



Published by the NZ
Nurses Organisation

Vol 11 No 1
November 2020

Kai Tiaki

Nursing Research

◆ **GUEST EDITORIAL: 2020 International Year of the Nurse and Midwife and the COVID-19 pandemic**

◆ **FROM THE EDITOR: The transformative potential of COVID-19 for nursing research**

◆ **Burnout in New Zealand registered nurses: the role of workplace factors**

◆ **Promoting the use of the SOAP(IE) documentation framework in medical nurses' practice**

◆ **Patient safety leadership walk rounds: Lessons learned from a mixed-methods evaluation**

◆ **Using escape rooms for collaboration while thinking under pressure**

◆ **Language and communication: A vital component of health for people with refugee backgrounds**

◆ **Literature review: The case for appointing Parkinson's disease nurse specialists**

◆ **Why do registered nurses leave the acute care hospital settings? (research brief)**

◆ **Perceptions of Indian IQNs transitioning into a bachelor of nursing programme in New Zealand (research brief)**

CONTENTS



**Kai Tiaki
Nursing Research**

Published by the NZ Nurses Organisation

Vol 11 No 1 November 2020

ISSN: 1179-772X

EDITORIALS

- **Guest editorial:** Jinny Willis
2020, the International Year of the Nurse and Midwife and the COVID-19 pandemic 5-6
- **From the editor:** Patricia McClunie-Trust
The transformative potential of COVID-19 for nursing research 7-8

RESEARCH PAPERS

- **Burnout in New Zealand registered nurses: The role of workplace factors**
Costantinos Tabakakis, Margaret McAllister, Julie Bradshaw 9-16
- **Promoting the use of the SOAP(IE) documentation framework in medical nurses' practice**
Jeanette Briscoe, Thomas Harding 17-23
- **Patient safety leadership walk rounds: Lessons from a mixed-methods evaluation**
Jacqui Wynne-Jones, Margot Martin-Babin, Brooke Hayward, Luis Villa 24-33
- **Students' perceptions of participating in educational escape rooms in undergraduate nursing education**
Johanna Rhodes 34-41
- **Language and communication: A vital component of health for people with refugee backgrounds**
Jenny Field, Patricia McClunie-Trust, Celine Kearney, Jane Jeffcoat 42-49
- **Literature review: The case for appointing Parkinson's disease nurse specialists**
Peta Taylor, Heather Josland, Natalia Batyaeva 50-57

RESEARCH BRIEFS

- **Registered nurse turnover in the acute setting**
Janine Ellison 58-60
- **Perceptions of Indian IQNs transitioning into a bachelor of nursing programme in New Zealand**
Kathy Corner 61-62

Kai Tiaki Nursing Research

Kai Tiaki Nursing Research is an internationally, double-blinded, peer-reviewed nursing research journal, published by the New Zealand Nurses Organisation. It contains research manuscripts from New Zealand-based nurse researchers (or other researchers where the research can be shown to have relevance to nursing in New Zealand).

Papers in all areas of nursing are welcome. Authors should present original work, or new and original analysis of existing work. Letters to the editor are also published. All articles and manuscripts will be subjected to the same rigorous review process.



EDITOR-IN-CHIEF

Patricia McClunie-Trust, RN, PhD
Patricia.McClunie-Trust@wintec.ac.nz

PRODUCTION EDITOR

Kathy Stodart, kasstonz@yahoo.co.nz

JOURNAL ADMINISTRATOR

Fiona Palframan
Ph 03-353-1220
PO Box 4102, Christchurch 8140
fiona.palframan@nzno.org.nz

PUBLISHER

New Zealand Nurses' Organisation,
PO Box 2128, Wellington 6140.
www.nzno.org.nz

SUBSCRIPTIONS

Ph 0800-28-38-48 or email library@nzno.org.nz

ADVERTISING

Queries to: Evelyn Nelson, Ph 027-447-6114,
evelyn@bright.co.nz

ISSN

1179-772X

PRINTER

Bright Communications, Wellington

EDITORIAL ADVISORY COMMITTEE

Patricia McClunie-Trust

Principal lecturer, Centre for Health and Social Practice, Waikato Institute of Technology, Hamilton.

Kate Weston

Acting associate professional services manager, NZNO.

Anne Brinkman

Professional nursing adviser, NZNO

Merian Litchfield

Nursing academic, researcher and author.

Kathy Stodart

Production editor, *Kai Tiaki Nursing Research*

Jinny Willis

Principal researcher, NZNO.

Sue Gasquoine

Nursing policy adviser/researcher, NZNO

Heather Woods

Librarian records manager, NZNO.

SUBMITTING MANUSCRIPTS

Manuscripts should be 3000-5000 words long (excluding abstract, tables and references). All manuscripts should be submitted electronically as Word files. Enquiries to: Kai Tiaki Nursing Research, C/o NZNO Library, New Zealand Nurses' Organisation, PO Box 2128, Wellington 6140. Ph: 0800-283848. Email: kaitiaki@nzno.org.nz For submission guidelines, go to www.nzno.org.nz/ktnr

COPYRIGHT AND REPRODUCTION

Authors may make copies of their own papers published in *Kai Tiaki Nursing Research*, provided that such copies are for free distribution only; they must not be sold. Authors may re-use their own illustrations in other publications appearing under their own name, without seeking permission from *Kai Tiaki Nursing Research*, provided that the source of the material is properly acknowledged. Permission to reproduce material from *Kai Tiaki Nursing Research* will not generally be given to third parties except with the consent of the authors concerned.

DISCLAIMER

The publisher and editors cannot be held responsible for errors or any consequences arising from the use of information contained in this journal; the views and opinions expressed do not necessarily reflect those of the publisher and editors.

PANEL OF REVIEWERS

- **Julie Bowen-Withington**, RN, RM, MHLthSci(nurs), PGDipEd, BAppSc(nurs), DipTchg(tert), is a principal nursing lecturer at the Department of Health Practice, Ara Institute of Canterbury, Christchurch.
- **Margaret Brunton**, RN, PhD, is an associate professor at the School of Communication, Journalism & Marketing, Massey University, Auckland.
- **Catherine Cook**, RN, RM, PhD, MCouns, is a senior lecturer in the School of Clinical Sciences, Auckland University of Technology (AUT).
- **Alexa Hantler**, RN, MEd(adult ed) is a senior nursing lecturer at the Eastern Institute of Technology (EIT), Hawke's Bay.
- **Monina Hernandez**, RN, MNurs(hons), PGDipHlthSc, PGCertTT, BSN, is a nursing lecturer at Massey University.
- **Brittany Jenkins**, RN, MN, is a nurse manager – workforce development, at West Coast District Health Board.
- **Annie Kane**, RN, PGCert(trauma and emerg), PGCert(nurs sci), MEd, is a programme manager for postgraduate studies at Whitireia New Zealand, Porirua.
- **Bernie Kushner**, RN, BScN(dist), MPhil(nurs)(dist) is a nursing lecturer and clinical placement leader in the School of Nursing, Massey University, Albany.
- **Christine Mercer**, RN, BA(soc sci), MEd, PhD, PGCert(prof sup) is an academic staff member/self-employed professional supervisor at Waikato Institute of Technology (Wintec), Hamilton.
- **Johanna Rhodes**, RN, MTchg, MHLthSci, PhD candidate, is the head of the School of Nursing at the Southern Institute of Technology, Invercargill.
- **Brian Robinson**, MSc, PhD, is a senior lecturer in the School of Nursing, Midwifery, and Health Practice, Victoria University of Wellington.
- **Leanne Ryan**, RN, MProfPrac, PGCertTT, CAT, is an academic staff member in the Centre for Health and Social Practice, Waikato Institute of Technology (Wintec), Hamilton.
- **Margaret Sandham**, BHSc(nurs), GradDipArts(psych), BA(hons, psych), DCLinPsych, is a senior lecturer in nursing at the Auckland University of Technology.
- **Kay Shannon**, RN, MN, is a lecturer in nursing at the Department of Nursing, Auckland University of Technology (AUT).
- **Kim van Wissen**, RN, PhD, is a senior lecturer and programme director in the School of Nursing and Health Practice, Victoria University of Wellington.
- **Jo Wailling**, RN, MHR, BHSc(hons), PhD candidate, is a research fellow and facilitator at the Diana Unwin Chair in Restorative Justice, Victoria University of Wellington.
- **Susan Waterworth**, RN, MSc, MPhil, is a senior nursing lecturer at the University of Auckland.

GUEST EDITORIAL: Jinny Willis

2020, the International Year of the Nurse and Midwife and the COVID-19 pandemic

Jinny Willis, BSc(hons), PhD, is the principal researcher at the New Zealand Nurses Organisation, Christchurch.

As 2020, the International Year of the Nurse and Midwife dawned, a novel coronavirus, SARS-CoV-2, emerged as a global threat. COVID-19, as it came to be known, was first described in Wuhan, China; the rest, as they say, is history. While many celebrations of nursing and midwifery could not take place, or remain on hold, the profession quietly continued to provide care. The pandemic has increased the visibility and appreciation of nurses worldwide (Fidele, 2020). Some might suggest the many occasions planned to celebrate the profession could not have achieved such a profile, but at what cost?

In New Zealand, there were 167 cases of COVID-19 among health-care workers as at June 12, 2020, representing 11 percent of all cases (Ministry of Health, 2020). Nurses (49) and health-care assistants, caregivers or support workers (79) represented almost three-quarters (73 percent) of those infected. More than half of these cases, 96 individuals (57 percent), were infected in the workplace. A quarter of those infected in the workplace, 42 people (25.1 percent), were likely to have been infected by a patient, resident or client; 32 people (19.2 percent) were found to have been infected by another health-care worker. Nine health-care workers were hospitalised, with two cases requiring intensive care.

The International Council of Nurses (ICN) aimed to find out the number of nurses and other health-care workers who had contracted or lost their lives due to COVID-19 since the virus outbreak began, but was constrained by the lack of systematic recording of data across member countries. A survey undertaken for the first two weeks of August revealed that 1097 nurses had died from COVID-19 across 44 countries – likely an underestimate, due to the lack of standardised data collection (ICN, 2020). In addition, the prevalence of COVID-19 infections among health-care workers ranged from 1 percent to 32 percent, with a mean of 10 percent. The findings also reveal moderate to severe shortages of PPE, and lack of consistency around recognition of COVID-19 as an occupational disease and compensation for health-care workers affected by COVID-19. Further evidence from a large prospective observational study of 2,135,190 individuals, comprised of front-line health-care workers and the general community using a COVID-19 symptom app in the United Kingdom and the United States, also revealed rates of COVID-19 infection in front-line health-care workers that were in the order of 11 to 12-fold higher than in the general community (Nguyen, 2020). Adjusting for biases in testing frequency between the two groups, and any other possible confounders, at least a three-fold increase in risk remained in the health-care workers. It is clear that morbidity and mortality for health-care workers is high.

Ethical tensions for nurses during the pandemic added to an already difficult scenario. McKenna (2020) notes the tensions between nurses' duty of care to patients and their duty of care to their whānau and family members. It is sufficiently difficult for those nurses in the "sandwich generation", that is, those who have the care of children as



Jinny Willis

well as parents, without the extra demands of a pandemic. Nurses were justifiably concerned about returning from work and infecting household members, particularly those who were vulnerable to COVID-19. The ICN survey showed high levels of mental distress among nurses (ICN, 2020). Indeed, in some jurisdictions, suicides among health-care workers have been reported.

The New Zealand response to COVID-19 was among the most successful in the world (Baker, 2020). The co-ordinated "all-of-

government" response, including border control measures; community transmission controls; case-based control measures; and health, well-being and economic support measures resulted in a conclusion of the elimination phase of the pandemic 103 days after notification of the first case (Baker, 2020). The response ensured that the health system was not overwhelmed by cases; indeed, a relatively small proportion of the total cases (1569) required hospitalisation, and deaths (22) were low. A five week lock-down proved to be the "pandemic breaker" and very good compliance by the New Zealand population, got the job done.

The New Zealand approach to eliminating COVID-19 and minimising the impact of the disease ensured that hospitals were not overwhelmed by inpatients. However, preparation for an unknown number of COVID-19 cases that might require treatment caused disruptions to essential health services. The World Health Organization (WHO) examined the impact of COVID-19 on a tracer set of up to 25 essential health services across the life course among the five WHO regions and found widespread reductions in essential services, with greater impact on low and middle-income countries (WHO, 2020). These services included: elective surgery; outpatient services; preventive services; diagnosis, treatment and rehabilitative services; and palliative services. The impact of these disruptions cannot be quantified at this time and indeed may not be apparent for years to come.

Most of the cases of COVID-19 in New Zealand were encountered in the community. Nurses were deployed in community-based assessment centres (CBACs), in contact tracing and more recently in managed isolation facilities. While the use of PPE in hospitals is routine, the use of PPE in nurses and health-care workers in the community is less usual. Donning and doffing of PPE is not necessarily intuitive, and correct fit is extremely important. In addition, despite the existence of pandemic plans from the days of SARS-1, preparedness was imperfect at best. The New Zealand Nurses Organisation

(NZNO), in collaboration with the McGuinness Institute, undertook a survey of NZNO members towards the end of Alert level 4 and into Alert level 3. Questions addressed: how safe members felt at work in regard to the human coronavirus; preparedness to use PPE appropriately; confidence that the district health board (DHB)/employer was able to provide the PPE needed; and confidence that New Zealand had the necessary PPE stock. Free-text responses were also invited. Some health-care workers reported very good access to PPE and communication about its use; however, a significant number of comments indicated that there was a lag in access to PPE in the early days of the pandemic. A number of nurses also reported that there were insufficient staff to allow change of PPE once contaminated or saturated. There was also a clear perception of rationing.

The Office of the Auditor General (2020) subsequently conducted an investigation and examined the system for managing PPE stock, how the stock was mobilised to DHBs to maintain adequate supply and distribution, as well as the process for procuring PPE. The findings were consistent with the experiences NZNO members reported. Fenton (2020) believes that the findings of inadequate stock of PPE, inequity in access to PPE across the health and disability system and complacency towards emergency preparedness reported by the Auditor-General are ethical concerns. At the very least, the Health and Safety at Work Act (HSWA, 2015), includes a requirement to manage workplace hazards “so far as is reasonably practicable”.

New Zealand has relied on internationally qualified nurses for a very long time; consequently, internationally qualified nurses comprise 27 percent of the New Zealand registered nursing workforce (NCNZ, 2019). A Business and Economic Research (BERL) report (Nana, 2013) predicts our reliance on nurses trained beyond New Zealand until 2035. What impact then, the current border closure? At some point a trade-off between protecting New Zealanders from imported cases of COVID-19 and adequacy of the nursing workforce is needed. New Zealand has to commit to “growing our own” nurses to reduce the reliance on overseas nurses for whom we must compete with other labour markets. This strategy would potentially have the additional benefit of boosting the numbers of Māori, Pacific and male nurses to better reflect the New Zealand population. However, the effect of the pandemic on recruitment of nursing students for 2021 and beyond is unknown. Preparation of students for tertiary study has likely been affected by disruption in course work associated with COVID-19 lockdowns.

The pandemic necessitated new ways of working that may persist. Reduction in provision of some essential services was accompanied by new ways of interacting with patients and delivery of care. An example is the move to telehealth, or virtual consultations, in a number of different settings. Atmore and Stokes (2020) report changes in consultations in a Dunedin urban general practice, comparing patient characteristics and reasons for engaging with the practice in 2019 and immediately post-COVID-19 in 2020. Virtual consultations increased from 30 to 70 percent between the two observation periods, while age group, gender, ethnicity and deprivation quintile, as well as investigations and types of referral, were similar between the periods.

The need for pandemic preparedness, as raised in the report of the Auditor-General, cannot be overstated. The National Ethics Advisory Committee undertook a consultation process as part of a revision of the guideline for allocation of resources during scarcity (NEAC, 2020). The principles include best use of the available resources, minimising harm and taking care not to exacerbate any existing

inequity or inequalities. The COVID-19 fatality rates for Māori are estimated to be 50 percent higher than for non-Māori (Steyn, 2020). It is vital therefore to consider the impacts for different sectors of the population. Also, special attention needs to be given to high-risk groups such as the elderly and those in aged residential care where the majority of deaths occurred in New Zealand in the first wave of COVID-19.

As the International Year of the Nurse and Midwife draws to a close, it is time to reflect and to celebrate the contribution of nurses, along with the rest of the health-care community, to the COVID-19 response in New Zealand and across the globe. Despite risk to themselves, family and whānau, nurses continued to deliver care in all contexts and inevitably were over-represented among COVID-19 cases. It is also timely to reflect on how some of the problems encountered with provision and access to PPE, and other impediments to safe working environments for nurses, might be addressed, particularly without an end to the pandemic in sight.

References

- Atmore, C., & Stokes, T. (2020). Turning on a dime – pre- and post-COVID-19 consultation patterns in an urban general practice. *New Zealand Medical Journal*, 133(1523).
- Baker, M. G., Wilson, N., & Anglemyer, A. (2020). Successful Elimination of Covid-19 Transmission in New Zealand. *New England Journal of Medicine*, 383, e56. doi:10.1056/NEJMc2025203
- Fedele, R. (2020). The impact of a global pandemic on the international year of the nurse and midwife. *Australian Nursing & Midwifery Journal*, 27(1), 18-20.
- Fenton, E. (2020). Management of personal protective equipment in New Zealand during the COVID-19 pandemic: report from the Auditor-General. *New Zealand Medical Journal*, 133(1522).
- International Council of Nurses. (2020). *Protecting nurses from COVID-19 a top priority: A survey of ICN's national nursing associations*. International Council of Nurses.
- McGuinness, W. (2020). *Survey Insights: An analysis of the 2020 NZNO PPE Survey*. McGuinness Institute and New Zealand Nurses Organisation.
- Ministry of Health (2020). *COVID19 in Health Care and Support Workers in Aotearoa New Zealand*. Ministry of Health.
- Nana, G., Stokes, F., Molano, W., & Dixon, H. (2013). *NEW ZEALAND NURSES: workforce planning 2010-2035*. BERL.
- National Ethics Advisory Committee. (2020). *Ethics and Equity: Resource Allocation and COVID-19*. Ministry of Health.
- Nguyen, L. H., Drew, D. A., Graham, M. S., Joshi, A. D., Guo, C-G., Mehta, R. S., Warner, E. T., Sikavi, D. R., Lo, C-H., Kwon, S., Song, M., Mucci, L. A., Stampfer, M. J., Willett, W. C., Eliassen, A. H., Hart, J. E., Chavarro, J. E., Rich-Edwards, J. W., Davies, R., Capdevila, J., Lee, K. A., Lochlainn, M. N., Varsavsky, T., Sudre, C. H., Cardoso, M. J., Wolf, J., Spector, T. D., Ourselin, S., Steves, C. J., Chan, A. T., on behalf of the Coronavirus Pandemic Epidemiology Consortium. (2020). Risk of COVID-19 among front-line health-care workers and the general community: a prospective cohort study. *Lancet Public Health* 2020, 5(9), e475–83. [https://doi.org/10.1016/S2468-2667\(20\)30164-X](https://doi.org/10.1016/S2468-2667(20)30164-X)
- Nursing Council of New Zealand. (2019). *The New Zealand Nursing Workforce: A profile of Nurse Practitioners, Registered Nurses and Enrolled Nurses 2018-2019*. Te Kaunihera Tapuhi o Aotearoa/Nursing Council of New Zealand.
- Office of the Auditor General. (2020). *Ministry of Health: Management of personal protective equipment in response to Covid-19*. <https://oag.parliament.nz/2020/ppe/docs/ppe.pdf>
- World Health Organization. (2020). *Pulse survey on continuity of essential health services during the COVID-19 pandemic*. Interim report, August 27, 2020.

FROM THE EDITOR: Patricia McClunie-Trust

The transformative potential of COVID-19 for nursing research

T ēnā koutou, tēnā koutou, tēnā tatou katoa.

Welcome to the 2020 edition of *Kai Tiaki Nursing Research*. As Jinny Willis notes in her guest editorial, this year has been significant for our profession. The COVID-19 pandemic has disrupted many aspects of human life that we previously took for granted, including our professional lives and usual ways of conducting research. It has also had a substantial impact on the mental and physical health and well-being of many New Zealanders – both health workers and the wider population. Collecting information about the impact the pandemic has had on our population is an important priority that nursing needs to engage with. Nurse researchers also need to examine and potentially embrace many of the changes that were forced on us by the pandemic.

We are on the cusp of new developments in the digital field and need new narratives to signpost the future direction of research, while at the same time managing the challenges digitalisation presents (Barnes, 2020; Torrentira, 2020) to both researchers and research participants. Researchers who were conducting studies at the time of the Level 4 lockdown in New Zealand found themselves faced with questions regarding the scope of their ethical approval and planned data collection methods, which were no longer fit for purpose when using digital media unless that was included in the original design. I found myself needing to move face-to-face interviews into a digital medium, which required additional ethical review to enable a different mode of gaining consent from participants and for collecting data via videoconference. As well, the research team was unable to meet to share transcribed data for the analysis stage. Further ethical review was required to explore the security of using an online “Teams site” to store data and write up the research collaboratively.

Davison (2020) explores the transformative potential of disruptions in helping researchers do things differently. As he suggests, while crises are challenging and potentially life-threatening, they also disrupt old habits, creating the conditions for change beyond what might previously have been conceived as possible or reasonable. Crises make us question previously held assumptions about how remote data collection might be constituted in research. For example, are online interviews using videoconferencing a less effective method of data collection, or are they simply different?

Using digital media to replace face-to-face data collection has four key benefits (Dodds & Hess, 2020). It is comfortable, non-intrusive and safe, engaging and convenient and easily set up. However, it also has limitations, including the absence of non-verbal communication and cues, potential challenges with setting up for researchers and participants who are inexperienced in digital media, and potential privacy and access issues. Barnes (2020) agrees that technology can also create a digital divide where some potential research participants are disenfranchised through lack of access to digital media, problems with internet connections and lack of technology skills.

COVID-19 has created unprecedented insights into different ways of conducting research that have been developed out of necessity.



Patricia McClunie-Trust

Digital media does offer a unique approach to data generation (Torrentira, 2020). It is more cost-efficient and easier to organise than face-to-face interviews and offers a practical solution to the need for social distancing or geographical distance. Torrentira also identifies a variety of other relevant data collection modes available including digital diaries and reflections, and online surveys. However, the potential for transformation in response to disruption needs to be carefully and thoughtfully managed. Davi-

son (2020) suggests that we should not try to replicate physical data collection in the virtual world. Data collected through the medium of technology will be different, and rather than imagining that online interviews are impoverished by the lack of face-to-face contact, research design needs to account for this difference. Flexibility and creativity in research design are important to enable research to continue in our current uncertain world. COVID-19 has created unprecedented insights into different ways of conducting research that have been developed out of necessity. It will be interesting to explore the methodological implications of these strategies as they develop.

