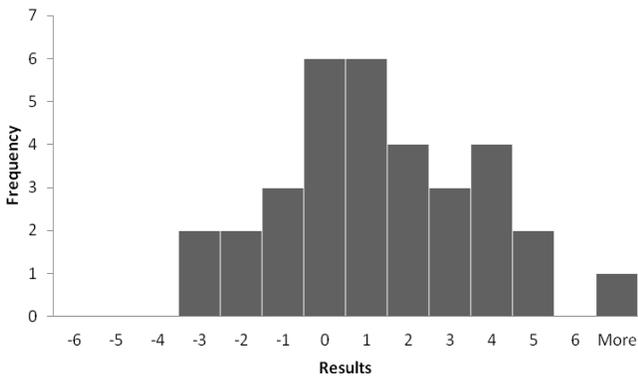
GRAPH 1: HISTOGRAM PRE-POST CONFIDENCE SCORE DIFFERENCE



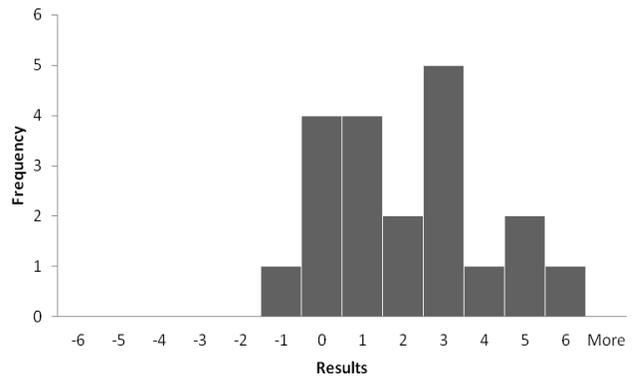
GRAPH 2: HISTOGRAM PRE-6 MONTH CONFIDENCE SCORE DIFFERENCE



GRAPH 3: HISTOGRAM PRE-POST KNOWLEDGE SCORE DIFFERENCE



GRAPH 4: HISTOGRAM PRE-6 MONTH KNOWLEDGE SCORE DIFFERENCE



With some potential visual outliers identified, further analysis was conducted via three sigma rule and a statistician undertook Jarque–Bera testing via STATA.

Questionnaire results comparison	Frequencies 1 standard deviation away from mean	Frequencies 2 standard deviations away from mean	Frequencies 3 standard deviations away from mean
Pre-post confidence test	66%	93%	100%
Pre-6 month confidence test	65%	100%	100%
Pre-post knowledge test	66%	100%	100%
Pre-6 month knowledge test	60%	100%	100%

Questionnaire results comparison	Skewness	Kurtosis	Adj chi2 (2)	Prob>chi2
Pre-post knowledge test	0.542	0.867	0.41	0.815
Pre-post confidence test	0.872	0.654	0.23	0.8927
Pre-6 month knowledge test	0.448	0.501	1.12	0.571
Pre-6 month confidence test	0.944	0.778	0.08	0.958

There were some variations from the three sigma-rule with data frequencies 1 standard deviation from the mean, however compliance was generally acceptable with other bands of frequency (See Table 1). Jarque-Bera testing demonstrated acceptable levels of skew and kurtosis ($< \pm 1$) and rejected the null hypothesis that data was not normally distributed for all test comparisons (See Table 2).

As a further confirmation of data validity, assistance was provided by a statistician in regards to repeat analysis of statistical significance with potential outliers removed. No significant differences in outcome were identified, therefore for the purposes of this report, data was treated as a whole and deemed normally distributed.

Demographics were analyzed and when possible, compared to the study population and national trends. Data from pre-test, post-test and 6 month questionnaires were then analyzed via two-tailed paired t-tests. T-tests for 6 month follow up were limited to those participants who responded to this phase of the study, which comprised 20 of the original 33 participants. However utilizing the de-identified project identification number, two-tailed paired t-test comparisons could still be made inclusive of the 6 month follow up data for these 20 participants.

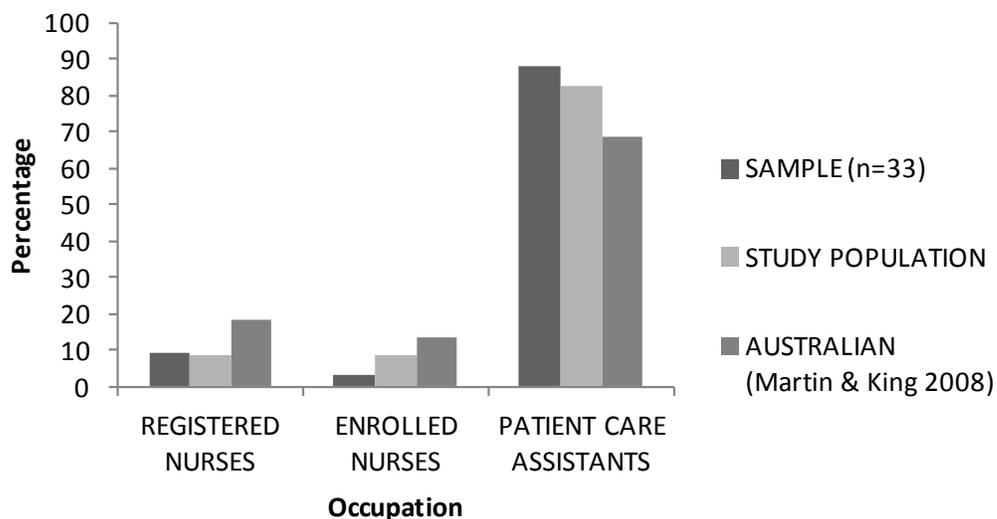
RESULTS

Sample profile:

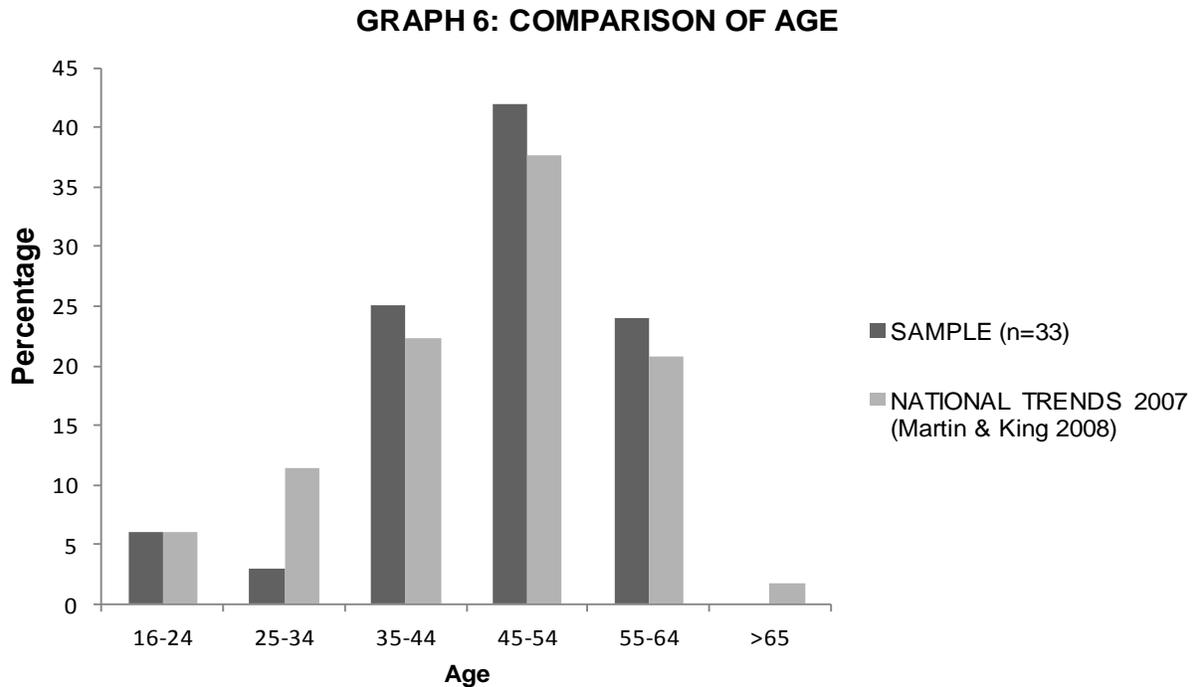
The response rate to the initial stages of the research was a sample of 33 employees, which reflects 36% of the study population. The initial stages of the research incorporated the pre-test questionnaire, completion of 3 modules of the self-directed learning package and a repeat post-test questionnaire. Of the original 33 employees within the first sample, 20 responded to the six month follow up questionnaire, which reflects 22% of the study population and a 60% response rate from the original sample.

Comparisons were made in regards to occupation between the sample and study population as well as national trends in regards to Australian care workers in Residential Aged Care Facilities. There was reasonable congruence between the three populations in regards to occupation (See Graph 5).

GRAPH 5: OCCUPATION COMPARISONS

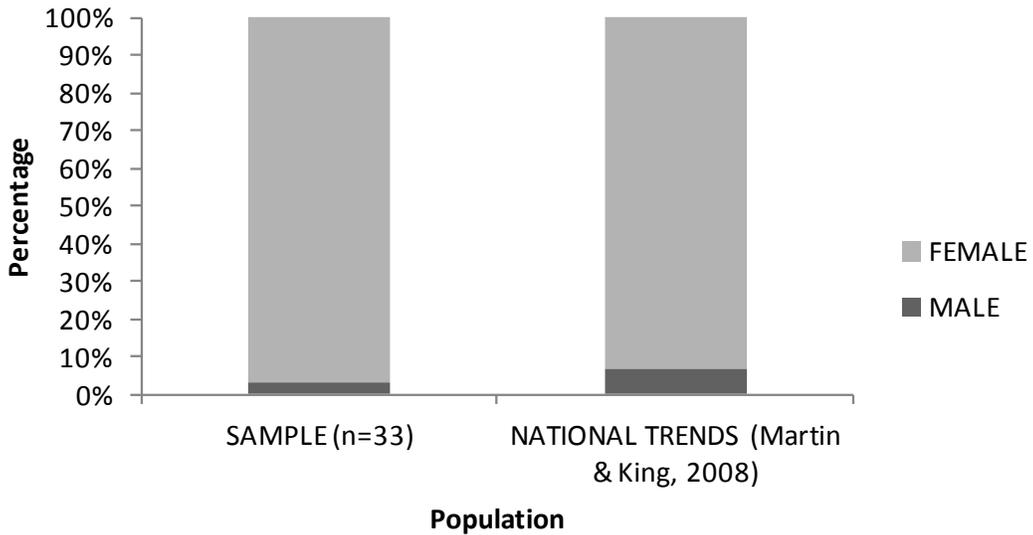


Age comparisons were also made between the study sample and national trends in regards to Australian care workers in Residential Aged Care Facilities. There were reasonable similarities in distributions between the two populations in regards to age (See Graph 6).



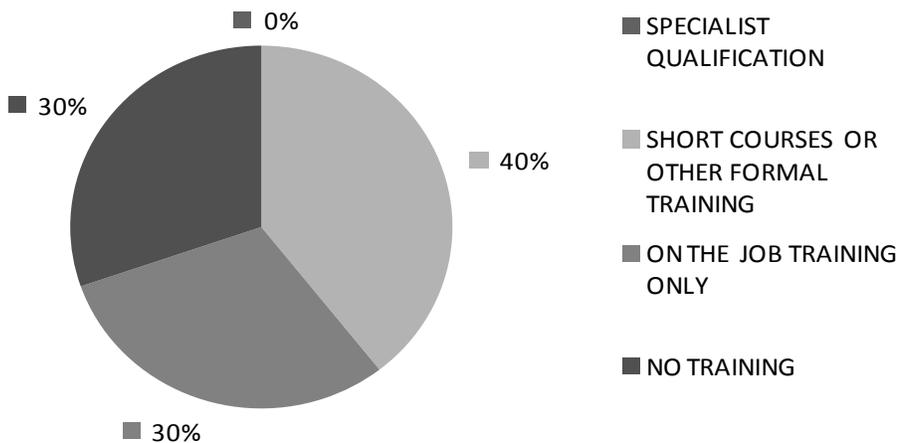
Compared to Australian averages for employees of Residential Aged Care Facilities, the sample population demonstrated a high degree of congruence in regards to gender (See Graph 7).

GRAPH 7: GENDER COMPARISONS



Previous palliative care training indicated on the questionnaire by the sample group indicates a similar distribution between those who had attended short courses, those who had been provided on the job training and those who had no training. No respondent indicated that they had any specialist palliative care training (See Graph 8).

