Like a breath of fresh air: Yoga and Tai Chi for Frail Older People in Residential Care: A mixed methods study

By:
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Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying subject to the provisions of the Copyright Act 1968.

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Date **Padmapriya Saravanakumar**

Acknowledgement of authorship

I hereby certify that the work embodied in this thesis is the result of original research and has not been submitted for a higher degree at any other University or Institution

Padmapriya Saravanakumar……..

Acknowledgements

I would like to express my deepest gratitude to the wonderful people who walked me through my PhD journey, in all the ups and downs and the twists and turns…

First among them are my supervisors, Professors Isabel Higgins, David Sibbritt and Pamela van der Riet. Isabel, you have been an inspiration to me from day one of my studentship here in the University of Newcastle. Your confidence in me and optimism helped me realise my potential as a researcher. My learning was not just in research, but was also about the Australian culture, mostly through your interesting metaphors and subsequent stories to explain what they meant. David and Pamela, I greatly value your excellent guidance and mentorship, support and encouragement. I feel very honoured to have known you all and for this opportunity to complete my PhD under your wise guidance.

I wish to acknowledge the funding support and training for my PhD from AUSAID, 'the Australian Leadership Award'.

I am very thankful to the older people who participated in the study, for giving me an opportunity to learn from them, for welcoming me and for trusting me to work with them. Equally welcoming and supportive were the staff members of the facility where we conducted the study and I am grateful to them. A special thanks to the yoga and tai chi instructors, motivated and passionate individuals who inspired me.

This thesis would not have been possible without support and encouragement from staff and colleagues from the School of Nursing and Midwifery and our faculty librarian, Debbie Booth. I have immensely benefited from the various training programmes organised by the school of nursing and the University. I have to mention my token of gratitude to all my RHD colleagues, past and present for adding cheer and support and for reminding me that I am not alone.

A big thank you to my Australian friends, Adele, Donna and Fiona, who have provided me with a lot of support, especially at times when the sailing was hard. My kids and I have loved our stay here in Australia and it was home away from home due to your support and friendship.

To my Amma and Dad, for your constant encouragement, love and prayers…

To Ayya and Amma, for being there for me…

To my husband, Kumar, for helping me make this happen, for believing in me and for sharing my dreams…

To my lovely angels, Kaushicka and Bharath, for being so patient and never complaining for my time away from you… and for your love….

Abbreviations

ADL: Activities of daily living

BBS: Berg Balance Scale

DEMQoL: Dementia Quality of life

VDS: Verbal descriptor scale

RACF: Residential aged care facility

Publications arising from this thesis

Article

Saravanakumar P, Sibbritt D, Higgins I, Van Der Riet P. "The influence of tai chi and yoga on balance and falls in a residential care setting: a randomised controlled trial" Contemporary Nurse (forthcoming)

Abstracts

Saravanakumar P, Higgins I, Sibbritt D, Van Der Riet P, Marquez, J. Yoga and tai chi for fall prevention in residential care: a feasibility study.8th World Congress on Active Ageing, Glasgow, Scotland 13-17th August 2012

Saravanakumar P, Higgins I, Sibbritt D, VanDer Riet P, Marquez J. An RCT on fall prevention in residential care: comparison of recruitment process in two facilities. Gerontology and Geriatrics conference Melbourne 2011. Ninth Asia/Oceania Regional Congress of Gerontology and Geriatrics, Melbourne, Australia 23-27 October 2011.

Saravanakumar P, Higgins I, Sibbritt D, VanDer Riet P. Tai Chi and Yoga for fall prevention in residential care. 4th Australian and New Zealand Falls Prevention Society Conference, University of Otago, New Zealand 21-23 November 2010.

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Abstract

Older people who live in residential aged care settings are at a high risk for falls; many of them are frail with high levels of dependence. Fall injuries, if not fatal, can result in permanent disability, loss of independence and poor quality of life for those affected. Many older people develop an ongoing fear of falling and are at high risk of subsequent falls. In addition, there can be delayed recovery from fall injuries with much pain, sleep disturbances, and depression. Older people with poor balance function are at risk of fall injuries. The management of falls in residential care is a major concern with the monitoring of falls and prevention strategies one of the mainstays of care in this setting. The importance of exercise interventions for improvement in balance for older people has been recognised and as a mechanism for fall prevention in residential care facilities.

The aims of the research reported in this thesis were to implement, "map" and evaluate a 14 week program of yoga and tai chi for frail older adults in residential care. The objectives were: to determine the feasibility of conducting randomised clinical trial (RCT) in a residential aged care facility (RACF) with frail older people to test the hypotheses that 1) a 14 week modified yoga program is more effective than usual RACF activity program in improving balance function, quality of life, pain experience and in reducing number of falls in a RACF and 2) a 14 week modified tai chi program is more effective than usual activity programs in improving balance function, quality of life, pain experience and in reducing number of falls in a RACF. Other objectives were to explore the participant (the residents and staff) perspectives on whether the14 week modified program of tai chi and yoga was feasible and appropriate and to observe and map the implementation of modified approaches of yoga and tai chi with older people in a RACF.

The study used a concurrent mixed methods design, incorporating a RCT and qualitative focus group (FG) interviews to explore the residents' and staffs' perspectives on whether the14 week modified program of tai chi and yoga was feasible and appropriate. The qualitative arm of the study utilised FG interviews with the participants

of the study and descriptive analysis based on the tenets of naturalistic inquiry. The qualitative arm of the study was designed to complement the findings of the RCT by providing a broader perspective of the program, thereby adding richness to the research. Both quantitative and qualitative findings determined that the modified yoga and tai chi programs are feasible in the RACF. The quantitative indicators of feasibility were as follows: recruitment of 33 participants, high attendance (≥70%) and completion rates (28/33).

The RCT demonstrated that a 14 -week modified yoga and tai chi program was feasible in a residential aged care setting, and provided evidence that yoga and tai chi may be associated with improvement in balance, pain and quality of life. These findings support growing evidence that interventions such as yoga and tai chi could reduce fall risk factors and also have holistic benefits. The qualitative findings showed that practicing yoga and tai chi led to perceived improvements in multiple wellness domains. This suggests that these interventions provide opportunities for frail and dependent older residents to experience enhanced quality of life and active aging. The qualitative findings also revealed important insights concerning what was most valued by the participants and the factors that motivated their participation in the programme. In particular, it identified lack of suitable physical activity and social isolation as key issues to be addressed in order to improve quality of life. Attributes of the yoga and tai chi programmes such as the instruction, group exercise, such as mindfulness, slow movements and guided imagery were important aspects motivating participation and facilitating confidence.

The study reported in this thesis makes an important contribution to the literature. It is the first RCT with an embedded qualitative study to examine a 14 - week tai chi and yoga program implemented in an Australian residential care facility. The mixed method design was appropriate in addressing the aim and research questions because it led to a comprehensive understanding of the feasibility and appropriateness of the yoga and tai chi intervention for older adults in residential aged care setting. The methods used in this study also resulted in the development of a comprehensive pictorial and explanatory

map of suitable forms of yoga and tai chi for use with frail and dependent older adults in RACFs.