Nursing workforce

Sustaining the nursing workforce following the closure of our borders to all people other than returning New Zealand citizens and residents will affect nurse migration. Internationally qualified nurses (IQNs) make up 27 percent of the New Zealand nursing workforce (NZNC, 2019). The reduction in volume of nurse migration means that our profession will have to invest in retaining nurses and growing more of our own. Research on burnout in New Zealand registered nurses (RNs) was the focus for research by Tabakakis, McAllister and Bradshaw, who found that workplace stress is implicated in nurse burnout. They suggest there is a relationship between the practice environment and repeated exposure to negative behaviours in the workplace, such as bullying. Efforts to reduce workplace stress include limiting high workloads, providing greater job flexibility

and autonomy, and effective management of bullying behaviours. Ellison's research brief shared the findings of an integrative review on RN turnover in the acute hospital setting. Findings of this review suggest that key factors in RNs' intention to leave are a perceived lack of support from employers and colleagues, high workload and insufficient staffing, and limited potential for professional development and career advancement.

Documentation and patient safety

Timely, accurate and complete documentation is an important element of patient safety and transition of care within and between health services. Documentation is also an essential requirement for legal, organisational and professional standards for nursing practice. Briscoe and Harding used an action research approach to evaluate nurses' use of the SOAP(IE) framework for documentation on inpatient medical wards. The findings show that heavy workloads, time constraints and a lack of understanding about how to use the SOAP(IE) framework are impediments to its application in practice. Patient safety leadership walk rounds (PSLWRs), a safety initiative that connects leaders with frontline services in hospitals, was the focus of an evaluative study conducted by Wynne-Jones, Martin-Babin, Hayward and Villa. The findings of this research suggest that PSLWRs have a positive impact on awareness of patient and staff safety, building safer ward environments, and creating a positive culture of monitoring and evaluation. However, the effectiveness of a PSLWRs programme depends on how it is implemented.

Nursing education

Innovative learning strategies have been a theme for nursing education during 2020, with the need to move face-to-face learning to online modes when all New Zealanders, except essential workers, were required to self-isolate in their homes. However, in our pre-COVID-19 world, simulation was an already well-established innovative mode of learning. Rhodes reports on research that captured undergraduate nursing students' perceptions of participating in an escape room. Escape rooms, or "game-based" simulations, help to prepare students for chaotic and unpredictable health-care environments by promoting teamwork, collaboration and critical thinking to achieve a specific outcome. Rhodes suggests that overall, students find escape rooms to be a memorable and innovative learning experience. The research brief by Corner reports on the experiences of four IQNs who were transitioning into an undergraduate nursing programme. The findings of this pilot study indicate that IQNs experience significant challenges in adapting to new ways of learning, as well as the culture shock of living and learning in a new country. However, the participants in this small-scale study also demonstrated resilience and determination in striving to complete the bachelor of nursing and gain New Zealand registration.

People-centred care

The New Zealand Health Strategy (Minister of Health, 2016) aims to support timely and equitable access to the health services people need, preferably within their own communities. It aims to support

and equip our population to be informed and involved in their health care. However, some people experience more challenges in engaging with health services than others. Research conducted by Field, McClunie-Trust, Kearney and Jeffcoat explored language and communication as a vital component of health for people with refugee backgrounds. The study concludes that there are multiple factors that affect how people from refugee backgrounds are able to interact with health services, including differences in language, culture and complexity of life experiences. The researchers suggest the health of these new New Zealanders is a social equity issue that nurses and other health professionals need to be concerned with, particularly in creating culturally safe encounters with health services. A further aim of the New Zealand Health Strategy is to create a "joined up" team approach to close potential gaps in health services. A literature review by Taylor, Josland and Batyaeva examines potential gaps in health services for people with Parkinson's disease (PwP). The findings of this review identify incomplete understanding of Parkinson's-specific care by health professionals, and lack of consistency in medication administration or adherence, as potential factors affecting the health and well-being of PwP. They advocate establishing a programme to educate health professionals and carers to ensure a co-ordinated interprofessional approach to care.

References

- Barnes, S. J. (2020). Information management research and practice in the post-COVID-19 world. *International Journal of Information Management*, 55, 102-175. <https://doi.org/10.1016/j.ijinfomgt.2020.102175>
- Davison, R. M. (2020). The transformative potential of disruptions: A viewpoint. *International Journal of Information Management*, 55, 102-149. <https://doi.org/10.1016/j.ijinfomgt.2020.102149>
- Dodds, S., & Hess, A. C. (2020). Adapting research methodology during COVID-19: lessons for transformative service research. *Journal of Service Management*. (Ahead of print). <https://doi.org/10.1108/JOSM-05-2020-0153>
- Minister of Health. (2016). The New Zealand Health Strategy: Future direction. www.health.govt.nz/system/files/documents/publications/new-zealand-health-strategy-futuredirection-2016-apr16.pdf
- Torrentira, C. (2020). Online data collection as adaptation in conducting quantitative and qualitative research during the covid-19 pandemic. *European Journal of Education Studies*, 7(11), 78-87. <https://doi.org/10.46827/ejes.v7i11.3336>
- Nursing Council of New Zealand. (2019). The New Zealand Nursing Workforce: A profile of Nurse Practitioners, Registered Nurses and Enrolled Nurses 2018-2019. Te Kaunihera Tapuhi o Aotearoa/Nursing Council of New Zealand.



**Costantinos
Tabakakis**

About the authors: Costantinos (Kosta) Tabakakis, MHSci(hons), MEd, is a PhD candidate at the School of Nursing, Midwifery and Social Sciences, CQUniversity, Noosa, Australia. He is also a research adviser at Research and Enterprise, University of Otago, Christchurch, New Zealand. His correspondence address is: c.tabakakis@cquemail.com

Margaret McAllister, RN, EdD, is an adjunct professor at the School of Nursing, Midwifery and Social Sciences/Higher Education, CQUniversity, Noosa, Australia.

Julie Bradshaw, RN, MNurs(hons), PhD, is the deputy dean for learning and teaching, and the head of course for mental health postgraduate nursing at the School of Nursing, Midwifery and Social Sciences, CQUniversity, Rockhampton, Australia.



**Margaret
McAllister**



Julie Bradshaw

This article was accepted for publication in August 2020.

BURNOUT IN NEW ZEALAND REGISTERED NURSES: THE ROLE OF WORKPLACE FACTORS

ABSTRACT

Aims and objectives: To investigate the impact of workplace factors on burnout in New Zealand registered nurses (RNs).

Background: Nursing is characterised by chronic workplace stress. Research examining the role of workplace factors (ie practice environment and bullying) in shaping burnout is scarce.

Methods: A cross-sectional survey was conducted among 480 New Zealand RNs. Burnout was self-reported using the CBI, while practice environment and negative acts in the workplace were self-reported using PES-NWI, and NAQ-R respectively. The STROBE checklist was used for this paper.

Results: For every point increase in PES-NWI, there was a decrease of 6.82, 12.62, and 9.86 points in personal burnout (PB), work-related burnout (WRB), and client-related burnout (CRB) respectively after controlling for demographic and job-related characteristics. For every point increase in NAQ-R, there was an increase of 0.47, 0.50, and 0.20 points in PB, WRB, and CRB respectively after controlling for sample characteristics. These two factors explained for 18.4 percent, 27.6 percent and 12.4 percent of the variation in PB, WRB and CRB respectively. The prevalence of high PB, WRB and CRB was 50.8 percent, 46.5 percent and 16.0 percent respectively.

Conclusion: Workplace factors are associated with burnout in RNs. Health-care organisations and nurse leaders have a duty to provide safe and healthy workplaces that cultivate positive outcomes for nurses and patients. Future efforts to reduce workplace stress and burnout in nurses will need to include initiatives that reduce high workloads, provide greater job flexibility and autonomy, increase collaboration and reduce bullying and harassment.

KEYWORDS

Bullying, harassment, nursing, burnout, workplace, stress

INTRODUCTION

A large body of evidence has emerged showing nurses from different countries and health-care systems are often exposed to high levels of stress in their workplace. These include nurses in Australia (Opie et al., 2011), Greece (Sarafis et al., 2016), the United Kingdom (Marangozov et al., 2017), Nigeria (Faremi et al., 2019), the United States (Roberts & Grubb, 2014), and Iran (Najimi et al., 2012). In a systematic literature review, McVicar (2003) identified several major sources of workplace stress in nurses, including workload/inadequate staff/time pressure, relationships with other clinical staff, leadership/management issues, professional conflict and the emotional demands of caring, shift work and lack of compensation. McVicar also concedes that it is nearly impossible to ignore the effect that personal circumstances have on a nurse's ability to cope with

workplace stress – sometimes easing stress, while at other times compounding difficulties.

Workplace stress in nurses is often associated with reduced job satisfaction (Hayes et al., 2015) and increased risk of burnout. Furthermore, workplace stress (ie inadequate staffing and lack of organisational support) was assessed by nurses as adversely affecting the quality of patient care (Aiken et al., 2002). Burnout is associated with increased absenteeism (Dyrbye et al., 2019) and, ultimately, may result in intent to leave the profession (Heinen et al., 2013).

BACKGROUND AND LITERATURE REVIEW

Within the New Zealand context, there has been a steady stream of research examining workplace stress in nurses. Dewe (1987)

conducted one of the earliest seminal studies on the topic and found several potential sources of stress for nurses, including work overload, difficulties with other staff, difficulties in nursing the critically unwell, concerns over patient treatment and dealing with helplessly ill patients. Later, Watson and Feld (1996) found that nurse-doctor conflict was another major source of stress, followed by workload, inadequate preparation for dealing with the emotional needs of patients and their families, and death and dying. In 2007, a survey of Australian and New Zealand nurses found workplace stress was increasing and the authors predicted that nurses would experience poorer mental and physical health (Chang et al., 2007). Huntington et al. (2008) reported that workload was the most common workplace stressor. Ditzel (2009) found nurses experienced a moderate frequency of perceived job stress, nurses who worked full-time in public hospitals were most susceptible to work stress, high workload was the most significant contributor to job stress, and nurses aged 20 to 30 years experienced the highest frequency of perceived job stress.

In addition to stress, research on burnout in New Zealand nurses is emerging. Hall (2001), in the first study exploring burnout in New Zealand nurses, found nearly a third of nurses were in the advanced phases of burnout. Burnout was strongly associated with age, in particular in the 41-45 years age band. No significant associations were found between burnout and gender, job positions and hours of work. Burnout patterns did not differ across nurse settings. Moloney et al. (2018) showed that work-life interference, workload and emotional demands have the largest effects on burnout. Frey et al. (2018), using hierarchical multiple regression, found the four factors in the model of specialisation (palliative care/other, palliative care education, psychological hardiness and psychological empowerment) significantly predicted burnout ($R^2 = 0.445$).

The International Hospital Outcomes Study (IHOS) (Aiken et al., 2002) is a body of work conducted in the United States over a period of 10 years, culminating in a conceptual framework for determining “good” or “Magnet” hospitals. These hospitals were successful in attracting and retaining nurses, while producing positive nurse and patient outcomes. Integral to positive nurse and patient outcomes were a set of two core hospital-level or organisational features: *nurse staffing*, and *organisational support for nursing care*. This work laid the platform for the development of the Practice Environment Scale – Nurse Work Index (PES-NWI) (Lake, 2002; Lake & Friese, 2006), which measures five key domains of the nursing practice environment. Two domains were specific to the hospital-environment: 1) nurse participation in hospital affairs, and 2) nursing foundations for quality of care. The remaining three domains were specific to the unit: 1) nurse manager ability, leadership and support, 2) staffing and resource adequacy, and 3) collegial nurse-doctor relations.

The Bergen Bullying Research Group (BBRG) has shown in its research that employees who have been exposed to bullying or bullying behaviours reported higher levels of psychological and physical symptoms than others (Mikkelsen & Einarsen, 2001). Also, BBRG has shown individuals who were bullied reported more detrimental outcomes (ie poor sleep quality, reduced job satisfaction) than others who had experienced interpersonal conflict/aggression only (Notelaers et al., 2018). A literature review by the National Institute of Health Norway and BBRG on workplace bullying highlights the undeniable conclusion that exposure to workplace

bullying results in a suite of short- and long-term negative mental and physical health outcomes (Nielsen & Einarsen, 2018).

In summary, New Zealand nurses report a range of workplace stressors which, if sustained, can result in burnout. There is an absence of data on the relationship between the practice environment and negative acts in the workplace, and burnout in New Zealand nurses. This requires further investigation. The work of Aiken et al. (2002) and Nielsen et al. (2011) have guided a current project examining resilience in New Zealand nurses (Tabakakis et al., 2019). This study explores the influence of personal, hospital workplace and bullying factors within this population.

Reducing sources of workplace stress and ultimately burnout in nurses needs to become a leading priority for health-care organisations around the globe, especially given the growing global nursing shortage (Drennan & Ross, 2019). This study aimed to investigate the impact of workplace factors, including practice environment and negative acts in the workplace, on burnout in New Zealand registered nurses (RNs).

METHODS

Study population, design and sample

In 2017, New Zealand had 49,933 practising RNs on the Register maintained by the Nursing Council of New Zealand. Ninety-one per cent of these were female, 43 percent were 50 years or older and 7 percent identified as Māori (Nursing Council of New Zealand, 2018).

This cross-sectional study was conducted between August 23 and November 4, 2018. Cross-sectional studies are observational and investigate both exposure and outcome at the same time in a set population (Nour & Plourde, 2019). Five thousand RNs were randomly selected from the New Zealand Nurses Organisation (NZNO) database and invited to participate. The NZNO population has a similar demographic profile to the national New Zealand nursing workforce. The email invitation included information about the study, contact details for the research team and a SurveyMonkey link to an anonymous online questionnaire. A participant information sheet was provided at the beginning of the questionnaire, which conformed to ethical procedures. The Strengthening the Reporting of Observational studies in Epidemiology (STROBE) checklist for cross-sectional studies (Von Elm et al., 2007) was used for this paper to ensure clear and complete reporting of study conduct.

Ethics

Ethical approval was obtained from the Central Queensland University Human Research Ethics Committee (CQU HREC) (approval number 2110). Advice was sought from Gary Witte (academic committees and services office manager, University of Otago) on whether ethics approval was also required from an accredited New Zealand-based ethics committee. Given the project received full ethical review from CQU HREC, it was deemed this was not required. This was further supported by NZNO. Māori consultation was undertaken with Karen Keelan (kaitohutohu rangahau Māori/Māori research advisor, University of Otago, Christchurch). Advice was given on data collection and dissemination to Māori stakeholders, including the possibility of providing the questionnaire and interview material in te reo Māori. This was considered, but due to budget constraints, was not feasible.

Variables and measurements

Demographic and job-related characteristics self-reported by the participants included age, gender (male, female, other), ethnicity (seven categories), relationship status (single, in a relationship/defacto/married/cohabitating, other), employment status (full-time, part-time, other), highest nursing qualification (undergraduate, postgraduate, other), years employed as a nurse, place of employment (district health board, non-district health board), and intention to leave in the previous 12 months (yes, no).

The Copenhagen Burnout Inventory (CBI) (Kristensen, Borritz, Villadsen, & Christensen, 2005) is a 19-item measure of fatigue (physical and psychological) and exhaustion in three domains (separate scales): (1) personal burnout, (2) work-related burnout, and (3) client-related burnout. Personal burnout (PB, six items) is an overall state of prolonged physical and psychological exhaustion, regardless of source (generic scale). Work-related burnout (WRB, seven items) is a state of prolonged physical and psychological exhaustion, which is perceived as related to the person's work. Client-related burnout (CRB, six items) is a state of prolonged physical and psychological exhaustion, which is perceived as related to the person's work with clients, which, in this context, is the patients. Items are rated on a series of 5-point Likert scales ("always", "often", "sometimes", "seldom" and "never/almost never"). Scores for all scales range from 0-100. Scores of 50 or greater in each of the three scales indicate a high level of burnout. Higher scores in each domain indicate greater severity of fatigue and exhaustion (burnout). Prevalence of burnout scores are determined by assessing the percentage of individuals with scores ≥ 50 as a percentage of the overall respondents within each subscale. The CBI has acceptable psychometric properties (Chambers et al., 2016; Fong et al., 2014; Milfont et al., 2008).

The Practice Environment Scale of the Nursing Work Index (PES-NWI) (Lake, 2002) was used to assess the practice environment. The PES-NWI includes 31 items with five subscales, with items scored on a Likert scale. The four responses are: 1=strongly agree, 2=somewhat agree, 3=somewhat disagree and 4=strongly disagree. The five subscales are: 1) nurse participation in hospital affairs (nine items), 2) nurse foundations for quality of care (nine items), 3) nursing unit manager ability, leadership and support of nurses (five items), 4) staffing and resource adequacy (four items), 5) collegial nurse-doctor relations (three items). The PES-NWI has been used in a revised form within the Australian context (Middleton et al., 2008). The revised version has been validated using a Queensland nursing population, demonstrating good psychometric properties (Parker et al., 2010). Response categories were reversed: 1=strongly disagree, 2=somewhat disagree, 3=somewhat agree and 4=strongly agree. A composite (overall) score can be calculated by adding the five subscale scores and taking an average. The composite score was used in this study.

The Negative Acts Questionnaire-Revised (NAQ-R) (Nielsen et

Table 1. Sample characteristics

	n	% or mean (SD)
Gender	586	
Male/other	35	6%
Female	551	94%
Average age (years)	559	47.1 (12.77)
Relationship status	586	
Single/other	137	23.4%
In a relationship	59	10.1%
Married/defacto/cohabiting	390	66.6%
Ethnicity	586	
European	430	73.4%
Māori	52	8.9%
Pacific peoples	18	3.1%
Asian	72	12.3%
Middle Eastern/Latin American/African (MELAA)	14	2.4%
Highest nursing qualification	586	
Undergraduate/other	453	77.3%
Postgraduate	133	22.7%
Employment type	586	
Full-time	287	49.0%
Part-time	250	42.7%
Other	49	8.4%
Average years employed as a nurse	586	20.87 (13.80)
Place of employment	586	
District health board	344	58.7%
Non-district health board	242	41.3%
Intention to leave	586	
Yes	305	305 (52%)
No	281	281 (48%)
Average CBI-PB mean score	485	48.55 (19.86)
Average CBI-WRB mean score	485	47.58 (21.53)
Average CBI-CRB mean score	485	24.07 (19.93)
Average PES-NWI mean score	515	2.70 (0.54)
Average NAQ-R score	480	34.27 (12.69)

CPI-PB: Copenhagen Burnout Inventory – Personal Burnout

CBI-WRB: Copenhagen Burnout Inventory – Work-related Burnout

CBI-CRB: Copenhagen Burnout Inventory – Client-related Burnout

PES-NWI: Practice Environment Scale – Nurse Work Index

NAQ-R: Negative Acts Questionnaire – Revised

al., 2011) was used to assess perceived exposure to negative acts in the workplace. The NAQ-R is a 23-item self-report questionnaire, consisting of three subscales measuring frequency, intensity and prevalence of unwanted and negative behaviour, and workplace bullying within the past six months. The three subscales are: 1) person-related bullying (seven items), 2) work-related bullying (12 items), and 3) physically intimidating bullying (three items). Examples of unwanted behaviour included someone withholding information

from you which affects your performance, being ordered to do work below your level of competence, and being exposed to persistent and unjustified criticism. Bullying behaviours included being shouted out, finger pointing, having one's personal space invaded

and being threatened. The first 22 items assess a respondent's perception of exposure to unwanted and negative behaviour, which may be deemed bullying if occurring frequently over time (often referred to as the "behavioural method"), while the 23rd item assesses the respondent's overall feeling of being bullied, often referred to as the "self-labelling method". Item 23 was not used in this study. The NAQ-R has five responses: 1=never, 2=now and then, 3=monthly, 4=weekly and 5=daily. Total NAQ-R scores (using first 22 items) range from 22-110, with higher scores indicating heightened intensity. The NAQ-R has good psychometric properties (Einarsen, Hoel, & Notelaers, 2009). The total NAQ-R score was used for this study.

Data analysis

Analyses were conducted using SPSS, v25.0. Descriptive statistics were presented as mean (SD) for quantitative variables, and frequencies and percentages for categorical ones. The Level 1 prioritised output classification standard was used to categorise ethnicity (Health Information Standards Organisation, 2017). T-test and ANOVA were used to examine associations between the three subscales of CBI and sample characteristics (categorical variables). Pearson's correlations were computed to test associations between burnout with age, years employed as a nurse, PES-NWI composite score and total NAQ-R score. A multiple linear regression was used for multivariable analysis to determine the associations of workplace factors (ie practice environment and bullying) and burnout. Two regression models were run. Model 1 included two workplace factors, ie average PES-NWI mean score and average NAQ-R score. Model 2 included the two workplace factors adjusted for age, gender, relationship status, ethnicity, highest nursing qualification, years employed as a nurse and place of employment. Assumptions were checked and met. Regression

Table 2. Pearson's correlations between scales

	n	Mean	SD	1	2	3	4	5
CBI – personal burnout [1]	485	48.55	19.86	1				
CBI – work related burnout [2]	485	47.58	21.53	.80*	1			
CBI – client-related burnout [3]	485	24.07	19.93	.52*	.64*	1		
PES-NWI composite score [4]	515	2.70	0.54	-.35*	-.46*	-.34*	1	
NAQ-R score [5]	480	17.36	7.05	.40*	.45*	.27*	-.50*	1

PES-NWI: Practice Environment Scale – Nurse Work Index
NAQ-R: Negative Acts Questionnaire – Revised

* Correlation is significant at the <0.001 level (2-tailed)

coefficients and 95 percent confidence intervals were reported for workplace factors. Cronbach's alphas were calculated for the CBI subscales, PES-NWI and NAQ-R to assess their internal consistency reliability. Missing values were excluded from analyses. All *p* values are two-sided and considered significant if <0.05.

RESULTS

A total of 480 participants completed all questionnaire scales, a response rate of 11.86 percent (586/4, 939; after removing inactive emails). Items within the three subscales of the CBI were well

Table 3. Bivariate associations between burnout and sample characteristics

	n	PB Mean (SD)	WRB Mean (SD)	CRB Mean (SD)
Gender				
Male	23	45.11 (19.61)	46.59 (22.26)	28.08 (27.59)
Female	458	48.72 (19.94)	47.65 (21.55)	23.96 (19.52)
Relationship status				
Single/other	112	48.92 (19.64)	47.70 (22.10)	22.17 (17.95)
In a relationship	51	52.04 (21.88)	52.87 (22.46)	25.00 (20.28)
Married/defacto/cohabiting	322	47.86 (19.60)	46.71 (21.12)	24.59 (20.54)
Ethnicity				
European	367	48.64 (19.34)	46.87 (20.69)	24.11 (19.52)
Non-European	118	48.27 (21.48)	49.82 (23.90)	23.94 (21.24)
Highest nursing qualification				
Undergraduate/other	370	49.16 (19.98)	48.14 (21.83)	25.23 (20.82)
Postgraduate	115	46.59 (19.42)	45.81 (20.53)	20.36 (16.26)
Employment type				
Full time	236	48.45 (20.71)	48.03 (21.79)	23.89 (21.04)
Part-time	209	48.88 (18.70)	47.28 (21.35)	24.10 (19.09)
Other	40	47.40 (21.05)	46.52 (21.45)	25.00 (17.80)
Place of employment				
DHB	299	50.41 (20.30)*	49.95 (21.68)**	26.64 (21.06)***
Non-DHB	186	45.54 (18.80)	43.78 (20.78)	19.94 (17.24)
Intention to leave				
Yes	254	53.99 (19.16)***	54.69 (20.24)***	27.82 (20.23)***
No	231	42.57 (18.91)	39.77 (20.19)	19.95 (18.79)

p*<0.05 (2-tailed), *p*<0.01 (2-tailed), ****p*<0.001 (2-tailed)

correlated – Cronbach's alphas were 0.90, 0.77 and 0.87 for PB, WRB and CRB respectively. The PES-NWI and NAQ-R showed good internal consistency as reported (Tabakakis et al, 2019). Table 1 (see p11) shows demographic and job characteristics of the sample. Characteristics of our sample are similar to those of the national sample. Note, the *n* varies across characteristics, as some questions were not answered by all respondents. On average, total PB, WRB and CRB scores were 48.55 (SD=19.86), 47.58 (SD=21.53) and 24.07 (SD=19.93) respectively. PES-NWI score was 2.70 (SD=0.54); and total NAQ-R score was 34.27 (SD=12.67). The prevalence of high PB, WRB and CRB was 50.8 percent, 46.5 percent and 16.0 percent respectively.