GRAPH 8: PALLIATIVE CARE TRAINING SAMPLE (n=33)



Knowledge and Confidence Score

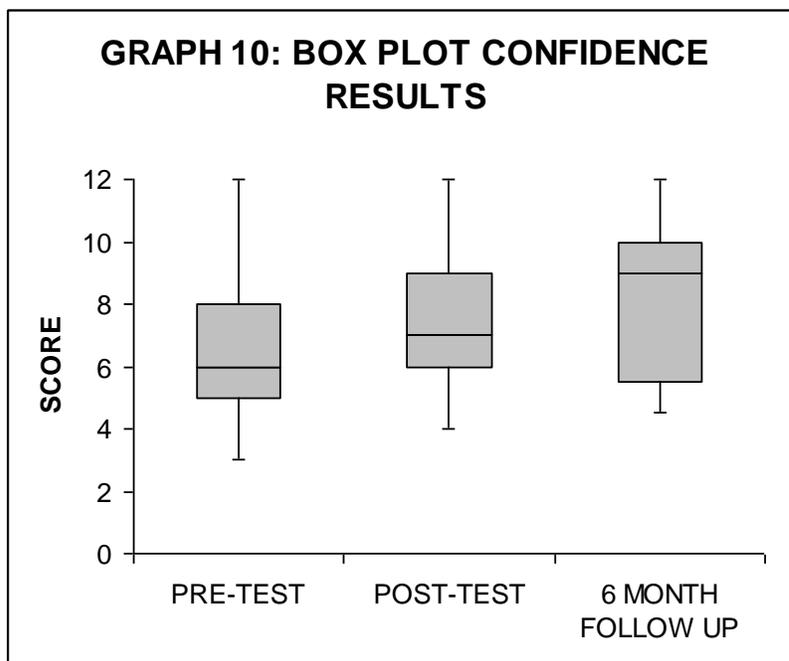
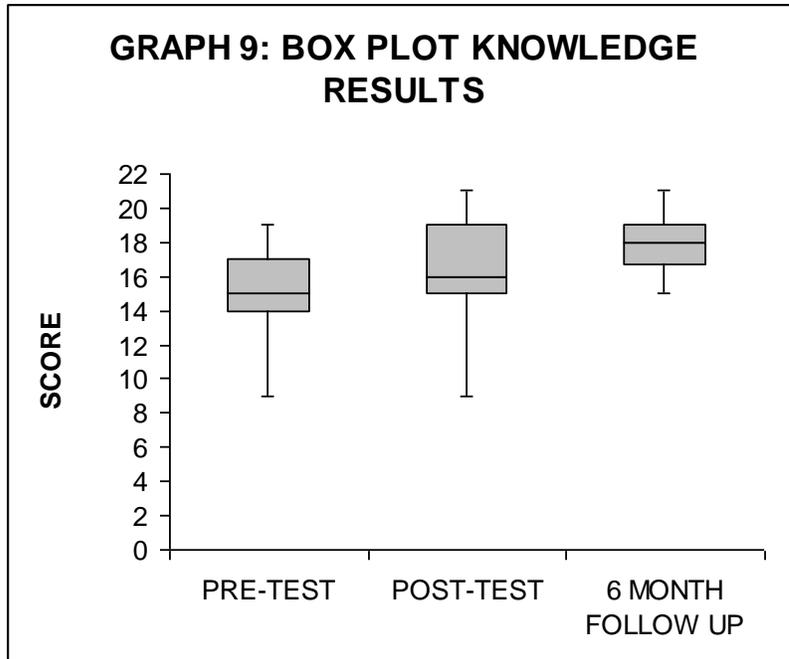
After completion of the self-directed learning package, there was a statistically significant increase in knowledge (md 1.3; sd 2.4; t 3.11; p .003) and an increase in confidence (md 0.94; sd 1.52; t 3.55; p .001). There was evidence that knowledge increases were retained and in fact improved after six months (md 2.1; sd 1.94; t 4.83; p .0001). Retention of confidence after six months was not demonstrated in the research findings (md 0.7; sd 2.53; t 1.23; p 0.232) (See Table 3).

Mean difference for pre-post test knowledge increased from 1.3 to 2.1 when compared to six month follow up comparisons. Standard deviation for the same parameters decreased from 2.4 to 1.9 (See Table 3).

Mean difference for pre-post test confidence scores when compared to six month follow up data decreased from 0.9 to 0.7 and standard deviation increased from 1.5 to 2.5. Recognizing however, that there was weak statistical power of data for the pre-test compared to six month follow up for confidence (See Table 3).

TABLE 3: TWO-TAILED PAIRED T-TESTS

Measure	Questionnaire results comparison	MEAN DIFFERENCE	STANDARD DEVIATION	T SCORE	P SCORE
Confidence score	POST-TEST COMPARED TO PRE-TEST (N=33)	0.939	1.519	3.552	0.001
	SIX MONTH FOLLOW UP COMPARED TO PRE-TEST (N=20)	0.7	2.536	1.234	0.232
Knowledge score	POST-TEST COMPARED TO PRE-TEST (N=33)	1.303	2.404	3.113	0.003
	SIX MONTH FOLLOW UP COMPARED TO PRE-TEST (N=20)	2.1	1.944	4.831	0.001



Graphs 9 and 10 provide a visual representation of knowledge and confidence results. Knowledge increased from pre-test, to post-test and then to 6 month follow up, with decreased variability between individual results over time. Once again, there is a demonstration of the minimal increases in confidence scores, particularly between post-test and 6 month follow up results.

DISCUSSION

The sample population for this pilot study is typical of many Residential Aged Care Facilities in Australia, including rural areas, in regards to age, discipline and gender. Residential aged care facilities employ a majority female workforce with a significant majority employed in the role of Patient Care Assistant. Therefore findings from this research project could reasonably be extended to the greater aged care workforce.

Self reports on levels of education in regards to palliative care training vary widely amongst the study sample. This reflects upon the findings from the Productivity Commission Inquiry Report into Caring for Older Australians in Australia (Productivity Commission 2011), which advocated for a minimum skill set for Patient Care Assistants and called for the provision of intentional mechanisms for education and capacity building including the development of dedicated career pathways.

This pilot study provided evidence that a self directed learning package can play a role in increasing levels of knowledge and confidence pertaining to the provision of palliative care. There was a statistically significant increase in knowledge (md 1.3; sd 2.4; t 3.11; p .003) and an increase in confidence (md 0.94; sd 1.52; t 3.55; p .001) after completion of the self-directed learning package. There was evidence that knowledge increases were retained after six months (md 2.1; sd 1.94; t 4.83; p .0001). . Retention of confidence after six months was not demonstrated in the research findings (md 0.7; sd 2.53; t 1.23; p 0.232).

Mean difference scores for the pre-post test knowledge period indicate an increase of in mean knowledge scores of +1.3 with a standard deviation of ± 2.4 , which indicates a trend for participants to increase their knowledge in at least one, if not more than one domain of palliative care knowledge offered in the package. Domains offered included palliative care philosophy, pain assessment

and bowel management, all of which addressed complex pedagogical needs in regards to palliative care knowledge, such as the role of personal values and communication skills.

