The prevalence of nutrition risk and associated risk factors among older adults recently admitted to age-related residential care within the Waitemata District Health Board region.

A thesis presented in partial fulfilment of the requirements for the degree of

Master of Science
in
Nutrition and Dietetics
at Massey University, Auckland, New Zealand

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2017

Abstract

Background: New Zealand has a rapidly growing ageing population, aligned with the ageing population trend occurring globally. Older adults account for a significant proportion of the government health care expenditure, primarily due to higher needs for disability services and a higher level of care, such as residential care. Malnutrition is multi-factorial and may result in disability and poor health contributing to a significant decline in the independence in older adults. Internationally, previous research has found a high prevalence of malnutrition among older adults in the residential care setting. This study aims to investigate the prevalence of malnutrition and associated risk factors among older adults (aged 64 to 84 years) newly admitted to residential care facilities across the Waitemata District Health Board (WDHB) region.

Methods: A cross-sectional study was undertaken among older adults newly admitted to WDHB residential care facilities. A questionnaire was used to assess participant sociodemographic and health characteristics. Anthropometric and body composition measurements were recorded. Grip strength was measured using a handgrip dynamometer and gait speed was measured by a 2.4m walk test. Nutrition risk was assessed using the Mini Nutritional Assessment- Short Form (MNA-SF), dysphagia risk was determined from the 10-item Eating Assessment Tool (EAT-10) and the Montreal Cognitive Assessment (MoCA) examined cognitive function.

Results: The mean age of participants was 78.7 ± 5.0 years. Of 77 participants, just under half (45.5%) were malnourished with a further 49.4% were at high nutrition risk. Over a third (37.7%) of participants were at dysphagia risk. Malnourished participants were more likely to require daily help prior to admission ($p=0.011$) and have a slower gait speed ($p=0.014$). A higher nutrition risk (lower MNA-SF score) was strongly correlated with a lower BMI ($r=0.274$, $p=0.024$), grip strength ($r=0.368$, $p=0.001$), higher dysphagia risk ($r=-0.248$, $p=0.029$) and higher medication use ($r=-0.213$, $p=0.043$).

Conclusion: Nearly half the participants were malnourished, and over a third were at risk of dysphagia. This study highlights that low BMI, grip strength and higher dysphagia risk and medication use are potential risk factors for malnutrition. Findings highlight the importance of malnutrition and dysphagia screening among older adults upon admission to residential care. This will ensure appropriate diagnosis and treatment for those identified at risk.

Acknowledgements

I would like to greatly acknowledge and thank the people who have been a part of my thesis journey. I would like to express my special thanks of gratitude to the participants who took part in this study. I am so blessed to have met such inspiring individuals and without you, this research would not have been possible.

To my academic supervisor, A/Prof Carol Wham, thank you for your encouragement, unwavering support, and wealth of knowledge. Your enthusiasm, guidance, helpful suggestions, patience, and passion for nutritional health in older adults has truly inspired me and greatly supported me throughout this thesis journey. To Dr Marilize Richter, thank you for your support with statistical analysis and your kind encouragement and helpful feedback throughout this process. I would also like to thank the team from the Waitemata District Health Board, Teresa Stanbrook and Dr Jacqui Allen, for your constant guidance and extensive knowledge to help this research progress successfully.

I am grateful for my dietetic classmate, flatmate and dearest friend, Liana, for your support throughout this Master's Programme. It has been such an honour to share this journey with you. Thank you for having such a kind and generous heart, and for the amazing memories we have shared together.

I owe a heartfelt thanks to my research partner, Stacey, who I have shared such unforgettable experiences with throughout the data collection process. I have greatly appreciated your support and advice and will forever cherish our close and long-lasting friendship.

My thanks and appreciation go to my dietetics classmates for your support and assistance. A special thanks to Melaney, Shivon, Anna, Danika and Emily. Our discussions and frequent catch-ups have made us such a close-knit group. Thank you all for knowing how to bring humour into every situation.

To my mum and dad, Roshanthi and Mahes, thank you for your overwhelming support, you have always been by my side during stressful times. Without you, this thesis would not have been possible. Thank you for always believing in me. A special thank you to my family, Dillshini, Dillshan, Jeshika and Riaan, for your unconditional love and guidance. It is also a pleasure to express my sincere gratitude to my partner, Rakitha, for your patience and persistent encouragement. Thank you for always teaching me not to take life to seriously; your light-hearted approach has contributed greatly in helping me complete this journey.

I pay my heartily thanks to my dearest friends, Annie and Rebecca, thank you for your helpful suggestions and support when times have overwhelmed me, I am truly lucky to call you both my best friends.

Dedication

I would like to dedicate this thesis to my grandfather (seeya), Ananda Hettige, who has taught me the true meaning of determination and dedication. Although his battle with cancer is not over, he lives every day with courage.

"We cannot direct the winds but we can adjust our sails"

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Abbreviations

ADL Activities of Daily Living

ANSI Australian Nutrition Screening Initiative

ARRC Age-related Residential Care

BIA Bioelectrical Impedance Analysis

BMI Body Mass Index

CC Calf Circumference

Cm Centimetre

DXA Dual- Energy X-Ray Absorptiometry

EAT-10 10- item Eating Assessment Tool

GP General Practitioner

Kg Kilogram

m Metre

MCI Mild Cognitive Impairment

MMSE Mini Mental State Examination

MNA Mini Nutrition Assessment

MNA-SF Mini Nutritional Assessment – Short Form

MoCA Montreal Cognitive Assessment

MST Malnutrition Screening Tool

MUST Malnutrition Universal Screening Tool

NRV Nutrient Reference Value

OECD Organisation for Economic Co-operation and Development

OTC Over The Counter

RDI Recommended Daily Intake

SCREEN II Seniors in the Community: Risk Evaluation for Eating and Nutrition, Version II

SD Standard Deviation

SGA Subjective Global Assessment

SNAQ Simplified Nutritional Appetite Questionnaire

WDHB Waitemata District Health Board

WHO World Health Organisation