Table 2 (see p12) shows the Pearson's correlations between the three subscales of the CBI, PES

NWI, and NAQ-R. PB, WRB, and CRB subscale scores were positively correlated with NAQ-R score ($r = 0.40$, $r = 0.45$, and $r = 0.27$ respectively; all p values <0.001). PB, WRB and CRB subscale scores were negatively associated with PES-NWI score ($r = -0.35$, $r = -0.46$, and $r = -0.34$ respectively; all p values <0.001). PES-NWI score was negatively correlated with NAQ-R score ($r = -0.50$, $p <0.001$).

Table 3 (see p12) shows bivariate associations between PB, WRB and CRB and sample characteristics. Burnout was not significantly associated with gender, ethnicity, relationship status, highest nursing qualification or employment type (p values >0.05). PB, WRB and CRB were significantly associated with intention to leave, having on average 11.42, 14.92 and 7.87 points more than others respectively (p values <0.001). PB, WRB and CRB were also significantly associated with place of employment, that is respondents who were employed in a DHB setting had on average 4.87, 14.92 and 6.7 points more than others. Age was negatively correlated with PB ($r = -.162$, $p <0.001$), WRB ($r = -.215$, $p <0.001$), and CRB ($r = -.152$, $p <0.01$). Years employed as a nurse was also negatively correlated with PB ($r = -.138$, $p <0.01$), WRB ($r = -.178$, $p <0.001$), and CRB ($r = -.117$, $p <0.05$).

Multivariable associations between PB, WRB, CRB and workplace factors (ie practice environment and negative acts in the workplace) are presented in Tables 4-6 (see above and p14). Model 1, that included only two workplace factors, explained 18.4 percent, 27.6 percent and 12.4 percent of the variation in PB, WRB and CRB respectively. Both factors were significantly associated with PB, WRB and WRB. For every point increase in PES-NWI, there was a 7.15 decrease in PB, 12.50-point decrease in WRB and 10.11-point decrease in CRB respectively (p values <0.001). In contrast, for every point increase in NAQ-R, there was a 0.47-point increase in PB, 0.50-point increase in WRB and 0.20-point increase in PB (p values <0.001). The results were similar even after controlling for age, gender, ethnicity, relationship status, years employed as a nurse, highest

Table 4. Multiple linear regression coefficients (95% confidence interval) between workplace factors and personal burnout

	Model 1 (n=480)	Model 2* (n=475)	Partial eta squared
PES-NWI	-7.15 (-10.57, -3.72)***	-6.82 (-10.28, -3.37)***	0.031
NAQ-R	0.47 (0.33, 0.62)***	0.50 (0.35, 0.64)***	0.084
Age	–	-0.16 (-0.39, 0.07)	0.004
Gender (M v F)	–	-2.20 (-9.75, 5.35)	0.001
Ethnicity (Euro v non-Euro)	–	2.76 (-1.18, 6.71)	0.004
Relationship status			
Single/other (v M/D/C)	–	1.82 (-6.62, 3.00)	0.002
In a relationship (v M/D/C)	–	-1.95 (-8.86, 4.96)	0.001
Yrs employed as a nurse	–	-0.11 (-0.31, 0.10)	0.002
Highest nursing qual (UG/other v PG)	–	1.45 (-2.32, 5.23)	0.001
Place of employment (DHB v non-DHB)	–	3.43 (0.02, 6.84)*	0.008
	Adjusted R ² = 0.184	Adjusted R ² = 0.212	

* Controlled for age, gender, ethnicity, relationship status, highest nursing qualifications, years employed as a nurse and workplace type.

PES-NWI = Practice environment scale – nurse work index, NAQ-R = Negative acts questionnaire – revised

M/D/C = married, defacto, cohabiting; UG = undergraduate, PG = postgraduate

* $p <0.05$, ** $p <0.01$, *** $p <0.001$

nursing qualification and place of employment (Model 2 in Tables 4-6). Coefficients for PB, WRB, CRB, and PES-NWI were -6.82, -12.62 and -9.86 respectively (p values <0.001). Coefficients for PB, WRB, CRB and NAQ-R were 0.47, 0.50, and 0.20 respectively (p values <0.001). Model 2 explained 21.4 percent, 32.6 percent and 17.3 percent of the variation in PB, WRB, and CRB respectively.

DISCUSSION

Nurses experience high levels of occupational stress. Understanding of the role of workplace factors in shaping burnout in New Zealand RNs is limited. The main goal of this study was to examine the impact of workplace factors on New Zealand RNs' burnout levels.

Our results show that the practice environment and perceived exposure to negative acts in the workplace, including bullying, play a significant role in shaping burnout in New Zealand RNs. For every point increase in PES-NWI, there was a corresponding 7.15-point decrease in PB, 12.50-point decrease in WRB and 10.1-point decrease in CRB. This inverse association is well-supported by previous research exploring the role of the practice environment on nurse burnout, including Swedish medical and surgical RNs (Leineweber et al., 2014), Brazilian primary healthcare nurses (Lorenz & Guirardello, 2014) and Belgian hospital nurses. In addition, for every point increase in NAQ-R, there was a corresponding 0.47-point increase in PB, 0.50-point increase in WRB, and 0.20-point increase in CRB. This result is supported by Kim et al. (2019), who found a significant association between bullying and burnout in Japanese hospital nurses. When compared to these studies, our study sample was, on average, both older and had been employed as nurses for longer.

The burnout subscale scores in our study (PB = 48.55, WRB = 47.58 and CRB = 24.07) were lower than most other studies using nurses and the CBI. Chou et al. (2014) reported PB, WRB and CRB

scores of 60.1, 55.8 and 42.9 respectively in a study involving Chinese medical professionals which included nurses. Differences in mean burnout scores may be attributed to both demographic (ie lower average age of Chinese nurses, 33.9 years) and structural (ie stricter social, economic and political regulation) factors. Nobre et al (2019) reported PB, WRB and CRB scores of 51.4, 58.5 and 53.1 respectively for Portuguese nurses working in an emergency department (ED). It is possible that higher mean scores were reported in the Portuguese study, as the sample included only ED nurses, who were younger (median age = 30.0 years). Equally important was the small sample size in the Portuguese study (n = 32). In contrast, Kristensen et al (2005) reported lower PB and WRB scores for both Danish hospital (PB = 36.9, WRB = 35.0) and district/community (PB = 38.4, WRB = 31.40) nurses than PB and WRB scores found in our study. Also, CRB (24.07) was lower in this study than CRB for both hospital nurses (29.7) and district/community nurses (25.3) (Kristensen et al., 2005). The demographic profile of both studies is quite similar, suggesting differences in social policy and working conditions between the two jurisdictions may have influenced nurse outcomes.

Published studies reporting prevalence of burnout in nurses using the CBI are scarce. The prevalence of high PB (50.8 percent), WRB (46.5 percent) and CRB (16.0 percent) in this study was lower than PB (59.4 percent), WRB (68.7 percent) and CRB (56.3 percent) in the Portuguese ED nurses study (Nobre et al., 2019). Prevalence in our study was also lower than the prevalence reported in a study involving Chinese nurses (PB = 73.2 percent, WRB = 66.0 percent and CRB = 43.3 percent) (Chou et al., 2014).

To our knowledge, this is the first study to investigate the influence of the practice environment and exposure to negative acts in the workplace on burnout in New Zealand RNs. Also, this is the first study to use the CBI with New Zealand nurses.

Table 5. Multiple linear regression coefficients (95% confidence interval) between workplace factors and work-related burnout

	Model 1 (n=480)	Model 2* (n=475)	Partial eta squared
PES-NWI	-12.50 (-16.00, -9.00)***	-12.62 (-16.09, -9.16)***	0.099
NAQ-R	0.50 (0.35, 0.65)***	0.51 (0.36, 0.66)***	0.086
Age	–	-0.24 (-0.47, -0.01)*	0.009
Gender (M v F)	–	-0.02 (-7.60, 7.57)	0.000
Ethnicity (Euro v non-Euro)	–	-0.13 (-4.09, 3.83)	0.000
Relationship status			
Single/other (v M/D/C)	–	2.30 (-6.25, 1.66)	0.003
In a relationship (v M/D/C)	–	-1.98 (-7.66, 3.70)	0.001
Yrs employed as a nurse	–	-0.12 (-0.33, 0.08)	0.003
Highest nursing qual (UG/other v PG)	–	0.90 (-2.89, 4.69)	0.000
Place of employment (DHB v non-DHB)	–	3.94 (0.52, 7.37)*	0.011
	Adjusted R ² = 0.276	Adjusted R ² = 0.0326	

¥ Controlled for age, gender, ethnicity, relationship status, highest nursing qualifications, years employed as a nurse and workplace type.

PES-NWI = Practice environment scale – nurse work index, NAQ-R = Negative acts questionnaire – revised

M/D/C = married, defacto, cohabiting; UG = undergraduate, PG = postgraduate

*p <0.05, **p <0.01, ***p <0.001

Table 6. Multiple linear regression coefficients (95% confidence interval) between workplace factors and client-related burnout

	Model 1 (n=480)	Model 2* (n=475)	Partial eta squared
PES-NWI	-10.11 (-13.66, -6.57)***	-9.86 (-13.41, -6.32)***	0.061
NAQ-R	0.20 (0.05, 0.36)***	0.24 (0.09, 0.40)**	0.020
Age	–	-0.22 (-0.45, -0.01)	0.007
Ethnicity (Euro v non-Euro)	–	1.69 (-2.36, 5.73)	0.001
Gender (M v F)	–	4.64 (-3.11, 12.38)	0.003
Relationship status			
Single/other (v M/D/C)	–	-3.67 (-7.71, 0.36)	0.007
In a relationship (v M/D/C)	–	-6.37 (-12.17, 0.57)	0.010
Yrs employed as a nurse	–	-0.06 (-0.27, 0.15)	0.001
Highest nursing qual (UG/other v PG)	–	3.90 (0.03, 7.77)*	0.008
Place of employment (DHB v non-DHB)	–	4.55 (1.05, 8.04)*	0.014
	Adjusted R ² = 0.124	Adjusted R ² = 0.18	

¥ Controlled for age, gender, ethnicity, relationship status, highest nursing qualifications, years employed as a nurse and workplace type.

PES-NWI = Practice environment scale – nurse work index, NAQ-R = Negative acts questionnaire – revised

M/D/C = Married, defacto, cohabiting; UG = undergraduate, PG = postgraduate

*p <0.05, **p <0.01, ***p <0.001

LIMITATIONS

This study had some limitations. First, the low response rate may limit the generalisability of the results to all New Zealand nurses. Future research using a shorter questionnaire may reduce response burden and may subsequently increase the response rate. Second, the study did not collect data on stressful life events, which may affect the

outcome of burnout. Third, the cross-sectional design does not allow us to draw conclusions on the causal relationship between burnout, the practice environment and negative acts in the workplace. A longitudinal design with enhanced data collection will improve efforts to uncover these relationships. Finally, studies employing the CBI in health systems like New Zealand are limited, which makes comparisons difficult. More research is needed using the CBI in nursing cohorts in similar health systems.

CONCLUSIONS

The findings show that the practice environment, and repeated exposure to negative acts in the workplace such as bullying, were associated with burnout in RNs. Health-care organisations and nurse leaders have a responsibility to provide safe and healthy workplaces that cultivate positive outcomes for nurses. Future efforts to reduce workplace stress and burnout in nurses will need to include initiatives that limit high workloads, provide greater job flexibility and autonomy,

and effectively manage bullying. Nurses will also need to prepare for the realities of shift work and the emotional labour required when making decisions in a context where there are sick patients and stressed people. Emotional intelligence is integral to nurses fulfilling their role, and it is not always taught well.

Specific workplace strategies to enhance the work environment may include ensuring safe staffing levels and appropriate skill mix and employing anti-bullying initiatives. Nursing education needs to have more simulation experiences that introduce students to an environment where multiple sources of stress are occurring, so that students can experience such challenging situations in a safe setting and rehearse responses that will ease, rather than add to tension. Students may also discuss and develop coping resources that expand their individual repertoires and increase their chances of coping in the future. Future research will also be required to examine the impact of such strategies on transforming work environments, easing stress and preventing burnout in RNs.

REFERENCES

- Aiken, L. H., Clarke, S. P., & Sloane, D. M. (2002). Hospital staffing, organization, and quality of care: Cross-national findings. *Nursing Outlook*, 50(5), 187-194. <http://dx.doi.org/10.1067/mno.2002.126696>
- Chambers, C. N. L., Frampton, C. M. A., Barclay, M., & McKee, M. (2016). Burnout prevalence in New Zealand's public hospital senior medical workforce: a cross-sectional mixed methods study. *BMJ Open*, 6(11). <http://dx.doi.org/10.1136/bmjopen-2016-013947>
- Chang, E. M. L., Bidewell, J. W., Huntington, A. D., Daly, J., Johnson, A., Wilson, H., Lambert, V., & Lambert, C. E. (2007). A survey of role stress, coping and health in Australian and New Zealand hospital nurses. *International Journal of Nursing Studies*, 44(8), 1354-1362. <http://dx.doi.org/10.1016/j.ijnurstu.2006.06.003>
- Chou, L.-P., Li, C.-Y., & Hu, S. C. (2014). Job stress and burnout in hospital employees: comparisons of different medical professions in a regional hospital in Taiwan. *BMJ Open*, 4(2), e004185. <http://dx.doi.org/10.1136/bmjopen-2013-004185>
- Dewe, P. J. (1987). Identifying the causes of nurses' stress: A survey of New Zealand nurses. *Work & Stress*, 1(1), 15-24. <http://doi.org/10.1080/02678378708258477>
- Ditzel, E. (2009). Job stress among nurses: the implications for the health-care profession. *International Journal of Behavioural and Healthcare Research*, 1(2), 125-142. <https://doi.org/10.1504/IJBHR.2009.024225>
- Drennan, V. M., & Ross, F. (2019). Global nurse shortages – the facts, the impact and action for change. *British Medical Bulletin*, 130(1), 25-37. <http://doi.org/10.1093/bmb/ldz014>
- Dyrbye, L. N., Shanafelt, T. D., Johnson, P. O., Johnson, L. A., Satele, D., & West, C. P. (2019). A cross-sectional study exploring the relationship between burnout, absenteeism, and job performance among American nurses. *BMC Nursing*, 18(1), 57. <http://doi.org/10.1186/s12912-019-0382-7>
- Einarsen, S., Hoel, H., & Notelaers, G. (2009). Measuring exposure to bullying and harassment at work: Validity, factor structure and psychometric properties of the Negative Acts Questionnaire-Revised. *Work & Stress*, 23(1), 24-44. <http://doi.org/10.1080/02678370902815673>
- Faremi, F. A., Olatubi, M. I., Adeniyi, K. G., & Salau, O. R. (2019). Assessment of occupational related stress among nurses in two selected hospitals in a city southwestern Nigeria. *International Journal of Africa Nursing Sciences*, 10, 68-73. <https://doi.org/10.1016/j.ijans.2019.01.008>
- Fong, T. C. T., Ho, R. T. H., & Ng, S. M. (2014). Psychometric Properties of the Copenhagen Burnout Inventory – Chinese Version. *The Journal of Psychology*, 148(3), 255-266. <http://doi.org/10.1080/00223980.2013.781498>
- Frey, R., Robinson, J., Wong, C., & Gott, M. (2018). Burnout, compassion fatigue and psychological capital: Findings from a survey of nurses delivering palliative care. *Applied Nursing Research*, 43, 1-9. <http://doi.org/10.1016/j.apnr.2018.06.003>
- Hall, L. (2001). Burnout: Results of an empirical study of New Zealand nurses. *Contemporary Nurse*, 11(1), 71-83. <http://doi.org/10.5172/conu.11.1.71>
- Hayes, B., Douglas, C., & Bonner, A. (2015). Work environment, job satisfaction, stress and burnout among haemodialysis nurses. *Journal of Nursing Management*, 23(5), 588-598. <http://doi.org/10.1111/jonm.12184>
- Health Information Standards Organisation. (2017). *HISO 10001:2017 Ethnicity Data Protocols*. New Zealand Ministry of Health.
- Heinen, M. M., van Achterberg, T., Schwendimann, R., Zander, B., Matthews, A., Kózka, M., Ensio, A., Sjetne, I. S., Casbas, T. M., Ball, J., & Schoonhoven, L. (2013). Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries. *International Journal of Nursing Studies*, 50(2), 174-184. <https://doi.org/10.1016/j.ijnurstu.2012.09.019>
- Huntington, A., Bidewel, J., Gilmour, J., Chang, E., Daly, J., Lambert, V., & Lambert, C. (2008). The relationship between workplace stress, coping strategies and health status in New Zealand nurses. *Journal of Occupational Health and Safety – Australia and New Zealand*, 24, 131-141.
- Kim, Y., Lee, E., & Lee, H. (2019). Association between workplace bullying and burnout, professional quality of life, and turnover intention among clinical nurses. *PLOS ONE*, 14(12), e0226506. <https://doi.org/10.1371/journal.pone.0226506>
- Kristensen, T. S., Borritz, M., Villadsen, E., & Christensen, K. B. (2005). The Copenhagen Burnout Inventory: A new tool for the assessment of burnout. *Work & Stress*, 19(3), 192-207. <https://doi.org/10.1080/02678370500297720>
- Lake, E. T. (2002). Development of the practice environment scale of the Nursing Work Index. *Research in Nursing & Health*, 25(3), 176-188. <https://doi.org/10.1002/nur.10032>
- Lake, E. T., & Friese, C. R. (2006). Variations in nursing practice environments. *Nursing Research*, 55(1), 1-9.
- Leineweber, C., Westerlund, H., Chungkham, H. S., Lindqvist, R., Runesdotter, S., & Tishelman, C. (2014). Nurses' Practice Environment and Work-Family Conflict in Relation to Burn Out: A Multilevel Modelling Approach. *PLOS ONE*, 9(5), e96991. <https://doi.org/10.1371/journal.pone.0096991>
- Lorenz, V. R., & Guirardello, E. d. B. (2014). The environment of professional practice and Burnout in nurses in primary healthcare. *Revista Latino-Americana de Enfermagem*, 22, 926-933. <http://dx.doi.org/10.1590/0104-1169.0011.2497>

- Marangozov, R., Huxley, C., Manzoni, C., & Pike, G. (2017). *Royal College of Nursing Employment Survey 2017*. <https://www.rcn.org.uk/professional-development/publications/pdf-007076>
- McVicar, A. (2003). Workplace stress in nursing: a literature review. *Journal of Advanced Nursing*, 44(6), 633-642. <https://doi.org/10.1046/j.0309-2402.2003.02853.x>
- Middleton, S., Griffiths, R., Fernandez, R., & Smith, B. (2008). Nursing practice environment: How does one Australian hospital compare with magnet hospitals? *International Journal of Nursing Practice*, 14, 366-372. <https://doi.org/10.1111/j.1440-172X.2008.00708.x>
- Mikkelsen, E. G., & Einarsen, S. (2001). Bullying in Danish work-life: Prevalence and health correlates. *European Journal of Work and Organizational Psychology*, 10(4), 393-413. <https://doi.org/10.1080/13594320143000816>
- Milfont, T. L., Denny, S., Ameratunga, S., Robinson, E., & Merry, S. (2008). Burnout and Wellbeing: Testing the Copenhagen Burnout Inventory in New Zealand Teachers. *Social Indicators Research*, 89(1), 169-177. <https://doi.org/10.1007/s11205-007-9229-9>
- Moloney, W., Boxall, P., Parsons, M., & Sheridan, N. (2018). Which Factors Influence New Zealand Registered Nurses To Leave Their Profession? *New Zealand Journal of Employment Relations (Online)*, 43(1), 1-13.
- Najimi, A., Goudarzi, A. M., & Sharifirad, G. (2012). Causes of job stress in nurses: A cross-sectional study. *Iranian Journal of Nursing & Midwifery Research*, 17(3), 301-305.
- Nielsen, M., & Einarsen, S. (2018). What we know, what we do not know, and what we should and could have known about workplace bullying: An overview of the literature and agenda for future research. *Aggression and Violent Behavior*, 42, 71-83. <https://doi.org/10.1016/j.avb.2018.06.007>
- Nielsen, M., Notelaers, G., & Einarsen, S. (2011). Measuring exposure to workplace bullying. In S. Einarsen, H. Hoel, D. Zapf, & C. Cooper (Eds.), *Bullying and Harassment in the Workplace. Developments in Theory, Research, and Practice*. (pp. 149-174). CRC Press, Taylor & Frances Group.
- Nobre, D. F. R., Rabiais, I. C. M., Ribeiro, P. C. P. S. V., & Seabra, P. R. C. (2019). Burnout assessment in nurses from a general emergency service. *Revista Brasileira de Enfermagem*, 72, 1457-1463. <http://dx.doi.org/10.1590/0034-7167-2017-0870>
- Notelaers, G., Van der Heijden, B., Günter, H., Nielsen, M. B., & Einarsen, S. V. (2018). Do Interpersonal Conflict, Aggression and Bullying at the Workplace Overlap? A Latent Class Modeling Approach. *Frontiers in Psychology*, 9, 1664-1078. <https://doi.org/10.3389/fpsyg.2018.01743>
- Nour, S., & Plourde, G. (2019). Pharmacoepidemiology in the Prevention of Adverse Drug Reactions. In S. Nour & G. Plourde (Eds.), *Pharmacoepidemiology and Pharmacovigilance* (pp. 25-65). Academic Press.
- Nursing Council of New Zealand. (2018). *The New Zealand nursing workforce: A profile of nurse practitioners, registered nurses and enrolled nurses 2016-2017*. www.nursingcouncil.org.nz/Publications/Reports-and-workforce-statistics
- Opie, T., Lenthall, S., Wakerman, J., Dollard, M., MacLeod, M., Knight, S., Rickard, G., & Dunn, S. (2011). Occupational stress in the Australian nursing workforce: a comparison between hospital-based nurses and nurses working in very remote communities. *Australian Journal of Advanced Nursing*, 28(4), 36-43.
- Parker, D., Tuckett, A., Eley, R., & Hegney, D. (2010). Construct validity and reliability of the Practice Environment Scale of the Nursing Work Index for Queensland nurses. *International Journal of Nursing Practice*, 16(4), 352-358. <https://doi.org/10.1111/j.1440-172X.2010.01851.x>
- Roberts, R. K., & Grubb, P. L. (2014). The consequences of nursing stress and need for integrated solutions. *Rehabilitation Nursing*, 39(2), 62-69. <https://doi.org/10.1002/rnj.97>
- Sarafis, P., Rousaki, E., Tsounis, A., Malliarou, M., Lahana, L., Bamidis, P., Niakas, D., & Papastavrou, E. (2016). The impact of occupational stress on nurses' caring behaviors and their health related quality of life. *BMC Nursing*, 15(1), 56. <https://doi.org/10.1186/s12912-016-0178-y>
- Tabakakis, C., McAllister, M., Bradshaw, J., & To, Q. G. (2019). Psychological resilience in New Zealand registered nurses: The role of workplace characteristics. *Journal of Nursing Management*, 27(7), 1351-1358. <https://doi.org/10.1111/jonm.12815>
- Von Elm, E., Altman, D. G., Egger, M., Pocock, S. J., Gøtzsche, P. C., & Vandenbroucke, J. P. (2007). The Strengthening of Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. *Lancet*, 370(9596), 1453. [https://doi.org/10.1016/S0140-6736\(07\)61602-X](https://doi.org/10.1016/S0140-6736(07)61602-X)
- Watson, P., & Feld, A. (1996). Factors in stress and burnout among paediatric nurses in a general hospital. *Nursing Praxis in New Zealand*, 11(3), 38-46.