Pre-post test scores were collected immediately before and after utilization of the self directed learning package to minimize confounding factors. However to limit extrinsic influences would be difficult to achieve for six month follow up data. Mean difference results for knowledge increased from the pre-post test period to the pre-six month data analysis (from 1.3 to 2.1). Data collection from the six month interval did not provide any significant information in regards to education or palliative care exposure in the intervening period. The sample population may have been exposed to education during this time or the utilization of the self-directed learning package may have itself generated subsequent discussion between the sample populations within each facility in regards to questionnaire responses. However, this analysis remains purely speculative.

Retention of confidence was not statistically significant after 6 months. Further to this analysis of 6 month follow up data, mean difference in results decreased and standard deviation increased. While significant statistical conclusions cannot be drawn from this data, the results in regards to retention of confidence raise interesting questions in regards to future research.

Future research could examine what role continuing education and mentoring play in maintaining confidence in palliative care provision. This reflects on the complex pedagogical nature of palliative care education. Imparting knowledge may itself be insufficient in regards to empowering a confident workforce and the role of continual exposure to complex knowledge and mentoring would be worth empirically exploring. Furthermore this raises questions of the efficacy of self-directed learning packages utilized in isolation without the benefit of multiple education modalities. As highlighted in the report from Guigni (2006), the answer

to adequate palliative care education provision may lie in the combination of multiple education modalities.

STRENGTHS AND LIMITATIONS

This research project adopted a quasi-experimental research design. The research design selected creates limitations through lack of randomization and no independent control group. Future research could examine a more robust selection of evidence by adopting more statistically accountable research designs and larger sample sizes.

As identified in the discussion, the measure of exposure to other education opportunities could not be eliminated from six month follow up data. There was no significant data collected in regards to further education or palliative care exposure that may occurred between the post-test and six month follow up period.

While the self directed learning package demonstrated statistically significant efficacy in increasing palliative care knowledge and confidence, this research project did not evaluate the effect on work practice and patient outcomes. If the goal of education is to provide a competent and confident workforce that affects best practice patient care, future research could investigate the result of palliative care education on patient outcomes and change in work practice.

There was a reduction in the number of responses for the six month follow up (n=20) which reflects 22% of the study population and a 60% response rate from the original sample. This may have played a role in the statistically insignificant finding for confidence at the six month follow up and warrants future investigation in relation to the role of education and possibly mentoring in retaining confidence in the provision of palliative care. Overall sample size for this research project

was relatively small and future research should incorporate larger sample populations.

There was no evaluation of the experience and/or rate of satisfaction in utilizing the self-directed learning package. While the package demonstrated an ability to increase knowledge and confidence for participants, what was the experience like? Is the self-directed learning package user-friendly? This information could also be subject to future evaluation.

As raised in the discussion, the project was able to identify a population that was representative of the national demographic trends for workers in residential aged care and adds strength to the applicability of this research to the wider population of workers. A reasonable level of confidence could be attributed to applying the self directed learning package to other residential aged care settings for the purposes of increasing workforce knowledge.

CONCLUSION

Rural health care workers are required to provide multiple roles and encounter issues of workforce retention and isolation from resources. Palliative care provision is one responsibility that is placed on many rural health care workers. Equitable access to palliative care education is an important consideration when addressing the education needs of the rural workforce

The empowerment and capacity strengthening of the aged care workforce is an important policy consideration in many countries. As policy makers consider the strengthening of the capacity of the aged care workforce, the question of the effectiveness of different education approaches will be an important one to consider. With developments in information technology and increasing access within rural areas, the utilization of self-directed learning is one possible solution to rural education needs.

This research project demonstrated that self-directed learning opportunities can increase knowledge and confidence for rural health care workers in aged care. In relation to the retention of confidence, future research should provide a deeper exploration of palliative care education needs and multiple modalities of education delivery including ongoing mentoring. Future research should focus on providing empirically validated viable solutions, enabling equitable access to palliative care education for rural health care workers.

REFERENCES

Adriaansen, M & Achterberg, TV 2008, 'The content and effects of palliative care courses for nurses: A literature review', *International Journal of Nursing Studies*, Vol. 45, No. 3, pp. 471-485.

Allen, S, O'Connor, M, Chapman, Y & Francis, K 2008, 'The implications of policy on delivering a palliative approach in residential aged care: Rhetoric or Reality?', *Contemporary Nurse*, Vol 29, No 2, pp. 174-183.

Andrews, S, McInerney, F & Robinson, A 2009, 'Realizing a Palliative Approach in Dementia Care: Strategies to Facilitate Aged Care Staff Engagement in Evidenced Based Practice', *International Psychogeriatrics*, Vol. 21, Supplement 1, pp. s64-s68.

Australian Institute of Health and Welfare 2012, 'Rural, Remote and Metropolitan Areas (RRMA) classification', Australian Government, accessed 1 August 2011, <http://www.aihw.gov.au/rural-health-rrma-classification/>

Bankert, EG & Kozel, VV 2005, 'Transforming Pedagogy in Nursing Education: A Caring Learning Environment for Adult Students', *Nursing Education Perspectives*, Vol. 26, No. 4, pp. 227-229.

Bloomfield, J, Roberts, J & While, A 2010, 'The effect of computer-assisted learning versus conventional teaching methods on the acquisition and retention of handwashing theory and skills in pre-qualification nursing students: A randomised controlled trial', *International Journal of Nursing Studies*, Vol. 47, No. 3, pp. 287-294.

Bugge, E & Higginson, IJ 2006, 'Palliative care and the need for education - Do we know what makes a difference? A limited systematic review' *Health Education Journal*, Vol. 65, No. 2, pp. 101-125.

Chen, SW, Stocker, J, Wang, RH, Chung, YC & Chen, MF 2009, 'Evaluation of self-regulatory online learning in a blended course for post-registration nursing students in Taiwan', *Nurse Education Today*, Vol. 29, No. 7, pp. 704-709.

Chen, SF, Kuo, CL, Lin, KC & Hsieh, JL 2010, 'Development and preliminary testing of a self-rating instrument to measure self directed learning ability of nursing students', *International Journal of Nursing Studies*, Vol. 47, No. 9, pp. 1152-1158.

Commission on Funding of Care and Support 2011, '*Fairer Care Funding volume 1*', Commission on Funding of Care and Support, viewed 10 February 2012, Commission on Funding of Care and Support 2011

Eagar, K, Senior, K, Fildes, D, Quinsey, K & Owen, A 2004, 'The Palliative Care Evaluation Tool Kit: A compendium of tools to aid in the evaluation of palliative care projects', University of Wollongong, viewed 1 August 2011, http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1004&context=chsd&sei-redir=1&referer=http%3A%2F%2Fwww.google.com.au%2Fsearch%3Fq%3DPalliative%2BCare%2BProgram%2BEvaluation%2BToolkit%26rls%3Dcom.microsoft%3A%2A%3AIE-SearchBox%26ie%3DUTF-8%26oe%3DUTF-8%26sourceid%3Die7%26rlz%3D1I7GGLJ_en%26redir_esc%3D%26ei%3DyPn7T6WFNOejqfC06zKBg#search=%22Palliative%20Care%20Program%20Evaluation%20Toolkit%22

Earle, V & Myrick, F 2009, 'Nursing Pedagogy and the Intergenerational Discourse', *Journal of Nursing Education*, Vol. 48, No. 11, pp. 624-630.