Jeanette Briscoe



Thomas Harding

About the authors: Jeanette Briscoe, RN, MN(hons), PGDipAdvNurs, BHSc(nurs), is a principal nursing lecturer at Northtec, Whangarei, New Zealand. Her correspondence address is: jbriscoe@northtec.ac.nz

Thomas Harding, RN, PhD, is a research consultant at Northtec, Whangarei.

PROMOTING THE USE OF THE SOAP(IE) DOCUMENTATION FRAMEWORK IN MEDICAL NURSES' PRACTICE

ABSTRACT

Aim: The aim of this research was to promote the use of the SOAP(IE) framework in medical nurses' practice.

Background: Documentation is an essential aspect of nursing practice required to meet legal, organisational and professional standards for patient care. Accurate and complete documentation records the care given to patients, along with their progress and responses to care. It also provides communication between the health professionals involved in the patient's care.

Method: Action research was selected as the methodology for this project, which involved district health board nursing staff. This methodology involves cycles of planning, implementing, evaluating and reflecting to identify areas needing improvement. Three cycles of action research were conducted, using audits, surveys and a focus group interview with registered nurses (RNs) in two medical wards. Audit and survey data were analysed using the descriptive statistical tool SPSS, and focus group interview data were analysed using manual thematic analysis.

Results: The first cycle found nurses had awareness of the SOAP(IE) framework; however, 75 percent of them did not use it when documenting, reporting time constraints, heavy workloads and a lack of clear guidelines as barriers to its use. A focus group interview was held in the reflection and planning stage of cycle two; the group identified further education, resources and promotion of the framework as methods for improving use of SOAP(IE). Following implementation of education sessions, and the use of posters, ID tags and nurse champions promoting the framework, results showed an increase from 25 percent to 95 percent of RNs using the SOAP(IE) framework for documenting.

Conclusion: Nurses acknowledge documentation is a key priority in nursing care; however they identify heavy workloads, time constraints and a lack of understanding and guidelines as barriers to using the SOAP(IE) framework. In-service education, providing guidelines through posters and ID tags and having designated nurse champions has promoted the use of the SOAP(IE) framework, resulting in more comprehensive and accurate nursing documentation.

This article was accepted for publication in September 2020.

KEYWORDS

Nursing documentation, SOAP, SOAP(IE), frameworks

INTRODUCTION

Several documentation frameworks are available to guide nurses. Commonly used documentation methods in New Zealand include SBARR, Focus charting, SOAP(IE), and narrative documentation (NZNO, 2017). The SOAP(IE) framework was chosen by the New Zealand district health board (DHB) involved in this study because it provides nurses with a problem-solving approach intended to improve communi-

cation among the multidisciplinary health-care team and improve quality and continuity of patient care. The SOAP(IE) framework consists of: subjective and objective assessment data, a plan of care, interventions and evaluation. These provide a clear problem-solving method and is also used by several other health professions for documenting patient care (Blair & Smith, 2012).

The DHB's 2015 documentation policy states that the SOAP(IE) framework is the required tool for health professionals to use for documentation in patient records. An audit of documentation by the DHB nursing directorate, which focused specifically on the use of the SOAP(IE) framework, found some nurses were not using this framework when documenting. The nursing directorate approached

1) The SOAP(IE) framework goes by a number of varying names, including SOAP, SOAPE, SOAPIE and SOAPIER. The authors have chosen to call it SOAP(IE) as this was the name given to it in the documentation policy of the district health board involved in the study. International literature most commonly uses SOAP, while the audit tool used in this study is specifically a SOAPE tool.

the local school of nursing to enquire about the teaching of nursing documentation in the bachelor of nursing (BN) programme. The SOAP(IE) documentation framework is taught to student nurses to enable them to document accurately and chronologically in patient health records while they are on clinical placements. A disconnect between what is taught and what is practised became evident. Nurses reported that new graduates were familiar with the framework and confident at using it when they started work at the hospital. However, anecdotal evidence suggests that within a short time they stop using the framework and follow the documentation format of nurses who have worked in that particular clinical area for a length of time. This highlighted an area of practice that could be improved. Therefore the DHB nursing leaders and the nursing school decided to collaborate on a research project to identify the issues nurses face when documenting and to explore how to promote the use of the SOAP(IE) framework in nursing practice.

LITERATURE REVIEW

A literature search of the CINAHL, Joanna Briggs Institute, EBSCO, and Gale databases was undertaken using the following key words: “nursing documentation”, “documentation frameworks” and “SOAP documentation”. It became evident there is limited recent research specifically related to nursing documentation and a lack of research conducted in New Zealand. This project aims to add to the body of knowledge from a New Zealand context.

Documentation is an essential aspect of nursing practice required to meet legal, organisational and professional standards related to patient care. Themes identified in the literature related to documentation include the purpose of documentation, documentation frameworks, effects of poor-quality documentation, and barriers to documentation for nurses (Beach & Oates, 2014; Jayasekara, 2019; McCarthy et al., 2019; Okaisu et al., 2014; Prideaux, 2011).

Accurate and complete documentation reflects the care given to patients and records their progress and responses to care. It also provides communication between health professionals involved in the patient's care (Beach & Oates, 2014; Jayasekara, 2019; McCarthy et al., 2019; Okaisu et al., 2014; Prideaux, 2011; Scruth, 2014).

Documentation should clearly and accurately detail the care delivered to patients, demonstrating critical thinking, clinical decision-making and evaluation of outcomes (Beach & Oates, 2014; Blair & Smith, 2012). Essential components of documentation include that it should be patient-centred, reflecting the patient's perspective of their health care, and that it be written fully in a chronological format to avoid omissions, mistakes or inaccuracies (Jeffries et al., 2010). Communication among health professionals is also identified as one of the main purposes of documentation. Clear and accurate documentation in the patient record enables all health professionals involved in the patient's care to collaborate and deliver safe care (Beach & Oates, 2014; Jeffries et al., 2010; Prideaux, 2011).

There are consistent themes in the literature related to poor-quality nursing documentation. Poor-quality documentation refers to records that are incomplete and inaccurate – these are issues which have been associated with compromised patient safety (Jeffries et al., 2010; Okaisu et al., 2014; Prideaux, 2011; Tower et al., 2012). Nurses describe heavy workloads, time constraints and the time that documentation takes away from direct hands-on patient care as factors associated with poor documentation (Blair & Smith, 2012;

Donohoe, 2015; Okaisu et al., 2014; Prideaux, 2011). Nurses also report a lack of guidelines or frameworks to help them structure their documentation in a systematic way (Blair & Smith, 2012; Okaisu et al., 2014; Prideaux, 2011).

AIM

The aim of this research was to promote the use of the SOAP(IE) framework in medical nurses' practice.

METHOD AND DATA COLLECTION

Action research was selected as the most appropriate methodology for this project, because it focuses on practice issues and practice change in clinical environments (Schneider, et al., 2014). Action research actively engages the participants in the process, empowering them to be fully involved in learning about their own situation and to facilitate the change process to improve their practice. Action research consists of repeated cycles of planning, action, data collection, analysis, evaluation and reflection, until the situation improves (Schneider et al., 2014). For this project, three cycles of action research were undertaken over a 12-month period.

Cycle one

Two methods of data collection were employed in cycle one: audit and survey. Planning commenced using the results of the initial documentation audit which prompted the research project. The initial audit data was collected from five DHB wards – three surgical and two medical. The audit showed the nurses in the surgical wards consistently used the SOAP(IE) framework when documenting patient care, while the nurses in the medical wards did not. A point to note is that the audit tool used the SOAPE framework, ie it did not include the “I” (implementation) section of the SOAP(IE) framework. The audit rated each component of the SOAPE framework as a percentage, to show how much they were used in nursing documentation in the five wards. The audit showed the framework was not being consistently used in medical nurses' documentation. Therefore the research team decided to undertake a survey (see Appendix 1), as part of the action phase of cycle one, to identify the reasons for this.

All registered nurses (RNs) (n=68) across the two medical wards were invited to complete an online questionnaire. Laptop computers were set up with the survey link in the staff room of both medical wards for easy access for participants. A total of 41 questionnaires were completed, a response rate of 60 percent.

Cycle two

The results of the survey formed the reflection and planning stage of cycle two. The survey asked for data on the RNs' nursing qualifications and years of RN experience (see Table 1, p19 and Appendix 1, p22-23) and then asked participants about their knowledge and use of the SOAP(IE) framework. Barriers identified from the literature were included and participants were asked to rate these using a Likert scale. They were also asked to add in any other barriers they felt impacted on their ability to use the framework (Appendix 1).

Reflection on the results of the survey identified that participants strongly agreed with the barriers identified from the literature to explain why they did not use the framework when documenting. The

researchers planned to hold a focus group interview with senior nurses in the medical wards, including two clinical nurse managers (CNMs), two associate nurse managers (ACNMs), and two clinical nurse educators (CNEs). The results from the survey were presented and a focus group interview was held to develop a plan to overcome the barriers identified and to promote the use of the SOAP(IE) framework.

Cycle three

Following the focus group interview, a series of measures were put in place in the DHB's two medical wards to promote use of the framework. A series of short 15-minute in-service education sessions were held over two months, ensuring all RNs received training on use of the framework. Posters were made and hung up in the ward offices where nurses frequently write their patient notes. All nurses were provided with a pocket ID-tag with key prompts for each section of the framework. CNEs became SOAP(IE) champions, available to nurses for advice and to promote use of the framework.

Following the implementation of education, prompts and champions, the survey (Appendix 1) was repeated to find out whether the new measures had improved use of the framework.

SAMPLE

A convenience sample of registered nurses working in two medical wards were invited to participate in this research. Nurses working in surgical wards were excluded based on the results of the initial audit showing that most surgical nurses effectively use the SOAP(IE) framework when documenting in patient records. Enrolled nurses were excluded due to their scope of practice limitations related to the analysis, assessment, planning and evaluation of patient care. Participants included the medical wards' two CNMs, two ACNMs and two CNEs, and all RNs working in the two medical wards were invited to participate. The sample size was n=68. The participants were provided with an information sheet outlining the purpose of the research and what would be required of them if they agreed to participate. Confidentiality of individuals was detailed in the information sheet, which outlined how the privacy of information would be maintained, and that individuals would not be able to be identified at any stage of the research. RNs who agreed to participate in the research were asked to sign a consent form indicating their consent to participate and informing them they could withdraw from the study at any time.

ETHICS

Ethical approval to conduct this study was obtained from the polytechnic research committee and approval was gained from the DHB director of nursing. The nursing directorate team, who were co-researchers in this project, undertook the audit of patient records. Their position as senior RNs employed by the DHB allowed them access to patient records for audit purposes. They were the only members of the research team who had direct access to patient records. Audit results did not include any data identifying patients or staff.

Table 1. Participants' roles, and demographic categories

Roles of participants (68 RNs)	DEMOGRAPHIC CATEGORIES:	
	Highest nursing qualification	Years of RN experience
2 charge nurse managers	• Hospital-trained, comprehensive or diploma	• 0-2 years
2 assistant charge nurse managers	• Bachelor's degree	• 3-5 years
2 clinical nurse educators	• Postgraduate certificate	• 6-10 years
62 RNs	• Postgraduate diploma	• >10 years
	• Master's degree	

DATA ANALYSIS

A mixed-method approach was adopted for this action research study, as a combination of qualitative and quantitative data collection methods were used. Munn and Pearson (2013) state that employing multiple approaches to data collection in action research allows deeper understanding of the subject being researched. Mixed-method data analysis combines and links quantitative and qualitative data (Sandelowski, 2000).

A collaborative approach was used to analyse the data. This included assistance from the DHB information technology (IT) department to retrieve the raw data from the surveys and the expertise of a nursing lecturer experienced in the use of computerised statistical analysis software. Audit and survey data were analysed using the Statistical Package for Social Sciences (SPSS) version 25. The methods used to describe the data were ordinal and nominal measurement and frequency distribution. The data were summarised through percentiles, cumulative frequency tables and sorting frequency tables. Further analysis of the data used cross-tabulation. Cross-tabulation presents the frequency distribution of two or more variables to determine a relationship or association between them (Suresh, 2014) and was used to examine the relationship between category variables, such as years of nursing experience and knowledge, and use of the SOAP(IE) framework.

Open-ended questions were used in the focus group interview and the data collected, transcribed and interpreted using thematic analysis. Vaismoradi et al. (2016) define a theme as repeating ideas and thematic analysis as a method for identifying, analysing and reporting themes within data. The aim of the focus group interview was to reflect on the main findings from the survey and develop a plan for the third cycle in the action research process. A manual coding method was used to identify the themes from the focus group interview data. This involved two researchers identifying the main themes from the interview and clarifying the accuracy of the interpretation of the themes with the focus group participants.

Self, peer and academic validation were achieved through regular research meetings with researchers, participants and a senior research advisor. Documentation of minutes of meetings, survey and audit reports were checked for accuracy. A project timeline was developed to outline the action research process. For action research, validation is enhanced by transparency in the process. A timeline provides the dates of data collection, action points and the change to practice as the project unfolded (McNiff, 2013).

RESULTS

Cycle one

Results from the initial documentation audit found the SOAP(IE) framework was not being consistently used by RNs in two medical wards. The overall areas of inconsistency related to documenting subjective data, assessment data, plans and evaluation (see Table 2, below.)

The main findings from the survey, using SPSS data analysis software, showed that although most of the nurses knew about the SOAP(IE) framework (82.5 percent), 75 percent of them did not use it for documentation. The results looked at the correlation between years of experience, knowledge of how to apply the framework, and putting the framework into use. Although 92 percent of the respondents with 0-5 years' experience knew how to apply the framework, 75 percent did not use it for their documentation. Equally, 75 percent of the nurses with more than six years of experience who had knowledge of the framework did not use it.

The findings also showed that over half the respondents learned about the framework from their undergraduate education. Although DHB policy specifies use of the SOAP(IE) framework, only 10 percent learned about the framework from their workplace.

Most of the respondents reported that heavy workload (95 percent) and time constraints (87.5 percent) were the main barriers in their experience of documenting care. Most respondents also agreed that lack of clear guidelines and interruption to direct hands-on patient care also rated highly as barriers to documentation.

Cycle two

Following completion of the survey in cycle one, the researchers reviewed the results and identified the need for collaboration with senior nurses in the wards to provide the resources and leadership needed to promote use of the SOAP(IE) framework. This formed the basis for holding a focus group interview with the CNMs, ACNMs and CNEs. The purpose of the focus group interview was to provide feedback and reflect on the results. Heavy workload and time constraints were found to be two of the main barriers to using SOAP(IE) documentation. However, one of the CNEs suggested that this *“related to documentation in general and not specifically to using the SOAP(IE) framework”*.

The results indicated that even though nurses knew about the

framework, they were unsure how to apply it to their documentation. The participants in the focus group interview identified the need for education and clear guidelines for nurses to refer to when documenting. A plan was formulated to run in-service education sessions, develop posters and ID tags and appoint the CNEs as champions of the framework.

Cycle three

Following the action phase – implementing in-service education sessions, posters and ID tags and appointing champions of the framework – a second survey was completed. Twenty-two nurses (response rate = 32 percent), a much smaller sample size than the first survey (41 respondents) responded. All the participants had knowledge of the SOAP(IE) framework, compared to 82.5 percent in the first survey. Furthermore, 90 percent of participants stated that they used the SOAP(IE) framework for their documentation each shift. This compared to 25 percent of participants using the framework in the first survey. However, due to the anonymity of the participants, it is unclear whether these were the nurses who were already using the framework. When asked about attendance at the in-service education offered, 91 percent (n=20) had attended. When the participants were asked if they had found the education beneficial in helping them understand and use the SOAP(IE) framework, 72 percent agreed they were, while 17 percent did not find the education beneficial.

DISCUSSION

Documentation is a professional and legal requirement for all health professionals (Blair & Smith, 2012; Okaisu et al., 2014). Accurate and comprehensive documentation has been described as a tool that provides communication between health professionals for the delivery of safe patient care (Beach & Oates, 2014; Blair & Smith, 2012; McCarthy et al., 2019; Okaisu, et al., 2014; Prideaux, 2011; Tower et al., 2012). A poor standard of documentation leads to a breakdown of communication between health professionals, which ultimately can compromise patient safety (Tower et al., 2012). One of the ways identified to ensure documentation is comprehensive and accurate is using the SOAP(IE) documentation framework (Blair & Smith, 2012).

One of the major findings of this research is that nurses need clear guidelines on how to implement the SOAP(IE) framework when documenting patient care. A lack of clear guidelines has been identified in the literature as an issue related to poor documentation (Blair & Smith, 2012; Okaisu et al., 2014; Prideaux, 2011). The DHB policy specifies SOAP(IE) as the required framework for documentation; however, the findings of this study demonstrate that only 10 percent of the participants learned about the framework through the DHB, and generally this was through other nursing colleagues. Most of the participants learned about the SOAP(IE) framework from their undergraduate nursing education. This finding highlighted the need for education on the use of the framework and a plan was developed to structure in-service education sessions to improve RNs' understanding of the framework. Govranos & Newton (2014) identified factors that need to be considered when planning in-service education, such as time, resources, the culture of the workplace and the support of managers, to ensure the learning is successful.

Table 2. Results of cycle one SOAPE framework audit of two medical wards

Framework sections	Percentage of RNs using aspect of framework in documentation		
	Ward A	Ward B	Overall
S: Subjective data	60	100	80
O: Objective data	100	100	100
A: Assessment/analysis data	40	100	70
P: Plan	53	53	53
I: Implementation	Not included in audit tool	Not included in audit tool	–
E: Evaluation	100	40	70

CNMs, ACNMs and CNEs were all part of the focus group interview during the planning stage, which confirmed their support for the provision of on-going education and practice improvement. Short, regular education sessions, delivered at times during shifts when nurses were best able to attend, were run by the CNEs to teach nurses about the framework. During the in-service sessions, nurses could ask questions and give suggestions to help improve their use of the framework. Participants suggested that having some examples of the framework would help and therefore posters were developed and displayed in ward offices as exemplars. Pocket-sized ID tags outlining the framework were also developed for quick reference.

The focus group also emphasised that nurses could become “champions”, to promote and assist other nurses with implementation of the framework. The CNEs took on this role and were available to nurses for advice and guidance. Ploeg et al. (2010) describe nurse champions as persuasive leaders who influence best practice by sharing information through education and mentoring. Champions are described as transformational leaders, having enthusiasm and vision as distinguishing features (Thomson et al., 2006). Even though there was a lower response rate to the second survey, 72 percent reported they found the education beneficial, increasing their knowledge of how to use the SOAP(IE) framework. The post-education audit showed use of the framework had increased from 75 percent to 90 percent, indicating the in-service education was successful. There is a lack of current literature that evaluates whether the knowledge gained from in-service education transfers to clinical practice; this is an area identified for further research. However, Clark et al. (2015) suggest a positive organisational culture and a supportive learning environment are needed to improve patient care.

The findings from this study indicate that heavy workloads and time constraints are among the main barriers to documentation. This is supported in the literature (Blair & Smith, 2012; Donohoe, 2015; Okaisu et al., 2014; Prideaux, 2011). Participants described documentation as “an interruption to hands-on patient care”, which was also reported by Donohoe (2015). However, the participants all agreed that documentation was a high priority in their workload. These views were related to documentation in general and not specifically to the use of the SOAP(IE) framework.

LIMITATIONS

This research was limited to two medical wards in one DHB and the sample size was small, therefore further research across other areas would be necessary to ascertain whether this documentation

framework is understood and used consistently. A further limitation relates to the results of the second online survey. It is unknown who the respondents were and whether they were the nurses already familiar with and using the framework from the first survey. The small sample size also limits the value of the data collected.

RECOMMENDATIONS FOR PRACTICE

The findings of this study indicate that on-going education and support are essential for the promotion of practice change. Continued support from management to provide resources to promote the use of the SOAP(IE) framework is essential. Champions of the framework are key to educating and promoting the framework and ongoing regular education sessions to support nurses to use the framework will enable accurate and comprehensive nursing documentation. Continued documentation audits will provide evidence of the quality and accuracy of nursing documentation and the use of the SOAP(IE) framework, and results should be disseminated to ward staff.

CONCLUSION

The aim of this collaborative action research project was to promote the use of the SOAP(IE) documentation framework in medical nurses' practice in a DHB. Although this was a small study, the results indicate increased use of the SOAP(IE) framework and improved nursing documentation.

Nurses describe documentation as a key priority of their nursing care; however, the main barriers of heavy workloads, time constraints, interruptions to hands-on care and a lack of understanding/guidelines of how to apply the SOAP(IE) framework impacted on the standard of nursing documentation. Implementation of in-service education, providing guidelines on the framework through posters and ID tags and appointing nurse champions have promoted the use of SOAP(IE), resulting in more comprehensive and accurate nursing documentation.

ACKNOWLEDGEMENTS

The authors would like to acknowledge:

- The research team: Jeanette Briscoe, Zoe Williamson, Michelle Panov, Sheryll Beveridge and Raiquel TePuni.
- Data analysis expertise: Victoria Munro (SPSS), DHB ICT department (audit and survey data).
- Senior research advisor: Dr Bev Mackay.