Feeg, VD, Bashatah, A & Langley, C 2005. 'Development and Testing of a CD-Rom Based Tutorial For Nursing Students: Getting Ready for HIPAA', *Journal of Nursing Education*, Vol. 44, No. 8, pp. 381-386.

Fisher, KA & Fraser, JD 2010, 'Rural health career pathways: research themes in recruitment and retention', *Australian Health Review*, Vol. 34, No. 3, pp. 292-296.

Fisher, MJ & King, J 2010, 'The self-directed learning readiness scale for nursing education revisited: A confirmatory factor analysis', *Nurse Education Today*, Vol. 30, No. 1, pp. 44-48.

Fragar, LJ & Depczynski, JC 2011, 'Beyond 50. challenges at work for older nurses and allied health workers in rural Australia: a thematic analysis of focus group discussions', *BMC Health Services Research*, Vol. 11, No. 42, pp. 1-13, viewed 4 June 2012, <http://www.biomedcentral.com/1472-6963/11/42>

Guigni C 2006, 'A comparative study looking at the effectiveness of two different teaching methods used to improve the integration of the Palliative Care Approach into Rural Residential Aged Care Facilities', *Health Education and Training Institute (HETI), rural directorate*, viewed 4 June 2012, <http://www.ruralheti.health.nsw.gov.au/completed-projects>

Horiuchi, S, Yaju, Y, Koyo, M, Sakyō, Y & Nakayama, K 2009, 'Evaluation of a web-based graduate continuing education program in Japan: A randomised controlled trial', *Nurse Education Today*, Vol. 29, No. 2, pp. 140-149.

Jang, KS, Hwang, SY, Park, SJ, Kim, YM, & Kim, MJ 2005, 'Effects of Web-Based Teaching Method on Undergraduate Nursing Students Learning of Electrocardiography', *Journal of Nursing Education*, Vol. 44, No. 1, pp. 35-39.

Kelley, ML, Habjan, S & Aegard, J 2004, 'Building Capacity to Provide Palliative Care in Rural and Remote Communities: Does Education Make a Difference?', *Journal of Palliative Care*, Vol. 20, No. 4, pp. 308-315.

Klunklin, A, Viseskul, N, Sripusanapan, A, & Turale, S 2010, 'Readiness for self-directed learning among nursing students in Thailand', *Nursing and Health Sciences*, Vol. 12, No. 2, pp. 177-181.

Kortes-Miller, K, Habjan, S, Lou-Kelly, M & Fortier, M 2007, 'Development of a Palliative Care Education Program in Rural Long Term Care Facilities', *Journal of Palliative Care*, Vol. 23, No. 3, pp. 154-162.

Landmark, B, Wahl, AK & Bohler, A 2004, 'Group supervision to support competency development in palliative care in Norway', *International Journal of Palliative Nursing*, Vol. 10 No. 11, pp. 542-548.

Leasure, AR, Davis, L & Thievon, SL 2000, 'Comparison of Student Outcomes and Preferences in a Traditional Vs World Wide Web Based Baccalaureate Nursing Research Course', *Journal of Nursing Education*, Vol. 39, No. 4, pp. 149-154.

Lekalakala-Mokgele, E 2010, 'Facilitation in problem-based learning: Experiencing the locus of control', *Nursing Education Today*, Vol. 30, No. 7, pp. 638-642.

Martin, B & King, D 2008, 'Who cares for older Australians?', Australian Government, accessed 1 August 2011, [http://www.health.gov.au/internet/publications/publishing.nsf/Content/CA25774C001857CACA257512000423CB/\\$File/who%20cares.pdf](http://www.health.gov.au/internet/publications/publishing.nsf/Content/CA25774C001857CACA257512000423CB/$File/who%20cares.pdf)

McClement, SE, Care, D & Dean, R 2005, 'Evaluation of Education in Palliative Care: Determining the Effects on Nurses' Knowledge and Attitudes', *Journal of Palliative Care*, Vol. 21, No. 1, pp. 44-48.

McConigley, R, Kristjanson, L & Nikoletti, S 2001, 'Palliative Care in Western Australia: an assessment of information and support needs', *International Journal of Palliative Nursing*, Vol. 7, No.11, pp. 555-564.

Mikol, C 2005, 'Teaching Nursing Without Lecturing: Critical pedagogy as communicative dialogue', *Nursing Education Perspectives*, Vol. 26, No. 2, pp. 86-89.

Noble, B, Hughes, P, Ingleton, C & Clark, D 2001, 'Rural palliative care needs: a survey of primary care professionals in Powys, Wales', *International Journal of Palliative Nursing*, Vo. 7, No. 12, pp. 610-615.

Ozturk, C, Muslu, GK & Dicle, A 2007, 'A comparison of problem-based and traditional education methods on nursing students' critical thinking dispositions', *Nurse Education Today*, Vol. 28, No. 5, pp. 627-632.

Palliative Care Australia 2006, '*Guidelines for a Palliative Approach in Residential Aged Care*', Palliative Care Australia, Accessed 12 March 2011, <http://agedcare.palliativecare.org.au/Default.aspx?tabid=1765>

Parker, D, Grbich, C, Brown, M, Maddocks, I, Willis, E, & Roe, P 2005, 'A Palliative Approach or Specialist Palliative Care? What Happens In Aged Care Facilities For Residents With a Non-Cancer Diagnosis?', *Journal of Palliative Care*, Vol. 21, No. 2, pp. 80-87.

Productivity Commission 2011, '*Caring for Older Australians: Volume 1 and 2*' Australian Government Productivity Commission, viewed 10 February 2012, <http://www.pc.gov.au/projects/inquiry/aged-care/report>

Reymond, L, Charles, M, Israel, F, Read, T & Treston, P 2005, 'A strategy to increase the palliative care capacity of rural primary health care providers', *Australian Journal of Rural Health*, Vol. 13, No. 13, pp. 156-161.

Ricketts, T 2005, 'Workforce Issues in Rural Areas: A Focus on Policy Equity', *American Journal of Public Health*, Vol. 95, No. 1, pp. 42-48.

Ronsen, A & Hanssen, I 2009, 'Communication in palliative care: Philosophy, teaching approaches, and evaluation of an educational program for nurses', *Nurse Education Today*, Vol. 29, No. 7, pp. 791-795.

Rosenberg, JP & Canning, DF 2004, 'Palliative care by nurses in rural and remote practice', *Australian Journal of Rural Health*, Vol. 12, No. 4, pp. 166-171.

Ross MM, McDonald B, McGuinness J 1996, 'The Palliative Care Quiz for Nursing (PCQN): the development of an instrument to measure nurses' knowledge of palliative care', *Journal of Advanced Nursing*, Vol. 23, No. 1, pp. 126-137.

Takenouchi, S, Miyashita, M, Tamura, K, Kizawa, Y & Kosugi, S 2011, 'Evaluation of the End-of-Life Nursing Education Consortium-Japan Faculty Development Program: Validity and Reliability of the End-of-Life Nursing Education Questionnaire', *Journal of Hospice and Palliative Nursing*, Vol. 13, No. 6, pp. 368-375.

United States Senate 2008, '*Aging in Rural America: Preserving Seniors Access to Healthcare*' US Government Printing Office, Washington, viewed 10 February 2012, http://www.2shared.com/document/6_ZFlwBO/Aging_in_rural_America_-_prese.html

True and False Questions

Please tick what you think is the most appropriate response to each of these statements:

No.	Statement	True	False
1	Palliative Care is only appropriate in situations where there is evidence of a downhill trajectory or deterioration.	<input type="checkbox"/> True	<input type="checkbox"/> False
2	The extent of the disease determines the method of pain treatment.	<input type="checkbox"/> True	<input type="checkbox"/> False
3	Adjuvant therapies are important in managing pain.	<input type="checkbox"/> True	<input type="checkbox"/> False
4	Drug addiction is a major problem when morphine is used on a long-term basis for the management of pain.	<input type="checkbox"/> True	<input type="checkbox"/> False
5	Individuals who are taking opioids should also follow a bowel regime.	<input type="checkbox"/> True	<input type="checkbox"/> False
6	The philosophy of palliative care is compatible with that of active treatment.	<input type="checkbox"/> True	<input type="checkbox"/> False
7	Manifestations of chronic pain are different from those of acute pain.	<input type="checkbox"/> True	<input type="checkbox"/> False
8	Pain threshold is lowered by fatigue or anxiety.	<input type="checkbox"/> True	<input type="checkbox"/> False
9	The provision of palliative care requires emotional detachment	<input type="checkbox"/> True	<input type="checkbox"/> False
10	The use of placebos is appropriate treatment of some types of pain	<input type="checkbox"/> True	<input type="checkbox"/> False

Multiple Choice Questions

Please circle what you think is the most appropriate response to these questions:

- 1: The nurse is orientating a new staff member on a unit that cares for many patients at the end of life. Which comment by the nurse correctly reflects a principle of palliative care?
- A: "We are busy because most people prefer to die in a hospital rather than at home where they would be a burden."
- B: "Death and dying are not discussed much here in order to maintain hope for patients and families."
- C: "Because our patients often are uncomfortable, they need physical care more than psychological or spiritual care."
- D: "Patients are eligible for palliative care even though they are receiving curative treatment."

2: The nurse's 68 year old patient is in the last hours of life after a lengthy illness. The patient has been receiving opioids for pain management. In assessing the patient as death approached, the nurse knows that the opioid dose may need to be:

A: Increased or decreased to maintain pain control.

B: Given only if requested by the patient.

C: Monitored as neuropathic pain increases as death approached.

D: Discontinued due to diminished consciousness and altered mental state.

3: The nurse is caring for Mrs P, a 55 year old woman with cancer. She received pain medication less than two hours ago after which she expressed significant relief. A colleague now reports that Mrs P is complaining of pain. The colleague says "She *can't* be hurting as much as she says she is." What is the nurse's most appropriate response?

A: "Pain is whatever she says it is. Let's assess her further."

B: "We need to explore the cultural meaning pain has for her."

C: "I will tell her gently that she must wait four hours between doses."

D: "I'll wait to give the next dose and re-assess her a little early, in an hour."

4: The nurse is developing a plan of care for a client with terminal cancer who has a prescribed fentanyl (Duragesic) patch has started to take Dilaudid as a PRN medication. Which goal would be essential to include in the client's plan of care?

A: Client will remain continent of urine and stool.

B: Client will have usual bowel pattern.

C: Client will not report dyspnea.

D: Client will not report fatigue.

- 5:** The home health nurse is caring for a client at the end of life who has a recent history of constipation. The nurse should assess the client for which indicator of fecal impaction?
- A:** Foul smelling diarrhea
 - B:** Sudden onset of liquid stool
 - C:** Fatty looking stools
 - D:** Blood and mucous strands in stool

- 6:** Ethical issues abound in palliative care. Which statement most accurately describes the nurse's role in addressing ethical issues in palliative care?
- A:** Consider patient decisions according to the nurse's own values and beliefs.
 - B:** Help the patient/family understand all options and their consequences.
 - C:** Refer patient care ethical issues to ethics experts within the health care system.
 - D:** Determine when patients are no longer competent to make their own

- 7:** The nurse is being oriented to palliative care. Which factor should the nurse identify as a requirement crucial to quality end-of-life care?
- A:** Maintaining cost-effective analgesic regimens
 - B:** Restricting care to symptom management algorithms
 - C:** Communicating effectively with clients and families
 - D:** Employing volunteers to ensure clients are not alone

8: The nurse is caring for a client in the end stages of a long illness. When determining the benefit of treatment or therapy with the patient and family, which question is the **least** important to consider?

A: Does the treatment or therapy match the patient/family goals of care?

B: Does the benefit of treatment or therapy outweigh the risks?

C: Does the treatment or therapy ensure comfort and quality life closure?

D: Does the treatment or therapy prolong the life of the patient?

9: The nurse is having a discussion about barriers to quality end-of-life care with a co-worker. Which comment by the co-worker indicated **misunderstanding** and the need for more information?

A: "A significant obstacle is health care professionals' lack of education about end-of-life care."

B: "One reason people don't seek palliative care is that they are reluctant to give up hope."

C: "The failure of health care professions to acknowledge the limits of traditional medicine is a major barrier."

D: "It is essential to know someone has six months or less to live for end-of-

10: Which approach by the nurse is most appropriate in caring for a dying patient?

A: Assist the patient and family to make choices regarding the final stage of life.

B: Explore choices that will avoid suffering for the patient and family.

C: Make decisions about physical care for the family to reduce their stress.

D: Advocate for the family to complete an advance directive for the patient.

11: Mr F has advanced prostate cancer with bone metastasis. He is unresponsive, and is being cared for at home by his daughter. The home health nurse is teaching the daughter about assessing her father's pain. Which statement by the daughter indicates understanding of her father's pain status?