REFERENCES

- Beach, J., & Oates, J. (2014). Maintaining best practice in record-keeping and documentation. *Nursing Standard*, 28(36), 45–50. <http://dx.doi.org/10.7748/ns2014.05.28.36.45.e8835>
- Blair, W., & Smith, B. (2012). Nursing documentation: Frameworks and barriers. *Contemporary Nurse*, 41(2), 160–168. <https://doi.org/10.5172/conu.2012.41.2.160>
- Clark, E., Draper, J., & Rogers, J. (2015). Illuminating the Process: Enhancing the Impact of Continuing Professional Education on Practice. *Nurse Education Today*, 35(2), 388–394. <https://doi.org/10.1016/j.nedt.2014.10.014>
- Donohoe, J. (2015). *Implementing an Education Programme and SOAP Notes Framework to Improve Nursing Documentation* (unpublished master's thesis). Royal College of Surgeons, Dublin, Ireland.
- Govranos, M., & Newton, J. M. (2014). Exploring ward nurses' perceptions of continuing education in clinical settings. *Nurse Education Today*, 34(4), 655–660. <http://dx.doi.org/10.1016/j.nedt.2013.07.003>
- Jayasekara, R. (2019, February 24). *Writing Effective Nursing Notes*. Joanna Briggs Institute. JBI@Ovid. 2019; JBI17163
- Jeffries, D., Johnson, M., & Griffiths, R. (2010). A meta-study of the essentials of quality nursing documentation. *International Journal of Nursing Practice*, 16, 112–124. <https://doi.org/10.1111/j.1440-172X.2009.01815.x>

McCarthy, B., Fitzgerald, S., O'Shea, M., Condon, C., Harnett-Collins, G., Clancy, M., Sheehy, A., Denieffe, S., Bergin, B., & Savage, E. (2019). Electronic nursing documentation interventions to promote or improve patient safety and quality care: A systematic review. *Journal of Nursing Management*, 27, 491-501. <https://doi.org/10.1111/jonm.12727>

McNiff, J. (2013). *Action Research: Principles and Practice*. Taylor and Francis.

Munn, Z., & Pearson, A. (2013). *Implementing Evidence Using an Action Research Framework*. Wolters Kluwer/Lippincott Williams & Wilkins.

New Zealand Nurses Organisation (NZNO). (2017). *Guideline: Documentation*. <https://www.nzno.org.nz/LinkClick.aspx?fileticket=GH84aNBnd64%3D&portalid=0>

Okaisu, E. M., Kalikwani, F., Wanyana, G., & Coetzee, M. (2014). Improving the quality of nursing documentation: An action research project. *Curationis*, 38(1), 1-11. <https://doi.org/10.4102/curationis.v37i2.1251>

Ploeg, J., Skelly, J., Rowan, M., Edwards, N., Davies, B., Grinspun, D., Bajnok, I., & Downey, A. (2010). The Role of Nursing Best Practice Champions in Diffusing Practice Guidelines: A Mixed Methods Study. *Worldviews on Evidence-Based Nursing*, 7(4), 238-251. <https://doi.org/10.1111/j.1741-6787.2010.00202.x>

Prideaux, A. (2011). Issues in nursing documentation and record-keeping practice. *British Journal of Nursing*, 20(22), 1450-1454. <https://doi.org/10.12968/bjon.2011.20.22.1450>

Sandelowski, M. (2000). Combining Qualitative and Quantitative Sampling, Data Collection, and Analysis Techniques in Mixed-Method Studies. *Research in Nursing & Health*, 23, 246-25. [https://doi.org/10.1002/1098-240X\(200006\)23:3%3C246::AID-NUR9%3E3.0.CO;2-H](https://doi.org/10.1002/1098-240X(200006)23:3%3C246::AID-NUR9%3E3.0.CO;2-H)

Schneider, Z., Whitehead, D., LoBiondo-Wood, G., & Haber, J. (2014). *Nursing and Midwifery Research: methods and appraisal for evidence-based practice* (5th ed.). Elsevier.

Scruth, E. A. (2014). Quality Nursing Documentation in the Medical Record. *Clinical Nurse Specialist*, 28(6), 312-314. <http://dx.doi.org/10.1097/NUR.0000000000000085>

Suresh, S. (2014). *Nursing Research and Statistics*. Retrieved from <https://ebookcentral.proquest.com>

Thompson, G. N., Estabrooks, C. A., & Degner, L. F. (2006). Clarifying the concepts in knowledge transfer: a literature review. *Journal of Advanced Nursing*, 53(6), 691-701. <https://doi.org/10.1111/j.1365-2648.2006.03775.x>

Tower, M., Chaboyer, W., Green, Q., Dyer, K., & Wallis, M. (2012). Registered nurses' decision-making regarding documentation in patients' progress notes. *Journal of Clinical Nursing*, 21, 2917-2929. <http://dx.doi.org/10.1111/j.1365-2702.2012.04135.x>

Vaismoradi, M., Jones, J., Turunen, H., & Snelgrove, S. (2016). Theme development in qualitative content analysis and thematic analysis. *Journal of Nursing Education and Practice*, 6(5), 100-110. <http://dx.doi.org/10.5430/jnep.v6n5p100>

APPENDIX

Appendix 1. Survey questions

1) How long ago did you graduate/register as a nurse?

2) What is your highest nursing qualification?

5
Masters
(nursing,
health science)

4
Postgraduate
diploma

3
Postgraduate
certificate

2
Bachelor of nursing
(undergraduate
degree)

1
Registered nurse
(hospital trained,
comprehensive or
diploma)

3) Do you know about the SOAP(IE) documentation framework?

- a. Yes
- b. No

4) Please explain how you know about this framework.

5) Do you know how to apply this framework when documenting patient care?

- a. Yes
- b. No

6) Do you use the SOAP(IE) framework?

- a. Yes
- b. No

If "Yes", how effective is it for you? Please explain.

If "No", describe the framework you use.

continues over page

7) In your workload, how important do you rate documentation of patient care?

5 High priority	4 Priority	3 Neither or N/A	2 Low priority	1 Not a priority
----------------------------------	-----------------------------	-----------------------------------	---------------------------------	-----------------------------------

8) Please rate the following barriers in regard to your experience of documenting patient care:

Heavy workload

5 Strongly agree	4 Agree	3 Neither or N/A	2 Disagree	1 Strongly disagree
-----------------------------------	--------------------------	-----------------------------------	-----------------------------	--------------------------------------

Time constraints

5 Strongly agree	4 Agree	3 Neither or N/A	2 Disagree	1 Strongly disagree
-----------------------------------	--------------------------	-----------------------------------	-----------------------------	--------------------------------------

Lack of clear guidelines

5 Strongly agree	4 Agree	3 Neither or N/A	2 Disagree	1 Strongly disagree
-----------------------------------	--------------------------	-----------------------------------	-----------------------------	--------------------------------------

Interruption to direct hands-on patient care

5 Strongly agree	4 Agree	3 Neither or N/A	2 Disagree	1 Strongly disagree
-----------------------------------	--------------------------	-----------------------------------	-----------------------------	--------------------------------------

Please add any other barriers you may have experienced.



**Jacqui
Wynne-Jones**



**Margot
Martin-Babin**



Brooke Hayward



Luis Villa

About the authors: Jacqui Wynne-Jones, RN, MHLthPrac, GradCertNursing (critical care), BHSc, is the clinical nurse director – surgery, anaesthesia, perioperative and critical care complex, Counties Manukau Health, Auckland, New Zealand.

Her correspondence address is: Jacqui.wynne-jones@middlemore.co.nz

Margot Martin-Babin, BHSc, BCom, is an evaluation officer, at Ko Awatea, Counties Manukau Health, Auckland, New Zealand.

Brooke Hayward, MAppPsych, is a senior evaluation officer at Ko Awatea, Counties Manukau Health, Auckland.

Luis Villa, MB, ChB, MPH, is the research and evaluation manager at Ko Awatea, Counties Manukau Health, Auckland.

PATIENT SAFETY LEADERSHIP WALK ROUNDS: LESSONS LEARNED FROM A MIXED-METHODS EVALUATION

ABSTRACT

Aim: This evaluation, undertaken in 2019, aimed to assess the impact of a patient safety leadership walk rounds (PSLWR) programme implemented in a hospital in Auckland, New Zealand, and to provide useful recommendations for programme improvement.

Background: A PSLWR is a safety initiative that aims to connect leaders with the frontline services of their hospitals, raising visibility of challenges in frontline care. This PSLWR programme involved senior leaders and other departmental representatives going out to wards to conduct staff and patient interviews to capture experiences, alongside an environmental assessment.

Method: This non-experimental outcome evaluation design applied a mixed-methods approach. This included an international literature search, semi-structured interviews with 25 staff, analysis of programme data, action follow-up assessments and evaluative observations of the PSLWRs.

Findings: Findings showed that PSLWRs have the potential to have a significant positive impact on some areas of patient and staff experiences of care. These include promoting awareness of and accountability for patient and staff safety, building safer ward environments, promoting a positive culture of monitoring and evaluation, and increasing visibility of people and processes. PSLWRs are also a useful tool to help organisations identify and address problems persisting in their care environment, but they cannot be completed in isolation from other organisational monitoring and without dedicated leadership time.

Conclusion: The overall effectiveness of a PSLWR programme very much depends on the way it is implemented. Eight recommendations are presented which should help to inform the development and implementation of similar programmes across the patient safety sphere.

This article was accepted for publication in October 2020.

KEY WORDS

Patient, safety, leadership, walk round, evaluation.

INTRODUCTION

Safety rounds, executive walk rounds, patient safety walk rounds and many other terms refer to the process of senior leaders from across a health organisation coming together to review the frontline to “connect senior leadership to patient safety and to incul-

cate safety ideas into the health care system” (Frankel et al., 2003, pg. 17). A nurse-led patient safety leadership walk round (PSLWR) programme was designed and implemented at Counties Manukau Health (CM Health) in Auckland, New Zealand. This article presents this PSLWR programme, along with findings and insights from an evaluation of the programme after five years of implementation.

BACKGROUND

The primary goal of PSLWRs is to improve patient safety culture across staff and services. *“Safety culture encompasses a group’s shared values, assumptions, attitudes and patterns of behaviour regarding safety”* (Singer & Tucker, 2014, p. 789). Safety culture is complex. It is typically characterised by multiple different subcultures and very much depends on local context (Hardy, 2013; Wailling et al., 2019). In health care, it is generally accepted that if staff perceive the organisation puts a high priority on safety, and that patient safety outcomes are positive, then there is a strong safety culture (Singer & Tucker, 2014).

There is clear evidence that *“a strong culture of safety is necessary to deliver reliably safe care”* (Singer & Tucker, 2014, pg. 789). Providing reliably safe care means there is consistent delivery of high-quality care that minimises risks of unnecessary harm. Hence, having an intervention that can potentially improve safety culture could be of immense value to the health-care sector. A number of systematic reviews indicated that reviewed PSLWRs were associated with improvements in reported patient safety culture (Girerd-Genessay & Michel, 2015; Morello et al., 2013; Sexton et al., 2014). Singer and Tucker (2014) state that *“safety rounds not only offer opportunities to fix specific problems identified but also to improve safety culture more generally by building trust, understanding and accountability for safety up and down the organisational hierarchy”* (p. 789). This indicates that PSLWRs have the potential to positively impact safety culture, reduce patient safety risks, and improve risk response actions at the hospital unit level (Schwendimann et al., 2013).

This PSLWR programme began in June 2014 across the clinical areas of Middlemore Hospital and its satellite sites. The PSLWRs were set up to better understand staff and patients’ experiences of care, and to increase visibility of care to senior leadership, in the wake of the Francis Report (2013), which detailed findings of extremely poor and concerning care at Mid Staffordshire Hospital in the United Kingdom (UK). Under direction from the Middlemore Hospital executive leadership team and the director of nursing, a working group of clinical nurse directors, charge nurse managers (CNMs), quality improvement specialists and a consumer representative was set up to develop and test a process for PSLWRs. The PSLWRs have been adapted in response to feedback across their years of operation.

The PSLWRs involve six to 10 staff coming together as a team of reviewers to see a pre-determined area on a set day and time. The composition of the team varies between PSLWRs; however, in principle, a mix of executive leaders, quality improvement staff, CNMs, and clinical and non-clinical managers are invited. The reviewers are briefed by the PSLWR coordinator and split into three groups. The first group interviews ward staff and the second group interviews patients. The questions were designed to understand people’s thoughts, feelings and experiences of working, or being cared for, on the ward. The third group reviews the ward environment, using a revised version of the UK National Health Service (NHS) 15 Steps Challenge tool. This tool was developed in response to a mother’s comment: *“I can tell what kind of care my daughter is going to get within 15 steps of walking onto every new ward”* (NHS England, 2017).

The PSLWR programme uses an appreciative inquiry framework

to guide its interactions with staff and services. Appreciative inquiry focuses on a positive and strengths-based model of feedback and improvement to introduce change (Sandars & Murdoch-Eaton, 2017). Working with individuals and groups, appreciative inquiry focuses on what is already working well. Problems or weaknesses are framed into opportunities where strengths can be developed. Appreciative inquiry has been shown to increase engagement, positive attitudes and overall commitment to change (Sandars & Murdoch-Eaton). In the PSLWRs, feedback is given through this framework to ward managers and staff in a post-review huddle that occurs immediately after the walk round. In a review of existing PSLWR programmes internationally, the explicit use of an appreciative inquiry approach appears unique to this PSLWR initiative.

EVALUATION AIMS

An evaluation of this PSLWR programme was undertaken in 2019. The purpose of the evaluation was to assess the impact of PSLWRs and support and inform long-term decision-making about the programme.

The following five questions guided the evaluation:

- 1) Do PSLWRs contribute to improved patient and staff experiences of care?
- 2) Do PSLWRs contribute to increased sense of ownership among charge nurse managers (CNMs) for processes related to safety and culture?
- 3) To what extent do PSLWRs help reduce variation in quality processes among participating wards?
- 4) How have PSLWRs contributed to acceptance of a culture of monitoring and evaluation?
- 5) Do PSLWRs help increase visibility of care and ward management/operations for executive management?

METHODOLOGY

This non-experimental outcome evaluation design applied a mixed methods approach. Data collection methods included:

- 1) An international literature search to collect previous research on, and evaluation of other implementations of PSLWRs or other similar patient-safety initiatives.
- 2) Semi-structured interviews with 25 staff, including 10 CNMs, 10 PSLWR reviewers and 5 PSLWR coordinators and sponsors. These were face-to-face interviews, conducted onsite for approximately 45 minutes.
- 3) Collection and analysis of historical (2014-2018) and current (2019) PSLWR response data. This qualitative and quantitative response data was collected from patients, staff, and about the environment, during the PSLWRs themselves. The 19 wards that underwent a PSLWR in 2019 had their historical data entered.
- 4) CNM action follow-up (AFU) assessments. These occurred approximately one month after a PSLWR had occurred on a CNM’s ward. The action follow-up was a brief semi-structured phone interview. Any actions mentioned during the interview were verified by evaluators through checking documents, organisational logs and registers, as well as on-ward observational checks.
- 5) Evaluative observations of PSLWRs. An observation template was used to guide evaluators to assess the reception of the

PSLWR monitoring and evaluation by the ward and its staff, alongside the way the PSLWRs were conducted. Four observations of 2019 PSLWRs were conducted.

Braun and Clarke's (2012) six-step method for thematic analysis was used to identify, analyse and interpret qualitative data. Descriptive statistics were used for the quantitative data. Frequencies and proportions were presented at each time point, and trends were examined to see if there was any change from baseline. Chi-square and Fisher's exact tests were used to identify which groups differed significantly in their responses. Statistical significance of 5 percent level was used. Analysis was conducted using OpenEpi (Dean, Sullivan & Soe, 2013) and SAS version 9.4. (Cary, 2014). No wards or individuals are identified in this publication.

ETHICS

This evaluation was ethically reviewed and approved by the New Zealand Ethics Committee (NREC Application 2019_15).

Though this research was non-interventional, particular risks concerning the vulnerability of staff participants when sharing criticisms, and the potential repercussions for their roles and relationships, were highlighted by the committee. Evaluators explained that criticisms of individual staff were excluded from evaluation findings and the participant information sheet (PIS) was modified to make clear to participants that the programme and general safety culture were the focus of the evaluation. If any clinical practice issues were raised, they had to be referred to the appropriate avenue, typically CNMs, for action and reporting. In the course of this evaluation, no issues pertaining to the clinical practice of staff requiring CNM involvement were raised.

Additionally, risks of staff being able to identify each other's experiences were raised by the ethics committee. While the research participants were a small group, the total population of hospital staff was more than 7000. Evaluators argued that identifying roles was

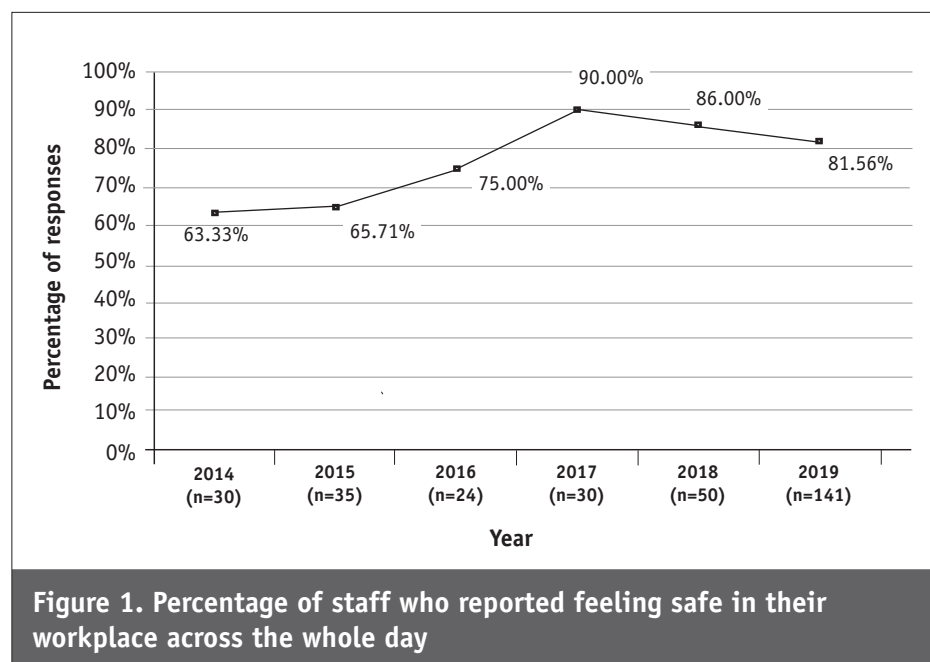


Figure 1. Percentage of staff who reported feeling safe in their workplace across the whole day

pertinent to evaluation discussion, and that staff anonymity could not be protected further. The risks were made clear to evaluation participants in the PIS and consent documentation.

FINDINGS

Quantities of data collected are outlined in Table 1 below. Findings from all data sources have been integrated and are presented in four sections which align with the evaluation questions.

Patient and staff experiences of care

Staff experiences of care

PSLWR data findings show that perceived staff safety has significantly improved over the PSLWR implementation period, though with no significant differences across different staff roles ($p=0.218$). As illustrated in Figure 1 (above), staff were 2.56 times more likely to report feeling safe in their workplace in 2019 (81.6 percent), compared to 2014 (63.3 percent), (OR [95% CI] =2.56 [1.09, 6.03]; $p=0.007$). This suggests that the PSLWRs may have contributed to staff feeling safer in their workplace.

There were no other significant changes in staff experiences. Levels of staff satisfaction did not change significantly ($p=0.454$), ranging from a minimum of 68.0 per cent of staff feeling positive about coming into work in 2014, to a maximum of 88.5 per cent in 2015. Staff were 2.22 times more likely to feel positive about their grandmother or close relative being cared for in their area in 2019 than in 2014. However, the observed increase in positive responses is not significant ($p=0.059$).

Patient experiences of care

Patient responses to PSLWR interviews also showed some significant changes. Being cared for by a health-literate service that enables patients to understand their care and treatment is important for positive patient experiences. Patients were significantly more

Table 1. Quantities of data collected

Data item	n
PSLWR 15 Steps templates	77
PSLWR staff templates	449
PSLWR patient templates	371
Action follow-ups	14
Interview	25
Observations of PSLWRs	4

likely to report receiving an explanation that was understandable in 2019 (92.4 percent) when compared to 2014 (84.4 percent) (OR [95% CI] =2.25 [0.68, 7.42]; $p=0.029$):

"Every time the team sees me, they tell me what is happening with my treatment. This boosts me. I feel comfortable when they explain treatment decisions to me". (PSLWR patient respondent)

There was no significant difference in responses by ethnicity ($p=0.544$).

There were also significant values that showed negative changes in patient experiences. Patients in 2019 were 44 per cent less likely (OR[95% CI] = 0.56 [0.24, 1.34]; $p=0.001$) to report knowing who was caring for them than they were in 2014. Knowing who is caring for them is an important aspect of care and staff-patient relationships that helps patients have more positive experiences:

"I don't know who is caring for me. I had three different people come in today". (PSLWR patient respondent).

A patient interviewed in 2019 was also 53 percent less likely (OR [95% CI] =0.47 [0.21, 1.06]; $p=0.045$) to describe a positive admission experience (40.8 percent) compared to patients interviewed in 2014 (59.4 percent). It is important to note that admission in itself is often a stressful and painful time for patients, depending on their situation and condition. However, a significant increase in the level of negative responses across both these indicators suggests there is a persisting issue.

Overall, there was variance in how PSLWRs affected staff and patient experiences of care. However, they do appear valuable in helping to identify issues that may not have previously been known about.

CNM ownership of safety and culture

Awareness and accountability

CNM interview participants emphasised that the PSLWR review process had improved their awareness of what was expected in terms of safety and quality of care at ward level. This awareness, in turn, made CNMs feel more accountable for ward-level initiatives such as posters, resource boards and patient-status boards. But CNMs feel this has not necessarily translated into actual changes in the work environment:

"I think they've given me a heightened awareness of the stuff that I've talked about around the quality side of things. I don't think they've necessarily changed what I do; I think that they have perhaps maybe focussed on some things that perhaps I wouldn't have necessarily focused, so I guess that is probably the change". (CNM)

An external perspective

CNM interview participants described how having external reviewers come into their areas helped them identify issues and improvements which might be overlooked in the mundanity of everyday ward management:

"I think it helps us. It's a good thing. Because we're here every day, there's things we don't really see that need changing, improvement; independent people from outside see things in a different light. Two of us can see exactly the same thing and

have two different perspectives". (CNM)

Some CNMs felt that having issues identified by external reviewers gave them a reason for requesting maintenance and escalating issues:

"... we could actually justify and say that we need our wall painted because the leadership ... identified [it]". (CNM)

But other CNMs favoured shifting towards a process based on peer review, indicating that sharing perspectives with fellow charge nurses and clinical staff would be more valuable to them. The appreciative inquiry approach was used in the review huddle of all four observed PSLWRs for the evaluation, and CNMs highlighted that having feedback delivered to them in this way made it easier to accept external perspectives and criticism.