A: "If he is not moaning, he's probably not experiencing pain."

B: "I'll have to guess when he is in pain since he can't tell me."

C: "Now that he's unable to communicate, we can stop his pain medication."

D: "Since he was in pain when he was conscious, I assume he's still in pain."

12: The nurse can contribute to ethical practice in end-of-life care by doing all the following **EXCEPT**:

A: Work closely with physicians to meet the needs of patients and their families.

B: Ensure that patients/families are aware of treatment options and consequences of those options.

C: Participate in creating systems of care that specifically meet end-of-life needs for patients and families.

D: Use personal values and morals to determine best courses of actions for patients and families.

APPENDIX TWO: LETTER TO MANAGERS



Dear <Managers Name>,

Mercy health invites members of your workforce to participate in a research project in regards to palliative care education.

It is recognised that access to education can be problematic in rural areas of New South Wales. This can be due to issues of transportation, backfill and staff availability, compounded by the fact that many education sessions are often held in the bigger rural centres.

In 2009, the Albury Wodonga Regional GP Network in collaboration with Mercy Health, developed self-directed education CDs for palliative care. The education CDs consist of short 15-30 minute tutorials that cover many aspects of palliative care. The CD is accessible for Registered Nurses Division One, Enrolled Nurses Division Two and Patient Care Assistants

In evaluating the efficacy of the education CD, Mercy Health Albury have nominated a participant for the Rural Research Capacity Building Program through the Clinical Education and Training Institute Rural Division. The program supports the candidate in completing a research project.

We invite your nursing staff and patient care assistants to participate in the research project. Participation in the research project would consist of the following:

SESSION ONE: (Approximately 1 hours)

- A pre-education knowledge test in palliative care.
- Participation in using a self-directed education package on palliative care.
- A post-education package knowledge test.

SESSION TWO: (Approximately 15 minutes)

- A third knowledge test 6 months after initial participation.

The education sessions can occur on-site at your facility and a date and time can be nominated by the participants. **Participation in this study is voluntary.** It is completely up to you and your individual staff whether or not you participate. If you or any staff member decide not to participate, it will not affect the relationships between you, the researcher or Mercy Health Albury, now or in the future. This research project has gained ethics approval via the human research ethics committee of Greater Southern Area Health Service.

Data will be collected, aggregated and utilised to measure changes in knowledge and confidence for the whole sample population. Results will be de-identified and will **not** be supplied to managers to monitor performance of participating staff.

Attached are copies of the information package for potential participants. If your organisation wishes to participate, please distribute the information package to your staff. Any staff that elect to participate can read the information sheet and complete the consent form at their discretion. The researcher will contact you within the next few weeks to confirm interest in participation and arrange a date and time to conduct the first session. If you have any questions, you are most welcome to contact the researcher directly. Details of contact are overleaf.
The researcher is:

Steven Pitman

Clinical Nurse Specialist, Palliative Care.
Mercy Health Albury, Palliative Care
Phone (02) 6042 1402
Fax (02) 6021 3156
Mobile 0400 470 272
Email steven.pitman@gsahs.health.nsw.gov.au

Alternative position and contact

Project Officer, Rural Palliative Care Project
Albury Wodonga Regional GP Network
Phone (02) 6049 1900
Fax (02) 6049 1999
Mobile 0400 470 272
Email SPitman@bordergp.org.au

Copies of the self directed education CD will be provided to all residential aged care facilities within the research catchment area upon completion of the project.

Regards,

Pauline Heath
Manager Palliative Care, Mercy Health Albury.

APPENDIX THREE: PARTICIPANT INFORMATION SHEET



PARTICIPANT INFORMATION SHEET

Research Project: Effectiveness of a palliative care staff education package

Invitation

You are invited to participate in a research study into the effectiveness of a self directed learning package in palliative care.

The study is being conducted as a part of the Rural Research Capacity Building Program under the auspices of the Clinical Education and Training Institute, Rural Division. The principle researcher is:

Steven Pitman

Clinical Nurse Specialist, Palliative Care.
Mercy Health Albury, Palliative Care
Poole St,
or, P.O. Box 364
Albury NSW 2640

Phone (02) 6042 1402
Fax (02) 6021 3156
Mobile 0400 470 272
Email steven.pitman@gsahs.health.nsw.gov.au

Alternative position and contact:

Project Officer, Rural Palliative Care Project
Albury Wodonga Regional GP Network
Suite 8, 175 Lawrence Street,
or, P.O. Box 168
Wodonga VIC 3689
Phone (02) 6049 1900
Fax (02) 6049 1999

Mobile 0400 470 272
Email SPitman@bordergp.org.au

Before you decide whether or not you wish to participate in this study, it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information carefully and discuss it with others if you wish.

1. 'What is the purpose of this study?'

Between 2008-2011, Albury Wodonga Regional GP Network undertook responsibility for the delivery of the Rural Palliative Care Project. One of the elective components of the project was the delivery of sustainable education options for primary health care providers in the outlying rural areas.

At the beginning of the project, it was identified that many of the outlying rural areas had difficulty accessing palliative care education due to issues of remuneration, travel limitations and staff availability for backfill. Therefore, the focus of the project education delivery was to provide self-directed learning packages that staff could utilise at their discretion.

Permission was gained from Palliative Care Australia to adapt some of their learning packages in aged care, making them generic for all health care workers and presenting these on a computer based CD with short self directed tutorials (15-20 minutes), that could be tagged onto the end of a normal working shift.

While the development of the education CD has been successful and distributed to the rural health organisations, a question still remains. How effective is the package in actually providing palliative care knowledge and confidence to health care professionals? Does it result in an increase in knowledge in regards to provision of palliative care?

The purpose of the study is to investigate if the self-directed learning packages in palliative care, developed by Albury Wodonga Regional GP Network, result in an increase in knowledge and confidence within key domains of palliative care service provision.

2. 'Why have I been invited to participate in this study?'

You have been identified as someone who works in a Residential Aged Care Facility (RACF), that exists within a rural area. Individuals who work within Residential Aged Care have been targeted because palliative care knowledge is increasingly expected of RACF workers, however there are sometimes limitations in regards to the availability of education, as identified during the Rural Palliative Care Project. Limiting the study to RACF workers also provides a well defined group within the research, which will enable easier interpretation of study results.

3. 'What if I don't want to take part in this study, or if I want to withdraw later?'

Participation in this study is voluntary. It is completely up to you whether or not you participate. If you decide not to participate, it will not affect the relationships between you, your employer or the researcher, now or in the future.

If you wish to withdraw from the study once it has started, you can do so at any time without having to give a reason. However, it may not be possible to withdraw your data from the study results if these have already had your identifying details removed. Therefore, please contact the researcher if you are required to withdraw from the study and this will help with the continuity of research information.

4. 'What does this study involve?'

The study will be conducted with participants throughout the year of 2011. If you wish to participate you will be asked to sign a consent form; this will be clearly explained to you by the researcher.

The study will then be undertaken incorporating the following steps:

- A pre-education knowledge test in palliative care.
- Participation in using a self-directed education package on palliative care.
- A post-education package knowledge test.
- A third knowledge test 6 months after my initial participation.

The knowledge tests have been constructed from three different validated knowledge tests. The test will not be used to evaluate your effectiveness in providing palliative care. Rather, it provides the researcher with an understanding of your knowledge prior to the utilization of the education package and after using the package. The researcher will also ask you to complete the test 6 months later to understand if knowledge from the education package has been retained over time.

Any identifying information will be held by the researcher utilizing a safe and anonymous protocol. This information will be stored in a locked file at Mercy Health Albury. This is kept only so the researcher can follow test results over time and will be destroyed after the completion of the project. You will be hand delivered your own personal test results to utilize at your discretion. Your personal test results will not be provided to your employer, your manager, or to any other individuals other than yourself.

5. 'Will I benefit from the study?'

This study aims to further our knowledge about:

- The use of self-directed learning packages in palliative care.

- The applicability of the self-directed learning package developed by Albury Wodonga Regional GP Network in improving knowledge and confidence in delivering key aspects of palliative care.
- The education needs of RACF workers in Rural areas.

The study should benefit you by:

- Providing an opportunity to participate in a research project.
- Enhancing your knowledge in areas of palliative care.
- The opportunity to try self-directed learning.

6. 'Are there risks to me in taking part in this study?'

If you decide to participate in the study, you need to be aware that:

- Combined requirements for participation will be approximately 4 hours. This will be broken up into four sessions.
- Individual test results will remain confidential utilizing the following strategies:
 - Each participant will be designated a research participant number.
 - A paper-based information sheet will link the participant number with personal details, including name and organization that the individual works at. This will be stored in a locked file at Mercy Health Albury, Community Palliative Care.
 - The information sheet linking the identifying participant information with the research participant number will be destroyed upon the completion of the research project (after the final report).
 - Test results will be hand delivered to individual participants in a sealed envelope for them to utilize at their own personal discretion.

As with any research, there may also be risks associated with the research that are presently unknown or unforeseeable.

7. 'How will my confidentiality be protected?'

Any identifiable information that is collected about you in connection with this study will remain confidential and will be disclosed only with your permission, or except as required by law. Only the researcher will have access to your details and results that will be held securely in a locked file at Mercy Health Albury. This information will be destroyed upon completion of the project.

8. 'What happens with the results?'

If you give us your permission by signing the consent form, we plan to discuss/publish the study results via the Rural Research Capacity Building Programs. This may include submission to a peer-reviewed professional journal and possible presentation at conferences for health professionals.

However, in any publication, information will be provided in such a way that you cannot be personally identified. Results of the study will be provided to you, if you wish and will be hand delivered by the researcher.

9. 'What happens if I suffer harm or injury as a result of the study?'

If you suffer any harm or injury as a result of this study, you should contact the researcher as soon as possible, who will assist you in providing information as to how the issue can be addressed through appropriate channels, such as formalized complaints procedures through your local area health service.

10. 'How is this study being paid for?'

The study is being sponsored by The Clinical Education and Training Institute, Rural Division via the Rural Research Capacity Building Program. All of the money being paid by the sponsor will be utilized by Mercy Health Albury in providing backfill so that the researcher can undertake the research project. No money is paid directly to the individual researcher.

11. 'Will taking part in this study cost me anything, and will I be paid?'

Participation in this study will not cost you anything apart from your time, for which we thank you. You will not receive any monetary payment, however to thank you for your time and for participating in the study you will receive a copy of the complete Palliative Care self-directed learning CD as well as provision of a copy for your workplace.

12. 'What should I do if I want to discuss this study further before I decide?'

When you have read this information, the researcher, Steven Pitman, will discuss it with you and any queries you may have. If you would like to know more at any stage, please do not hesitate to contact him on 0400 470 272 .

13. 'Who should I contact if I have concerns about the conduct of this study?'

This research project has been approved by Greater Southern Area Health Service Human Research Ethics Committee. If you have any complaints about the conduct of this project, please contact the committee through:

The Complaints Officer
GSAHS HREC
Locked Bag 10
Wagga Wagga
NSW 2650
Tel 02 6933 9186 Fax 02 6933 9188

Thank you for taking the time to consider this study.

If you wish to take part in it, please sign the attached consent form.
This information sheet is for you to keep.

APPENDIX FOUR: CONSENT FORM



CONSENT FORM

Research Project: Effectiveness of a palliative care staff education package

The researcher seeks your consent to participate in the above research.

Please remember that your decision to participate is voluntary; you do not have to consent if you do not wish to participate. If you decide not to participate you do not have to give a reason.

The researcher is:

Steven Pitman

Clinical Nurse Specialist, Palliative Care.
Mercy Health Albury, Palliative Care
Poole St,
or, P.O. Box 364
Albury NSW 2640

Phone (02) 6042 1402
Fax (02) 6021 3156
Mobile 0400 470 272
Email steven.pitman@gsahs.health.nsw.gov.au

Project Officer, Rural Palliative Care Project
Albury Wodonga Regional GP Network
Suite 8, 175 Lawrence Street,
or, P.O. Box 168
Wodonga VIC 3689

Phone (02) 6049 1900
Fax (02) 6049 1999
Mobile 0400 470 272
Email SPitman@bordergpp.org.au

CONSENT

As a participant in the above-named study:

- I have had the purpose of the research and any related benefits and risks explained to me by the researcher.

- I am aware that the research will involve
 - A pre-education knowledge test in palliative care.
 - My participation in a self-directed education package on palliative care.
 - A post-education package knowledge test.
 - A third knowledge test 6 months after my initial participation.

- I understand that as part of the study, any information collected about me, as well as my personal details, is confidential, and that neither my name nor any other identifying information will be published.

- I understand that I am free to withdraw from the study at any time. If I wish to withdraw I should contact the researcher to let them know. If I do withdraw, this will not affect my employment status, my relationship with the researcher or with the health care organisation where the study takes place, now or in the future.

- I have read and understood the written explanation provided to me on the participant information sheet and have been given this sheet to keep.

- I am aware of who to contact if I have any complaints about the conduct of the research and that these contact details can be found on the participant information sheet.

- I agree to participate in the above-named study.

(Print)
NAME: _____

SIGNATURE: _____

DATE: _____

Consent form number two: 21/3/2011