Limited actionability and continuity of feedback

CNM interview participants felt the limited actionability of PSLWR recommendations restricted their ability to make positive change to their wards' safety and culture. They felt that the PSLWRs were only a "one-off" interaction with their wards, without the continuity of long-term monitoring and support:

"It's almost like, let's go have a walk round, have a look, here's your feedback and that's it until such time". (CNM)

As illustrated in Figure 2 (see p28), of 32 improvement recommendations identified in the action follow-ups, 15 (47 percent) were fully resolved, eight (25 percent) in progress or partially resolved, and nine (28 percent) not actioned or resolved. Items were coded to aggregate common recommendations. Excluding single outcomes, sanitation (eg cleaning and having hand sanitiser available) and environment (eg repainting, fixing doors) items were the most frequently resolved. Conversely, recommendations about patient information (eg having the right information displayed and keeping patient notes secure) were the most unresolved items.

Feedback from wards about the implementation of recommendations was not always made available to the reviewers and coordinators, making it difficult to assess whether any changes had occurred because of the PSLWRs:

"I think there is not enough joining up of the observations across the organisation ... There's not an action plan with time frames and people responsible, and then a review of 'did you manage to change things or not?'" (Reviewer)

Scope for merging with existing monitoring programmes was identified, to build a more comprehensive and useful picture of the quality and safety of care being provided in the organisation.

Ward quality processes

Ward quality processes help ensure safe, high-quality care is provided to patients. No specific ward quality processes or measures were provided by the programme team. Evaluators decided to use percentage of wards meeting the expectation of being safe and well-maintained as a measure of variability in ward quality processes.

A key expectation of wards is that they are safe and well-maintained. In a question introduced to the PSLWR 15 steps template in 2016, reviewers are asked to assess the ward and identify any obvious safety risks. The expectation is that no safety risks to patients or staff exist. Figure 3 (p28) shows a significant (OR [95% CI] = 0.47 [0.21, 1.06]; $p=0.004$) decrease in the percentage of

wards assessed that had an obvious safety risk identified by the PSLWR reviewers, from 87.5 percent in 2016 to 33.3 percent in 2019.

This suggests that the PSLWRs may have contributed to reducing variation in environmental safety processes across wards, helping wards become safer. However there was no significant difference in the percentage of wards that were described by reviewers as being well-maintained ($p=0.844$).

Though PSLWRs appear to promote better ward quality processes for environmental safety, further research into how they affect other ward quality processes is still needed.

Culture of monitoring and evaluation

Monitoring has been a positive experience

Qualitative findings suggest that overall, the monitoring and evaluation associated with the PSLWRs has been positively received. Participants from all three interview groups showed gratitude for the appreciative inquiry approach and discussed how important positively-framed feedback is. CNMs felt that having their feedback framed in such a positive manner made them feel safe, engaged, more amenable to feedback and more motivated to make changes:

"It's a nice, safe environment to get the feedback, and how you sit in the room and the people that are giving the feedback give it in such a positive manner... they tell you what they really enjoyed, but [they] just say 'if there was to be a slight improvement', they choose the right words [so] that you're quite receptive, rather than getting defensive". (CNM)

The appreciative inquiry approach has helped initial feelings of uncertainty and fear amongst CNMs and ward staff to dissipate, and enabled the PSLWR to become a safe feedback process. Some CNMs felt the PSLWRs had made it easier to accept the monitoring associated with more extensive monitoring programmes:

"I must admit, if I'd had to do [other monitoring programme] before the walk round, I probably would've been unsure of what to do". (CNM)

A widespread concern raised by interview and action follow-up participants was the authenticity of the PSLWR observations, given wards know when the PSLWR is scheduled:

"I know for a fact that my charge nurse is like 'I've got walk around today, we're busy tidying everything up, making sure it is all in the right place'. They let the staff know that they're coming. From that perspective, it's very staged; it's like making sure the house is tidy because you know the visitors

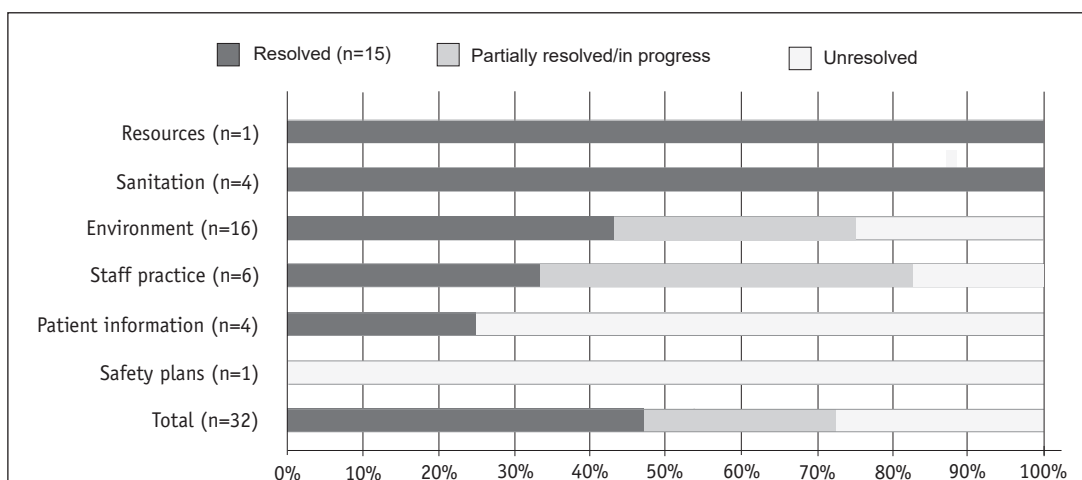


Figure 2. Action follow-up assessment outcomes (n=32)

are coming". (coordinator/sponsor)

CNMs felt that knowing when the PSLWRs were coming produced less feedback and improvement recommendations. All three participant interview groups preferred unannounced visits.

Retaining the positive and safe feedback process was important to participants and would need to be a key consideration in any modified or integrated version of the PSLWRs.

Organisational monitoring is burdensome

A significant point of discussion across all participants was the PSLWR's relationship to other organisational monitoring. Participants, especially CNMs, stressed that the organisation placed a substantial burden on clinical staff and areas through monitoring:

"It is a lot sometimes ... from mid last year to now we had lots of audits and lots of organisational walk rounds ... it's like, make sure that we are maintaining this, maintaining that". (CNM)

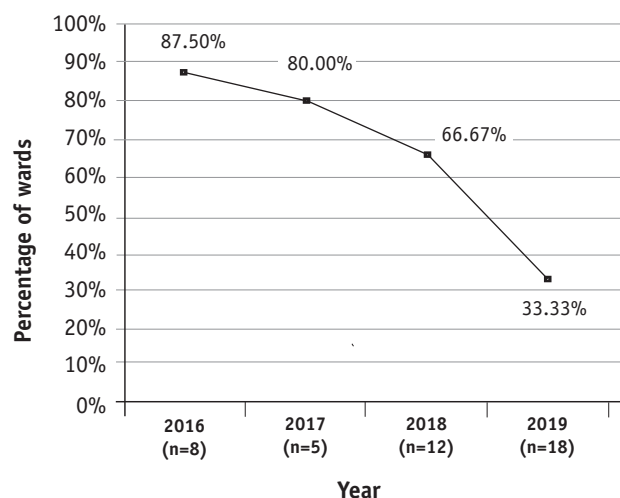


Figure 3. Percentage of wards in which an 'obvious safety risk to patients or staff' was identified

The time burden associated with PSLWRs was reflected in the observations. Reviewers appeared to choose staff randomly, asking them first if they were free to talk for “five minutes”. However, the observed interviews were 10-15 minutes long. This included time (5-10 minutes) where some reviewers asked their own questions that were not on the PSLWR staff interview template.

CNM interview participants felt that duplication of data collection and the lack of integration across numerous monitoring initiatives meant their already limited clinical time was continuously being wasted. Though PSLWRs appear to positively contribute to a good culture of monitoring and evaluation, participant responses suggest that monitoring and evaluation would be more readily accepted if it were more efficient and effective, with clarity of purpose and no duplication of data collection across monitoring programmes.

Visibility of care and ward operations to executive management

Increased visibility across people and processes

Reviewers felt that having the opportunity to immerse themselves in the ward and clinical environments provided them with a new perspective and an understanding of the realities clinical areas are facing in the current health climate:

“... it’s really good to get back [to clinical areas] and see what’s going on, and to interact with patients and staff ... [it] gives you different perspectives on what goes on in the organisation ...”. (Reviewer)

For reviewers in executive roles, hearing the thoughts and feelings of staff was of particular value. They commented that there is limited monitoring of staff satisfaction and culture across the organisation, and therefore the PSLWRs provide valuable insight into staff views.

Reviewers also highlighted how the PSLWRs supported their professional visibility as workplace leaders. This increase in professional visibility was mentioned by all the reviewers interviewed:

“... for me it is important because I get to get out and be visible as a leader”. (Reviewer)

Interacting with other staff was the primary reason stated by reviewers for their participation, and intention to continue to participate in the PSLWR programme. Reviewers described various benefits of increased professional visibility, including getting better staff engagement within their role, being recognised, and being “in touch” with their clinical areas. Charge nurse managers also indicated that they appreciated the increased visibility of leadership that PSLWRs facilitated:

“I do like the fact that we have people coming in to look at the ward that don’t usually visit the ward as well. Sometimes it’s those opportunities that you actually get to see the executive team, which is great; it keeps you in touch”. (CNM)

Leadership participation

How often executive managers actually take part in PSLWRs is a key consideration when looking at whether the walk rounds help increase the visibility of care and ward management/operations to these managers. However, as with many senior staff in health organisations, they have significant demands on their time.

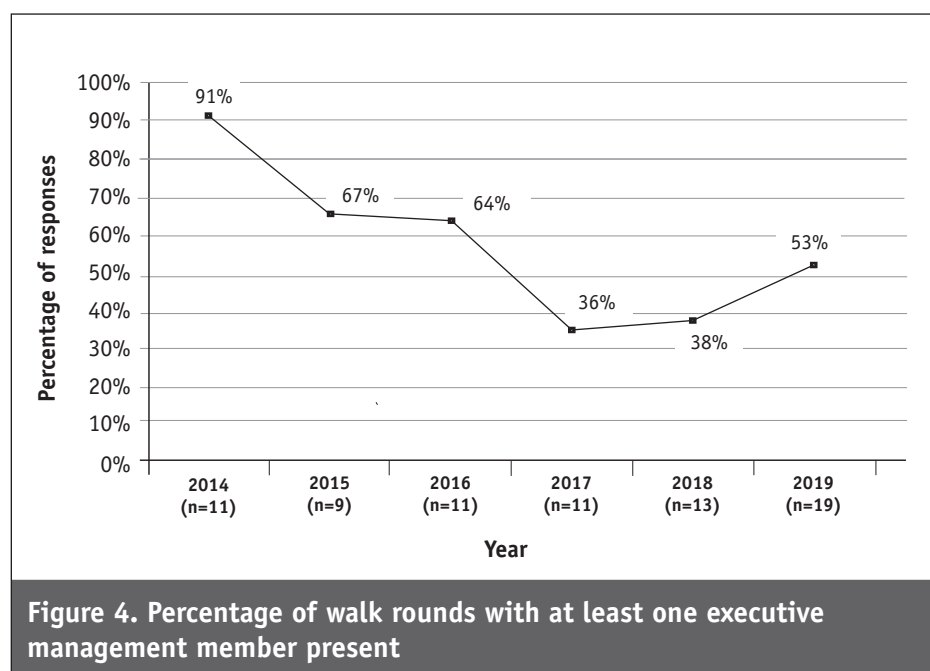
Across the 75 PSLWRs examined in this study, there were 517 reviewers, with a median of seven reviewers per PSLWR. Of the 517 reviewers, 63 (12 percent) were from executive management. PSLWR data presented in Figure 4 (below) shows there were fewer PSLWRs with executive management reviewers in 2019 (53 percent of PSLWRs) compared to the first year of the programme (91 percent of PSLWRs), (OR [95% CI] = 0.11 [0.012, 1.05]; $p=0.02$).

There was also a significant (OR [95% CI] = 0.238, [0.042, 1.36]; $p=0.036$) decrease in the number of unique executive management staff who participated in the PSLWR programme. These results account for changes in membership of reviewer teams across the five-year period. Although leaders described gaining some visibility and insights from the PSLWRs, decreasing participation likely diminishes this effect across executive management:

“I think it should continue because it’s really valuable [for] people at the front line ... [but] you just get nurse educators, you get some [non-clinical staff] ... but nurses need to see the managers, they need to see the CEO, they need to see the director of nursing, they need to see that somebody cared about them and came to the ward to check and talk to them.” (CNM)

Reviewers also suggested that more operational support was required to ensure long-term sustainability of the programme.

PSLWRs help make leaders more visible and provide them with better oversight of care and ward operations. However, it is crucial that the organisation ensures executive leaders have dedicated time to participate, so the right leaders experience the visibility benefits.



DISCUSSION

Established and emerging evidence, including that specifically related to PSLWRs, present theories and findings that are relevant to consider in the evaluation of this PSLWR programme.

Safety and the appreciative inquiry approach

Safety is one of the most dominant paradigms in health care. How a health-care organisation ensures the safety of its staff and patients can be challenging and complex. Safety-I and Safety-II are two alternative theories of creating safety. Safety-I considers safety purely as an absence of errors and failure. With health organisations and systems now more complex, contemporary theorists argue for a shift to Safety-II, which focuses on “*creating successes rather than eliminating failures*” (Smaggus, 2019, p. 667). Smaggus also argues that Safety-II builds a culture where the focus is on how clinical staff “*create safe, high-quality care through adaptation, improvisation and dedication*” (p. 667). The appreciative inquiry approach undertaken in this PSLWR programme aligns the programme with Safety-II theory.

As shown in the quotations in these findings, and in the literature, the appreciative inquiry approach has helped CNMs trust the organisation (McSherry et al., 2018) and increased their overall commitment to change (Sandars et al., 2017). Therefore, we argue that focusing on everyday success and achievement through the appreciative inquiry approach, in addition to exploring challenges and areas for improvement, is a step in the right direction. However, the appreciative inquiry framework has wider application to PSLWRs than just the positive language framework. It could be a valuable tool for developing solutions and implementing change in clinical areas.

Elements of the appreciative inquiry approach are also present in safety culture literature. Neto and colleagues (2017) point out that for an organisation to have positive safety culture, it must ensure that:

- 1) All workers take responsibility for their own safety, as well as for their colleagues, patients and family.
- 2) Security is prioritised over financial and operational goals.
- 3) Identification, reporting and resolution of security-related problems is encouraged and rewarded.
- 4) The organisation learns from safety incidents.
- 5) Resources, structure and accountability for effective maintenance of security are provided.

The PSLWRs present opportunities to deliver on items 1, 3, 4 and 5. Though there was some evidence of item 1 being implemented in this evaluation, increases in some negative patient experiences and no change in staff satisfaction suggests there is still work to be done. The appreciative inquiry approach successfully supports item 3; however, this evaluation has highlighted there is the opportunity to improve how organisational learning and accountability (items 4 and 5) is supported through the programme. Currently, it is likely that the same issues are being discretely identified and resolved in individual areas. If a PSLWR programme wants to work on the prevention of issues, then supporting organisational learning is a must (Tucker & Edmonson, 2003). Frankel and colleagues (2005) argue that implementing a system or process that supports allocation of responsibility and accountability for change, and enables monitoring of changes over time is key to effective PSLWRs. Implementing such a process in our PSLWR programme would enable collaboration on solutions and support organisational learning. However,

consideration of the operational resources and support required to ensure programme sustainability is needed.

Considerations for successful PSLWRs

There are a number of factors that case studies and evaluations have highlighted as being critical to implementing successful PSLWRs. Together, Martin and colleagues (2014), Zimmerman and colleagues (2008) and Singer and Tucker (2014) give us a list of key considerations for effective PSLWRs:

- 1) Advanced scheduling to ensure consistent attendance in the face of competing demands.
- 2) High intensity of exposure to PSLWRs.
- 3) The willingness of frontline workers to speak up.
- 4) Having scripted questions provided to staff in advance to give them time to think about their answers.
- 5) Senior managers' understanding and engagement with safety rounds.
- 6) Define a clear process and accountability for resolution of issues identified in the PSLWRs.
- 7) Giving areas the opportunity to communicate their actions and resolutions regarding issues raised in the PSLWRs to the conductors and wider organisation.
- 8) Provide easy-to-understand reporting to disseminate PSLWR findings and solutions.

Though not all these items have been raised in the evaluation findings, there are some key discussion points to be had.

Te Tiriti o Waitangi

Firstly, though it is not presented in PSLWR literature, in a New Zealand context it is pertinent that any health-care programme takes into consideration Te Tiriti o Waitangi, as outlined in the Ministry of Health's (MoH) commitment to fulfilment (MoH, 2019). This evaluation did not identify any explicit consideration of Te Tiriti or te ao Māori (the Māori worldview) in the development or implementation of the PSLWRs. Collection of patient ethnicity in the most recent year of the programme (2019) provided some insights, but limited Māori participation meant no significant conclusions could be drawn. Māori review of the process, tools and data is necessary to ensure a programme that is dedicated to reducing inequities and meets our Crown obligations under Te Tiriti o Waitangi.

Balancing frequency and monitoring burden

Thomas et al (2005) suggest that a dose-response relationship exists between PSLWRs and safety culture; that PSLWRs “*may need to be conducted more frequently, address a broader range of topics, address a larger audience during rounds, or occur for a longer duration ... to have an impact on overall unit safety [culture]*” (p.7). While this may be important to support follow-up and action on PSLWR recommendations, increased frequency of PSLWR visits in isolation is not an appropriate solution when staff already feel overburdened with monitoring. What needs to occur is the prioritisation and integration of multiple programmes across the patient-safety sphere to produce a coherent and effective programme that reduces the burden on clinical services, but ensures effective monitoring and evaluation of safety issues, recommendations and actions.

Implementing unannounced visits

Contrary to walk round literature, our evaluation has shown that

having PSLWR and other monitoring programmes as unannounced visits may have some benefits, including offering a more realistic snapshot of the ward. This suggests that advanced scheduling may only be beneficial to reviewers. The UK National Health Service 15-Steps programme (on which the PSLWR 15 steps template is based) recommends unannounced visits (NHS, 2017). However, there needs to be consideration of how unannounced visiting could potentially impact on the burden of monitoring discussed by CNMs.

There is limited literature on unannounced visiting or auditing, particularly in a health context. A randomised control trial of announced and unannounced surveys in a hospital setting found no significant differences in each method's effectiveness in detecting quality issues (Ehlers et al., 2017). A systematic review and exploratory study comparing unannounced and announced inspections in Dutch nursing homes (Klerks et al., 2013) stated that announced inspections are still the preferred option when assessing both the organisation and its preconditions for good care. However, unannounced visits make risks more visible and reduce the burden of monitoring for the organisation, and a combination of announced and unannounced visits is likely to provide the best overall view of care (Klerks et al.).

If there truly is no significant difference between announced and unannounced visits in their ability to identify quality issues, then other benefits should be considered. If unannounced visiting does reduce monitoring burden, unannounced visits may be the best choice. However, it remains to be seen if this is exclusively for the organisation, or also for the staff being monitored. Furthermore, research in aged residential care may not completely reflect the issues and demands of inpatient wards. Klerks and colleagues' (2013) systematic review only identified three relevant articles, and the limited other research highlights a need for further study of the true differences between announced and unannounced visits. For now, codesigning a monitoring plan with staff, taking into consideration local context, is likely to create the best solution that works for both the organisation and its staff.

Leadership participation and team composition

Leadership attendance is also a pertinent issue in this discussion, as significant declines in leadership participation were found in this evaluation. In the hospital it investigated, the Francis Report (2013) identified an absence of systems and processes to enable leadership to be clearly aware of organisational performance against safety and quality standards. The aim of implementing PSLWRs at Middlemore Hospital was to ensure those processes were in place. Having executives actively participate in PSLWRs, demonstrating commitment to the programme and accountability for patient safety, is critical for PSLWRs to enact positive change (Singer & Tucker, 2014).

However, it should also be considered whether senior leaders are the right people to be participating if the goal of PSLWRs is to improve safety. In this evaluation, CNMs indicated they would prefer a peer-review approach. Additionally, the finding that executive leaders' participation has decreased, but perceived staff safety has increased, suggests that the remaining middle management and peers who comprise the review team (as outlined in the background) are valuable in terms of building safety. The concept of distributed leadership suggests that leadership is associated with activities rather than roles and positions (Fitzgerald et al., 2013). The use of distributed leadership to enhance safety is well-evidenced across the literature, including in New Zealand (Horsley et al., 2019). Evaluating

our organisation with a distributive leadership lens may provide insights into how to better build PSLWR review teams based on relevant activities, rather than roles and positions. But the value that CNMs described from seeing executive leaders on the frontline still needs to be considered.

CONCLUSION AND RECOMMENDATIONS

Evaluating this PSLWR programme has shown the overall effectiveness of PSLWRs very much depends on the way they are implemented. PSLWRs have the potential to have a positive impact on patient and staff experiences of care, to promote awareness and accountability for patient and staff safety, to build safer ward environments, to promote a positive culture of monitoring and evaluation, and to increase visibility of people and processes. PSLWRs are also a useful tool in helping organisations identify and address persisting problems in their care environment. However, PSLWRs cannot be completed in isolation from other organisational monitoring and evaluation, and leadership time needs to be set aside to ensure the visibility benefits are experienced by the right people. Established and emerging evidence, particularly that related to safety and preconditions for successful PSLWRs, will help inform programme development.

As a result of this study, evaluators propose the following recommendations for organisations currently implementing, or intending to implement, a PSLWR programme:

- 1) Ensure the PSLWR programme is sufficiently integrated with, or differentiated from, other similar programmes and initiatives.
- 2) Review who is relevant to be participating, using a distributive leadership lens and considering which leaders would benefit from this visibility, and commit this leadership support to the programme.
- 3) Develop a co-designed monitoring plan with staff that takes into consideration the local context and existing research on announced and unannounced visits.
- 4) Implement an appreciative inquiry approach in data collection and feedback, making sure to consider the whole of this approach and how it could be a valuable tool in working with clinical areas in developing solutions and implementing change.
- 5) Establish a process to record data that allows for assessment and prioritisation of issues and allocation of accountability, and implement regular follow-ups to assess actions undertaken.
- 6) Support the sharing of programme results to promote organisational learning.
- 7) Provide the programme with dedicated resources and support to ensure its sustainability.
- 8) Commit to Māori review of the process, tools and data to work towards meeting equity and Te Tiriti o Waitangi obligations.

LIMITATIONS

As PSLWR forms were handwritten and typed up for analysis, legibility of forms was an issue that resulted in some responses being excluded. Also, staff and patient responses were recorded by reviewers, and then interpreted again by evaluators in the analysis. Hence, there is a greater risk that data has been misinterpreted, and it is not known what responses may have been excluded in reviewers' initial recordings.

Existing research has highlighted that it is difficult to attribute any measured or observed change directly to PSLWRs (Morello et al, 2011; Girerd-Genessay & Michel, 2014) due to the concurrent impact of other factors and programmes. This should be considered in the findings reported from this evaluation.

Furthermore, PSLWRs have the potential to influence or be influenced by numerous factors, items and theories. Though authors have worked to try and include all relevant literature, the large scope of applicable literature and our focus on PSLWRs specifically may mean potentially relevant articles have been missed.

ACKNOWLEDGEMENTS

The authors would like to recognise the owners of the Walk Rounds trademark, Alan Frankel and the Health Research and Educational Trust. They would also like to thank all those who have been involved in the PSLWRs since their initiation, including patients, staff, reviewers, and evaluation staff participants. Special thanks to Denise Kivell and Karyn Sangster for their passion and support for patient safety and nursing leadership, and to Dr Lynne Maher and Annie Fogarty for reviewing this article. Thank you also to Christin Coomarasamy (MPhil, MSc, BSc) for her statistical support and to Milly Athy-Timmins (BHSc) for completing data entry and transcription. Lastly, the authors would like to acknowledge the funding and review received from the Counties Manukau Health Tupu Fund and the New Zealand Ethics Committee.

REFERENCES

- Braun, V., & Clarke, V. (2012). Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbook of research methods in psychology, Vol. 2. Research designs: Quantitative, qualitative, neuropsychological, and biological* (p. 57-71). American Psychological Association. <https://doi.org/10.1037/13620-004>
- Cary, N. C. (2014). *SAS Version 9.4*. SAS Institute Inc.
- Dean A. G., Sullivan K. M., & Soe M. M. (2013) *OpenEpi: Open Source Epidemiologic Statistics for Public Health. Version 3.01*. <http://www.OpenEpi.com>
- Ehlers, L. H., Simonsen, K. B., Jensen, M. B., Rasmussen, G. S., & Olesen, A. V. (2017). Unannounced versus announced hospital surveys: a nationwide cluster-randomized controlled trial. *International Journal for Quality in Health Care*, 29(3), 406-411. <https://doi.org/10.1093/intqhc/mxz039>
- Fitzgerald, L., Ferlie, E., McGivern, G., & Buchanan, D. (2013). Distributed leadership patterns and service improvement: Evidence and argument from English healthcare. *The Leadership Quarterly*, 24(1), 227-239. <https://doi.org/10.1016/j.leaqua.2012.10.012>
- Francis, R. (2013). *Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry*. The Stationary Office.
- Frankel, A., Pratt, S., Graydon-Baker, E., Huber, C. N., Grenham, M., Console, P., O'Quinn, M., Thibault, G., & Gandhu, T. K. (2005). Patient Safety leadership Walkrounds at Partner Healthcare: learning from implementation. *Joint Commission Journal on Quality & Patient Safety*, 31(8), 423-37. [https://doi.org/10.1016/S1553-7250\(05\)31056-7](https://doi.org/10.1016/S1553-7250(05)31056-7)
- Frankel, A., Graydon-Baker, E., Neppl, C., Simmonds, T., Gustafson, M., Gandhi, T.K. (2003). Patient Safety Leadership Walkrounds. *Joint Commission Journal on Quality & Safety*, 29(1), 16-26. [https://doi.org/10.1016/S1549-3741\(03\)29003-1](https://doi.org/10.1016/S1549-3741(03)29003-1)
- Girerd-Genessay, I., & P. Michel. (2015). Faut-il mettre en place des rencontres de sécurité des soins? Revue de la littérature. *Revue d'Épidémiologie et de Santé Publique*, 63(5), 315-323. [Should we establish patient safety leadership walkrounds? A systematic review] <https://doi.org/10.1016/j.respe.2015.08.005>
- Hardy, L. (2013). *How do district health boards respond to and use the serious and sentinel event report?* (Master of Public Health). University of Otago. <http://hdl.handle.net/10523/5059>
- Horsley, C., Hocking, C., Julian, K., Culverwell, P., & Zijdel, H. (2019). Team Resilience. In E. Hollnagel, R. Wears, & J. Braithwaite (Eds.), *Delivering Resilient Healthcare* (pp. 97-117). Routledge.
- Klerks, M. C. J. L., Ketelaars, C. A. J., & Robben, P. B. M. (2013). Unannounced, compared with announced inspections: A systematic review and exploratory study in nursing homes. *Health Policy*, 111(3), 311-319. <https://doi.org/10.1016/j.healthpol.2013.05.001>
- Martin, G., Ozieranski, P., Willars, J., Charles, K., Minion, J., McKee, L., & Dixon-Woods, M. (2014). Walkrounds in practice: corrupting or enhancing a quality improvement intervention? A qualitative study. *Joint Commission Journal on Quality & Patient Safety*, 40(7), 303-10. [https://doi.org/10.1016/S1553-7250\(14\)40040-0](https://doi.org/10.1016/S1553-7250(14)40040-0)
- McSherry, R., Timmins, F., De Vries, J., & McSherry, W. (2018). A reflective qualitative appreciative inquiry approach to restoring compassionate care deficits at one United Kingdom health care site. *Journal of Nursing Management*, 26(8), 1108-1123. <https://doi.org/10.1111/jonm.12630>
- Ministry of Health. (2019). *Te Tiriti o Waitangi*. Ministry of Health. <https://www.health.govt.nz/our-work/populations/maori-health/te-tiriti-o-waitangi>
- Morello, R. T., Lowthian, J. A., Barker, A. L., McGinnes, R., Dunt, D., & Brand, C. (2013). Strategies for improving patient safety culture in hospital: a systematic review. *BMJ Quality & Safety*, 22(1), 11-18. <http://dx.doi.org/10.1136/bmjqs-2011-000582>
- Neto, A., Silva, M., De Medeiros, S., Barbosa, M., Salvado, P., & Santos, V. (2017). Patient Safety Culture In Health Organizations: Scoping Review. *International Archives of Medicine*, 10.
- Joint Commission. (2017). New alert focuses on safety culture in health care. *The Joint Commission Perspectives*, 37(4), 8-13.
- NHS England. (2017). *The fifteen steps challenge: Quality from a patient's perspective; an inpatient toolkit*. NHS England.
- Sanders, J., & Murdoch-Eaton, D. (2017). Appreciative inquiry in medical education. *Medical Teacher*, 39(2), 123-127. <https://doi.org/10.1080/0142159X.2017.1245852>
- Schwendimann, R., Milne, J., Frush, K., Ausserhofer, D., Frankel, A., & Sexton, J. B. (2013). A closer look at associations between hospital leadership Walkrounds and patient safety climate and risk reduction: a cross-sectional study. *American Journal of Medical Quality*, 28(5), 414-21. <https://doi.org/10.1177%2F1062860612473635>
- Sexton, J. B., Sharek, P. J., Thomas, E. J., Gould, J. B., Nisbet, C. C., Am-spoker, A. B., Kowalkowski, M. A., Schwendimann, R., & Profit, J. (2014). Exposure to Leadership Walkrounds in neonatal intensive care units is associated with a better patient safety culture and less caregiver burnout. *BMJ Quality & Safety*, 23(10), 814-22. <http://dx.doi.org/10.1136/bmjqs-2013-002042>
- Singer, S. J. & Tucker, A. L. (2014). The evolving literature on safety Walkrounds: emerging themes and practical messages. *BMJ Quality & Safety*, 23(10), 789-800. <http://dx.doi.org/10.1136/bmjqs-2014-003416>
- Smaggs, A. (2019). Safety-I, Safety-II and burnout: how complexity science can help clinician wellness. *BMJ Quality & Safety*, 28, 667-671. <http://dx.doi.org/10.1136/bmjqs-2018-009147>

Thomas, E. J., Sexton, J. B., Neilands, T. B., Frankel, A., & Helmreich, R. L. (2005). The effect of executive walk rounds on nurse safety climate attitudes: a randomised trial of clinical units. *BMC Health Services Research*, 5(1), 28. <https://doi.org/10.1186/1472-6963-5-28>

Tucker, A. L., & Edmonson, A.,C. (2003). Why Hospitals Don't Learn from Failures: Organizational and Psychological Dynamics that Inhibit System Change. *California Management Review*, 42(2), 55-72. <https://doi.org/10.2307/2F41166165>

Wailling, J., Robinson, B., & Coombs, M. (2019). Surveillance, anticipation and firefighting: Perspectives of patient safety from a New Zealand case study. *Journal of Nursing Management*, 27(5), 939-945. <https://doi.org/10.1111/jonm.12732>

Zimmerman, R., Daniels, C., Smith, T., & Shaver, J. (2008). An Evaluation of Patient Safety Leadership Walkarounds. *Healthcare Quarterly*, 11(1), 16-20.



Johanna Rhodes

About the author: Johanna Rhodes, RN, MTChg, MHealSc, PhD candidate, is the head of the School of Nursing, Southern Institute of Technology, Invercargill, New Zealand. Her correspondence address is: johanna.rhodes@sit.ac.nz

This article was accepted for publication in September 2020.

STUDENTS' PERCEPTIONS OF PARTICIPATING IN EDUCATIONAL ESCAPE ROOMS IN UNDERGRADUATE NURSING EDUCATION

ABSTRACT

Aim: The aim of this research was to capture undergraduate nursing students' perceptions after participating in an educational escape room.

Background: Preparing students for chaotic and unpredictable health-care environments is arguably challenging. There is a need to create innovative and engaging teaching strategies that promote learning through teamwork, collaboration and critical thinking. In 2019, A New Zealand school of nursing introduced escape rooms as an educational tool in its undergraduate nursing programmes. Students solved puzzles and completed activities collaboratively in groups, to "escape" from a classroom before a set time limit was reached.

Design: Survey research conducted in 2019 included a post-implementation online questionnaire consisting of five questions. The first question established which escape room the student had participated in. This was followed by three questions using a Likert scale to measure the students' perceptions of their experience in relation to: 1) teamwork and collaboration, 2) thinking critically while under time pressure, and 3) contribution to learning. A final open-ended question inquired about their overall experience.

Results: Overall, the students found the escape rooms to be an effective and innovative learning experience due to the requirement for teamwork, collaboration and thinking critically while under time pressure.

Conclusion: The findings of this study are consistent with previous studies on students' perceptions of participating in escape rooms in educational settings. The success of the implementation validates continuing use of this education innovation.

KEYWORDS

Escape rooms, survey research, nursing education, teamwork, collaboration, critical thinking.

INTRODUCTION

Preparing students for chaotic and unpredictable health-care environments is arguably difficult. There is a need for innovative, cost-effective and engaging teaching strategies that promote learning through teamwork and problem-solving (Cain, 2019; Edwards et al., 2019; Wu et al., 2018). There are a variety of teaching modalities that promote engagement, eg flipped classrooms, simulation and game-based activities (Cain). Adapting the commercial game-based activity of "escape rooms" into tertiary education is relatively new; however it offers an opportunity for large groups of students to participate in a single classroom with one educator. Educational escape rooms are designed in the same manner as commercial escape rooms, where participants solve puzzles and complete activities to successfully escape a room in a limited amount of time.

BACKGROUND

Four escape rooms were introduced into programmes at a school of nursing in New Zealand in 2019. They followed the commercial

escape room design, except the puzzles and activities pertained to specific learning outcomes. Students would work collaboratively to solve puzzles and complete activities to "escape" from the classroom before they ran out of time. The escape rooms were run at different times during the academic year in single classrooms with one nursing educator. The purpose of implementing these was to provide an immersive learning environment for students that contributed to teamwork, problem solving and collaboration, while thinking critically under time pressure.

Escape room design

The four escape rooms were implemented at the school of nursing in three different programmes – the New Zealand Certificate in Study and Career Preparation, Health and Wellness; the New Zealand Diploma in Enrolled Nursing; and the Bachelor of Nursing, years one and two. (See Table 1, p35.)

The escape rooms followed a linear approach, meaning students could not progress until they had successfully completed sequential puzzles and/or activities. In each escape room, groups of four students worked collaboratively to solve the puzzles and

complete the activities. The students had 60 minutes to “escape”, by successfully solving nine puzzles/activities. These involved, but were not limited to, jigsaws, props, pictures, diagrams, crosswords, word finds, patient assessment and interventions, taped handovers, scenarios and laboratory results.

The students were advised of the escape room activity and its rules before the timetabled session via the electronic learning platform Blackboard. In the classroom, the educator verbally introduced the activity, then projected the rules onto half of a large screen in the classroom; these remained visible throughout the session. The rules provided key information on aspects including time penalties, use of hints, and use of electronic devices and the internet. Use of the internet was encouraged for two of the escape rooms (“Introduction to direction and delegation” and “Solve a puzzle – a patient journey”) and discouraged for other two which were examination revision – intended to provide students with the opportunity to collaboratively identify gaps in their knowledge to guide their individual examination preparation. A 60-minute online digital countdown timer was projected onto the other half of the large screen; this was accompanied by dramatic music, designed to increase the intensity of the classroom atmosphere, reflecting the chaotic nature of the health-care environments the students were preparing to work in.

First clue – formation of groups

The first clue was in an envelope taped under each seat in the classroom. The answer to this clue led to the students forming into groups of four. For example, in the “Revision for pharmacology and drug calculations” escape room, the first clue asked each student to complete a drug calculation. They then used this answer to find other students who had the same answer. The rationale for this method of forming groups was that it reflected the unpredictable health-care environments these students are being educated for and the importance of working with many different people. A master sheet listing the correct membership of each group was held by the educator, who confirmed for each group when they could progress to their next puzzle or activity.

Sequential learning activities

Each group worked collaboratively to decipher clues and solve the remaining eight puzzles/activities, which were of varying types and degrees of difficulty. Completion of each puzzle/activity resulted in a code number. These numbers were used to open boxes at the front of the room secured with combination locks. In these boxes, the next clue was found. Due to the number of students in two of the escape rooms, multiple boxes with identical codes were used to accommodate them.

Hints for solving clues and puzzles were available from the educator in each escape room. There was no limit to how many hints a group could ask for, but after each hint a 30-second penalty was applied – the group had to stop and wait out the penalty time before proceeding with their activity.

Each group was required to complete each puzzle/activity within the 60-minute time period. As groups “escaped”, they were able to leave the classroom, and were asked to return later for a collaborative debrief.

After the four escape rooms were completed, the perceptions of the students who took part were formally evaluated using survey research, in the form of an anonymous online questionnaire.

Table 1. Escape rooms and programmes

Escape room	Programme
Maths revision	New Zealand Certificate in Study and Career Preparation, Health and Wellness
Introduction to direction and delegation	New Zealand Diploma in Enrolled Nursing (EN)
Revision for pharmacology and drug calculations	Bachelor of Nursing (BN), year one
Solve a puzzle – a patient journey	Bachelor of Nursing (BN), year two

LITERATURE REVIEW

A scoping literature review suggested that the use of escape rooms as a teaching strategy in health-care education fosters problem-solving, problem-seeking and critical thinking, while keeping students engaged (Cain, 2019; Kinio et al., 2019; Land, 2013; Morrell & Ball, 2019). Dietrich (2018) discussed the use of escape rooms to motivate students to embrace learning. Although game-based learning is typically considered a high-quality multisensory environment, Taub et al. (2018) said the main reasons for the interest in games for learning are the motivation of players and their deep engagement while playing. While learning and play often have opposite connotations, Mitgutsch (2011) explained they share key attributes – both are challenging, time-intensive and have interactive processes that require cognitive effort and a willingness to acquire new knowledge or aptitudes.

Escape rooms are used in undergraduate health-care programmes in the medical (Kinio et al., 2019; Welton et al., 2018; Wu et al., 2018), nursing (Edwards et al., 2019; Morrell & Ball, 2019; Morrell & Eukel, 2020) and pharmacy (Cain, 2019; Eukel et al., 2017; Hermanns et al., 2017) professions. The amount of literature on their specific use in nursing education is narrow. A descriptive study by Adams et al. (2018) revealed positive results with undergraduate nursing students in terms of acquiring knowledge and teamwork. Edwards et al. (2019) concluded that an escape room implemented in a maternity clinical course for nursing students had provided students with an engaging and interactive learning activity. However, the Edwards study focuses on the planning and implementation of the escape room, and does not provide data on the perception of the students who participated. Overall, the limited literature suggested that escape rooms offered an interactive, engaging learning experience. The positivity of the reviewed literature, despite its limits, drove the decision to implement the escape rooms that are the subject of this study.

AIM

The aim of this research was to capture students' perceptions of participating in escape rooms in undergraduate nursing programmes in a New Zealand school of nursing.

DESIGN

Survey research was the design selected for this study, in the form of a post-implementation online questionnaire. Data were collected using five questions developed by the researcher and loaded onto the electronic learning platform, Blackboard. The questionnaire was available to the students in the final four weeks of their 2019 academic year. An announcement was placed on Blackboard with an information sheet explaining the study and the date the questionnaire would open and close. Consent was implied if a student completed the questionnaire. If students did not have access to an electronic device, they could complete the questionnaire using the onsite computer suites.

The questionnaire consisted of five questions: the first, a multiple-choice question, established which escape room the student had participated in. The rationale for this question was to enable analysis specific to each escape room, before considering the data across all the escape rooms.

The next three questions used a four-point Likert scale ("strongly agree", "agree", "disagree", "strongly disagree") to measure the student's perception of their escape room experience, asking:

- When you reflect on your escape room experience, do you agree or disagree that this experience assisted you with developing teamwork and collaboration in a time pressure environment?
- When you reflect on your escape room experience, do you agree or disagree that this experience assisted you with thinking critically while under time pressure?
- When you reflect on your escape room experience, do you agree or disagree that this experience significantly contributed to your learning?

The final question was open-ended, allowing participants to reflect on and share their opinion/s about their escape-room experience:

- When you reflect on your participation in an escape room, please share any further opinions that you have about your overall experience.

ETHICS

Ethical clearance was granted by the Southern Institute of Technology human research ethics committee.

PARTICIPANTS

All students who had participated in an escape room and were still enrolled at the institution were invited to participate in this study (n=181). A total of 84 percent (n=152) completed the questionnaire.

The only demographic data gathered for this research were that all participants were enrolled as either full-time or part-time students in an undergraduate nursing programme at one tertiary institution

Table 2. Number of students who participated in an escape room and participated in this study

Escape room	Number of students enrolled at the end of the 2019 academic year who had participated in an escape room	Number of students who completed the questionnaire
Maths revision	22	12
Direction and delegation	16	12
Pharmacology and drug calculations	82	76
Solve a puzzle – a patient journey	61	52

in New Zealand. Data on their age, gender or ethnic identification were not gathered. The rationale for this was that the aim of the study was to collect perceptions of the students to establish if the implementation of escape rooms as a teaching and learning tool had contributed to developing teamwork and collaboration and thinking critically while under time pressure. The results of this study would then enable discussion and a decision on whether to continue to use escape rooms.

RESULTS

The results are presented in three parts: multiple-choice question, Likert questions and open-ended question.

Multiple-choice question

This question established which escape room the student had participated in.

Likert questions

Analysis of the three questions that used a four-point Likert scale ("strongly agree", "agree", "disagree", "strongly disagree") began with summarising the results from each individual escape room using Microsoft Excel. This was to establish whether there were any differences between the responses across the four escape rooms. Figures 1-4 on the following pages summarise the Likert results from the four separate escape rooms.

There was strong similarity between the individual results from each escape room. Figure 5 on page 39 combines the Likert results of the four escape rooms.

The answers to the Likert questions showed that most students who participated in an escape room considered that this experience had contributed significantly to their learning by promoting teamwork and collaboration while having to think critically under time pressure. The individual results from each escape room were consistent and generally very positive.

Two escape rooms, "Maths revision" and "Solve a puzzle – a patient journey", generated responses that the experience had not contributed to developing teamwork and collaboration, nor thinking critically under time pressure, nor contributed to their learning. As none of these questions asked for an explanation, students' reasons for answering "strongly disagree" or "disagree" are not known. Where students answered "strongly agree" or "agree" to the questions, their reasons are also unknown. However, the final open-ended question

offered an opportunity for students to express any further opinions they had, potentially capturing a further understanding of the results from the Likert questions.

Open-ended question

The final question, which was open-ended, asked, “When you reflect on your participation in an escape room, please share any further opinions that you have about your overall experience.” The open-ended question was analysed using a thematic approach. The process of thematic analysis followed the six steps recommended by Braun and Clarke (2006, p. 19): (1) familiarisation with the data, (2) initial coding, (3) searching for themes among the initial codes, (4) reviewing and refining the themes, (5) defining and naming final major themes, and (6) writing up the themes to report the overall account of the participants.

All participants responded to this question with varying lengths of dialogue. These ranged from one sentence to multiple paragraphs. After becoming familiar with the data, doing initial coding and reviewing themes that fitted meaningfully together, the researcher used the computer-assisted data analysis software NVivo to analyse and synthesise the data. However, it is important to remember the software cannot understand text and cannot replace the analytical skills of the researcher (Houghton et al., 2017). Using NVivo to analyse the data was helpful in a number of ways. It allowed systematic processing of a large dataset by easily merging comments. Once coding was complete, it was especially helpful in allowing data comparison across different participants. Three main themes emerged during the analysis:

1. Memorable
2. Challenging and frustrating
3. Learning about self under pressure

The results are presented using these themes, supported by verbatim comments.

‘Memorable’

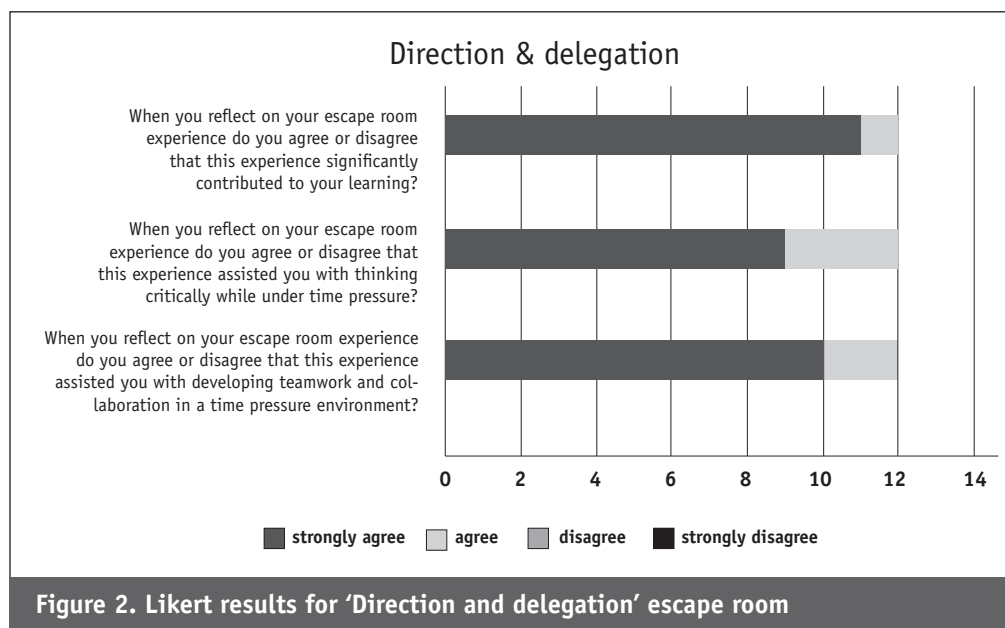
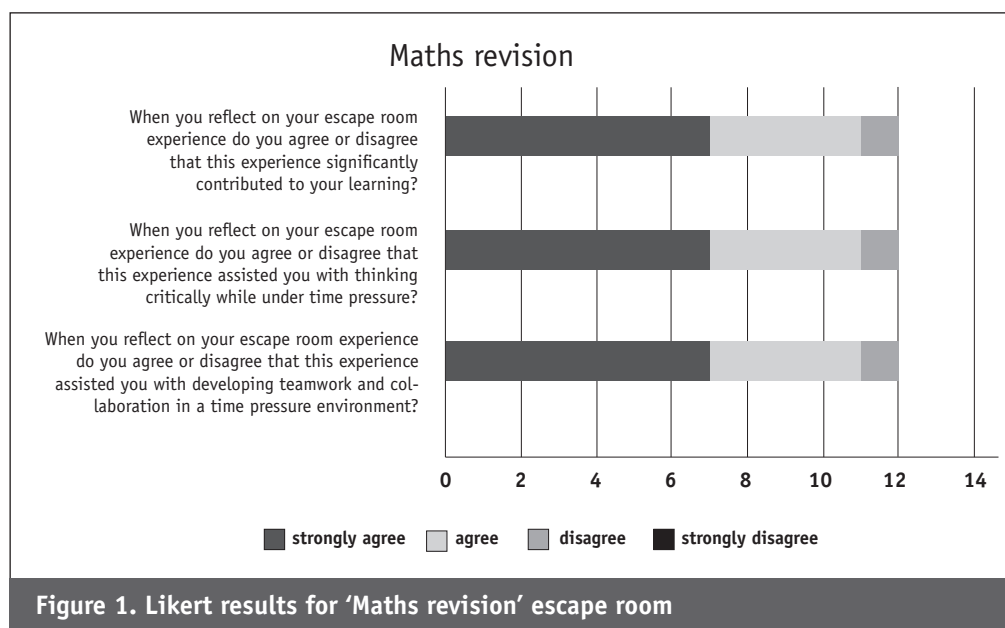
A memorable learning experience is when students can recall information and translate this understanding (Culleiton, 2010). Many of the students’ responses used words like “remembered”, “recall”

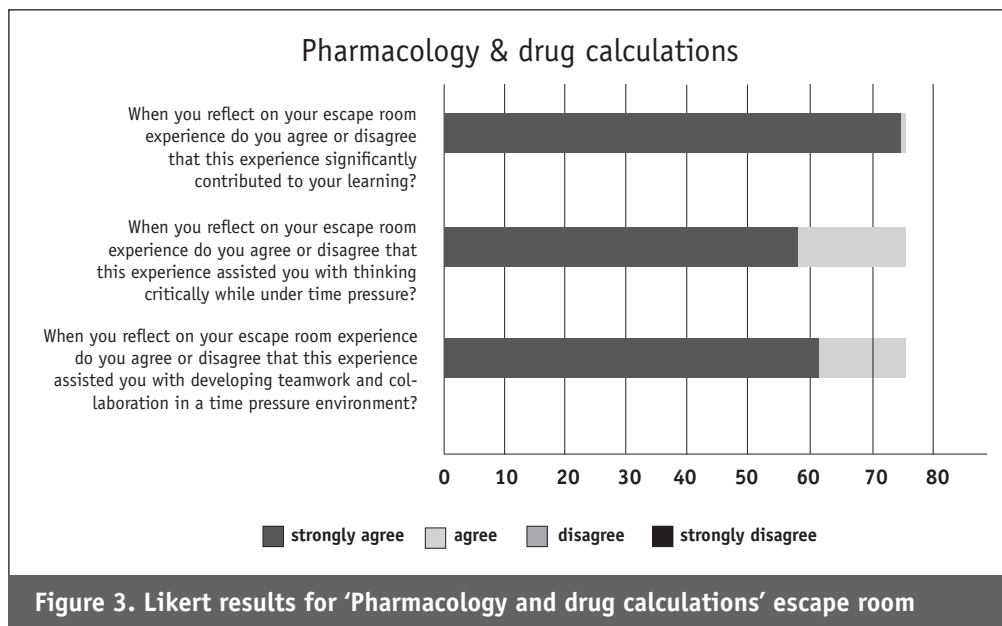
and “never forget”.

“This class was a while ago, but I remember it well. I especially remembered the twist. While I was on clinical a similar experience happened. I remembered the escape room and asked my registered nurse mentor the key question that our group took ages to figure out, it made a difference for the patient, I made a difference”. (‘Solve a puzzle – a patient journey’ escape room).

This view was shared by the majority of students who had participated in the “Solve a puzzle – a patient journey” escape room. They said they remembered the session and then linked what they had learnt to experiences they had come across in clinical practice.

In the Likert questions, a small number of students expressed “strongly disagree” or “disagree” responses. The following comment

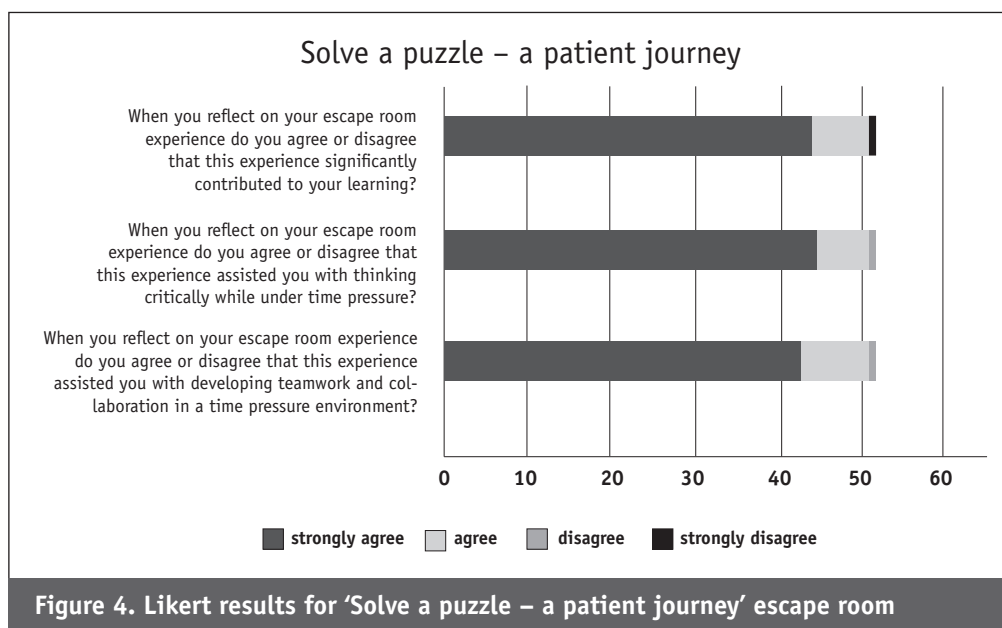




challenging as I just don't remember the stuff. However, I aced the exam as during it I remembered the escape room activities and recalled the material I needed. It was the first time ever I got a great mark". ('Revision for pharmacology and drug calculation' escape room).

"Drug calculations don't come easy to me, I need to think, and work through the formulas. I was worried that my slowness would hold up my group! But I loved the pressure, my group easily escaped. But the best news was, I have the formulas forever in my brain. During the exam I imagined I was trying to escape, I felt that pressure, and escaped with 100% pass". ('Revision for pharmacology and drug calculation' escape room)

"Math[s] is the worst for me. I was extremely nervous about the exam ahead and not sure about an escape room as a way of revising, until I did it. It started to make sense and gave me a context why I needed to know the info. I passed, but for me I actually understood it". ('Revision for pharmacology and drug calculation escape room)



may explain these, and highlights the wide variation in learning styles that students bring to classrooms.

"I recall this class for possibly all the wrong reasons as I strongly disliked it, did not work for me. I prefer to sit and listen as this is how I learn. I do not learn without lecture notes to follow". ('Solve a puzzle – a patient journey' escape room).

Dominant among student responses was their recall of the escape room used specifically for revision of pharmacology and drug calculations. This may have been due to nursing students finding drug calculations challenging (Mackie & Bruce, 2016; Wright, 2012). Students also recalled the escape rooms alongside the exam that followed, which may reflect how important assessment outcomes are to them.

"I was very nervous about my exam, I always find exams

"I entered this class wondering what was going to happen, I have a fear of being locked in a room, so did consider not coming. But I knew I had to know about math[s]. I will never forget this class, I understood math[s] at the end. I was not afraid, I was too busy. I have re-done the activities since this class, it remains my favourite class. And I do remember we were not actually locked in the room, but it would not have mattered, it was fantastic". ('Maths revision' escape room)

"Wow, I will never forget that class. I hate math[s], can't do math[s], don't get math[s], and suddenly I was in a group and had to do it. But it worked, together our group worked through the math[s] problems, I even led one of them, and got it correct, that never happens to me! I don't now love math[s], but this way of doing it was awesome, I will never forget that class and bigger miracle I nailed the exam". ('Maths revision' escape room)

Fears about maths were expressed in comments on the "Maths revision" escape room.

The viewpoint of these participants was representative of other students' responses about the value of learning during the escape room experience, even when they had not been sure about what was going to happen during the class.

Students recognised how they had gained confidence from their experience of being successful in the "Maths revision" escape room, and later used the activities as revision tools.

'Challenging and frustrating'

The theme "challenging and frustrating" featured in many narratives:

"I wanted to win, but some of my group did not share this, they wanted to take time with each clue, exploring it deeper. I was frustrated. But I realised that I was missing important things and leaping to wrong conclusions. I think for the first time I understood there is no I in team". ('Direction and delegation' escape room)

"Challenging" and "frustrating" were often linked in students' comments. The challenge of the unexpected twist in the "Solve a puzzle – a patient journey" escape room dominated in these comments.

"This was so challenging. It seemed obvious in the beginning. I didn't take it seriously, but then it all changed, that one clue, it challenged me, and I was frustrated that I had missed some of the clues. Being challenged with frustration was a great experience, as when I then was on clinical placement, I think I managed this better when things kept changing for my patient". ('Solve a puzzle – a patient journey' escape room)

"We are constantly told to think critically, until this experience I did not really understand what it meant, or if it actually mattered. On that day, as our group struggled to escape it clicked, critical thinking while challenging and frustrating does matter". ('Solve a puzzle – a patient journey' escape room)

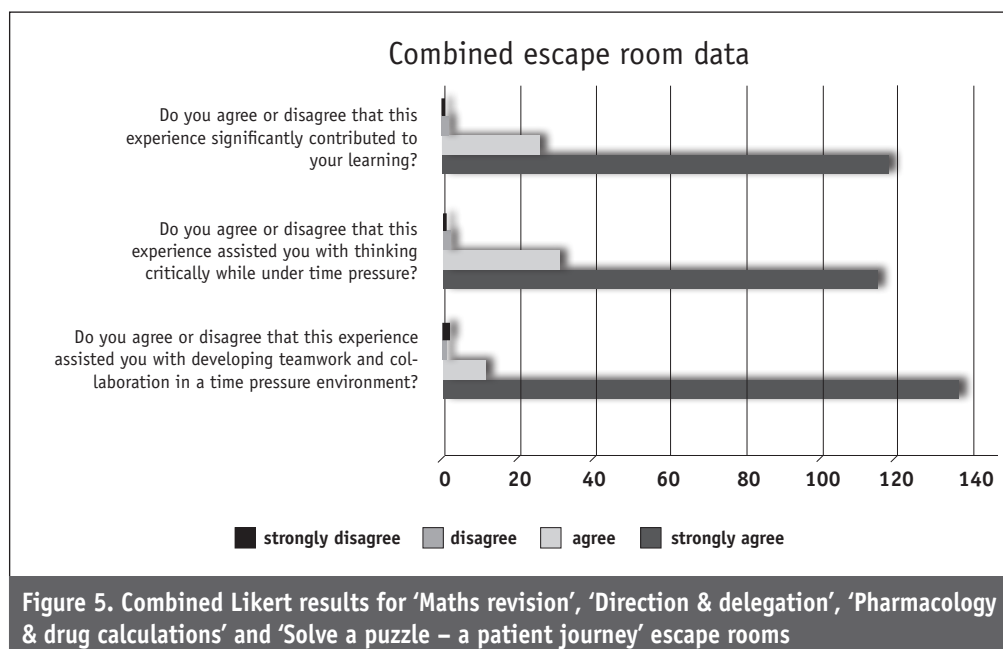
The following comment may go some way to explaining why a small number of students expressed either "strongly disagree" or "disagree" responses in the Likert questions. It highlights the importance of continuing to recognise the wide variety of learning styles students bring to classrooms.

"I wanted to escape long before we did, I was not learning as my frustration with my group dominated my experience. Not having lecture notes to guide, was terrible". ('Solve a puzzle – a patient journey' escape room)

'Learning about self under pressure'

Insight into self was a vivid theme in the students' responses:

"I felt pressure when I walked in the room, I don't like feeling



edgy as it makes me unbalanced. But I had a wonderful person in my group who was very calming, and led us all fantastically, I felt supported. When we escaped, I reflected and realised that being under pressure does not have to be stressful". ('Solve a puzzle – a patient journey' escape room)

"I know I can be quite pushy, and dominate in group situations, add pressure to this and perhaps I am worse. I like to lead, so did in this case, but for once I listened, for some reason I realised I could not do this alone. Later I thought about this and concurred that I must consciously change my behaviour in pressure situations. A few months later when I was in a clinical setting, I was placed under immense pressure, I felt my self act up, but stopped myself and remembered. It was remarkable, the situation changed. I don't remember the specific content of the escape room, but I passed the exam, so it worked. But beyond that I learnt about me". ('Revision for pharmacology and drug calculation' escape room)

"I did not think I react badly when under stress, how wrong. I wanted the music to stop, I wanted space to think. I made good decisions but realise I could make bad decisions easily when pressured". ('Direction and delegation' escape room)

The following comment adds to previously mentioned possible explanations for the small number of students who expressed "strongly disagree" or "disagree" responses to the Likert questions:

"I don't feel pressure in lectures, I like to listen rather than do. I wonder now how I will cope in pressured clinical situations as I don't think I have experienced these yet, it has made me think how I rely on lecture notes for information". ('Solve a puzzle – a patient journey' escape room)

Looking at the results of the Likert questions and the open-ended question, the characteristic that all the escape rooms had in common was that students were involved in the challenge, with a common goal of wanting to escape before the time ran out. The escape rooms

required students to make choices which affected the outcome. The results suggest that the escape games created memorable learning experiences by connecting the puzzles/activities in a meaningful way. The nursing school's implementation of escape rooms was intended to provide an opportunity for students to work in a chaotic and unpredictable environment that inspired them to seek more knowledge collaboratively in order to escape. These experiences helped them reflect on how the learning connected to their own lives and clinical experiences, arguably helping them develop motivation to further learn and explore.

The escape rooms offered a non-traditional learning opportunity that fostered constructive interactions, leading to observations of one's own and others' unique strengths and limitations – not unlike working in a health-care setting. The results show that students recognised that successful completion of the puzzles/activities in a group required particular abilities and skills in terms of communication, interpersonal relations and transactions with each other. Overall, based on the results from this study, the students found that participating in the escape rooms was an effective and innovative experience that contributed to their learning by promoting teamwork and collaboration, while forcing them to think critically under time pressure. The additional comments from the open-ended question revealed how the students had applied intangible proficiencies and collective problem-solving in a high-pressure situation. These qualities were likely to benefit them in clinical practice, as the escape-room concept was designed to reflect what they could encounter in real-life practice.

DISCUSSION

The results of this study are consistent with previous evaluations of escape rooms in educational settings. Morrell and Eukel (2020) conducted a non-experimental mixed-methods pilot study using concurrent triangulation, with assessment administered electronically immediately before and after participation in escape rooms. Their study concluded that an escape room, as a teaching and learning method, had enabled students to actively engage in recall and application of cardiovascular critical care content. The escape room immersed students in learning while providing them with immediate feedback. This finding highlights a connection between knowledge acquisition and the development of practice-ready skills such as critical thinking, communication and collaboration. Morrell and Eukel's results are reflected in the results of this study, providing further evidence of escape rooms contributing significantly to students' learning while developing teamwork and collaboration.

A longitudinal, prospective observational study conducted by Welton et al. (2018) concluded 89 percent of participants had increased their awareness of patient safety, following simulated patient rooms with manikins set up with five patient safety problems. Their results found that 100 percent of the participants considered the escape room had been valuable for team-building and wanted this form of teaching to be repeated for future topics. The results of the Welton et al. study also support significant findings in this study with similar strong reference to teamwork and collaboration across the results of the Likert and open-ended questions.

A systematic review of escape rooms for learning conducted by Fotaris and Mastoras (2019) reviewed 68 studies, with 20 concerning

health and welfare. Their overall conclusions were there were major advantages in introducing escape rooms as a method of learning and teaching to promote teamwork and collaboration. Fotaris and Mastoras also found escape rooms reinforced and strengthened social relationships. This finding connects with the theme identified in this research, "learning about self under pressure". Improvement of analytical skills was highlighted in Fotaris and Mastoras' systematic review, providing an example of critical thinking. Again, this was reflected in this study, with a high percentage of students agreeing that participating in an escape room had helped them think critically while under time pressure.

The "challenging and frustrating" theme identified in this research is not specifically visible in the literature reviewed. However the literature does refer to challenging puzzles and activities. The findings of this research confirm that participating in an escape room is a challenging experience, and participants' perception of the level of challenge particular types of puzzles and activities present to them are an important consideration. The effectiveness of using escape rooms in this New Zealand nursing school, as shown in this study, supports their continued use by the school in future academic years. The positive results of this study may also encourage other nursing schools to consider using escape rooms as an educational tool.

LIMITATIONS

This study has four limitations. Firstly, it provides results of the use of escape rooms in only one school of nursing. The results cannot be generalised to all other nursing schools. Secondly, no data was gathered on the gender, age or cultural identity of the participants. While this would be available via the institution's student management system, the researcher felt this was not necessary for the aims of this study, but suggests this could be relevant in future research on this topic. Thirdly, this research was conducted at the end of the academic year and for some students there was a significant time gap between their escape-room experience and the collection of the research data. It is not known if the responses would have been different had the data been collected directly after their experience. Finally, reference has been made to the use of escape rooms as a learning and teaching method to help prepare students for chaotic and unpredictable health-care environments. However, the findings of this study may not be generalisable to the clinical environment.

CONCLUSION

This research concluded that the implementation of escape rooms as a learning and teaching method contributed to positive experiences for the students. These positive experiences relate to developing teamwork and collaboration and thinking critically while under time pressure. Despite the limitations of the study, this conclusion validates continuing to use this learning and teaching method, with further opportunities for research and evaluation.

ACKNOWLEDGMENTS

The author wishes to acknowledge the generosity of participants for their time and contributions.

REFERENCES

- Adams, V., Burger, S., Crawford, K., & Setter, R. (2018). Can you escape? Creating an escape room to facilitate active learning. *Journal for Nurses in Professional Development*, 34(2), E1-E5. <https://doi.org/10.1097/NND.0000000000000433> <http://doi.10.1097/NND.0000000000000433>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Cain, J. (2019). Exploratory implementation of a blended format escape room in a large enrollment pharmacy management class. *Currents in Pharmacy Teaching and Learning*, 11, 44-50. <https://doi.org/10.1016/j.cptl.2018.09.010>
- Culleiton, A. L. (2010). Preceptor pointers: Try these educational techniques to create a current, memorable learning experience for new nurses and managers. *Nursing Management*, 41(11), 40. <https://doi.10.1097/01.NUMA.0000389014.28740.18>
- Dietrich, N. (2018). Escape classroom: The Leblanc process – An educational “escape game”. *Journal of Chemical Education*, 95(6), 996-999. <https://doi.org/10.1021/acs.jchemed.7b00690>
- Edwards, T., Boothby, J., & Succheralli, L. (2019). Escape room: Using an innovative teaching strategy for nursing students enrolled in a maternity clinical course. *Teaching and Learning in Nursing*, 14, 251-253. <https://doi.org/10.1016/j.teln.2019.05.001>
- Eukel, H., Frenzel, J., & Cernusca, D. (2017). Educational gaming for pharmacy students – design and evaluation of a diabetes-themed escape room. *American Journal of Pharmaceutical Education*, 8(7), 1-5. <https://doi.org/10.5688/ajpe8176265>
- Fotaris, P., & Mastoras, T. (2019). Escape Rooms for Learning: A Systematic Review. *European Conference on Games Based Learning*, 235-243. <https://doi.org/10.34190/GBL.19.179>
- Hermanns, M., Deal, B., Campbell, A., Hillhouse, S., Opella, J., Faigle, C., & Campbell, R. (2017). Using an escape room toolbox approach to enhance pharmacology education. *Journal of Nursing Education and Practice*, 8(4), 89-95. <http://hdl.handle.net/10950/632>
- Houghton, C., Murphy, K., Meehan, B., Thomas, J., Brooker, D., & Casey, D. (2017). From screening to synthesis: Using nvivo to enhance transparency in qualitative evidence synthesis. *Journal of Clinical Nursing*, 26(5-6), 873-881. <https://doi.org/10.1111/jocn.13443>
- Kinio, A., Dufresne, L., Brandys, T., & Jetty, P. (2019). Break out of the classroom: The use of Escape Rooms as an alternative teaching strategy in surgical education. *Journal of Surgical Education*, 76(1), 134-139. <https://doi.org/10.1016/j.jsurg.2018.06.030>
- Land, M. H. (2013). Full STEAM ahead: The benefits of integrating the arts into STEM. *Procedia Computer Science*, 20, 547-552. <https://doi.org/10.1016/j.procs.2013.09.317>
- Mackie, J., & Bruce, C. (2016). Increasing nursing students’ understanding and accuracy with medical dose calculations: A collaborative approach. *Nurse Education Today*, 40, 146-153. <https://doi.org/10.1016/j.nedt.2016.02.018>
- Mitgutsch, K. (2011). Playful learning experiences: Meaningful learning patterns in players’ biographies. *International Journal of Gaming and Computer-Mediated Simulations (IJGCMs)*, 3(3), 54-68. <https://doi.org/10.4018/978-1-4666-4018-4.ch011>
- Morrell, B., & Ball, H. (2019). Can you escape nursing school?: Educational escape room in nursing education. *Nursing Education Perspectives*. Advance online publication. <https://doi.org/10.1097/01.NEP.0000000000000585>
- Morrell, B., & Eukel, H. (2020). Escape the generational gap: A cardiovascular Escape Room for nursing education. *The Journal of Nursing Education*, 59(2), 111-115. <https://doi.org/10.3928/01484834-20200122-11>
- Taub, M., Azevedo, R., Bradbury, A., Millar, G., & Lester, J. (2018). Using sequence mining to reveal the efficiency in scientific reasoning during STEM learning with a game-based learning environment. *Learning and Instruction*, 54, 93-103. <https://doi.org/10.1016/j.learninstruc.2017.08.005>
- Welton, C., Peterson, E., Styling, G., Milijasevic, N., & Sia, S. (2018). You can escape, but did you learn? Using Escape Rooms to measure knowledge and increase awareness. *Canadian Journal of Respiratory Therapy*, 54(2), 51.
- Wright, K. (2012). Student nurses’ perceptions of how they learn drug calculation skills. *Nurse Education Today*, 32(6), 721-726. <https://doi.org/10.1016/j.nedt.2011.09.014>
- Wu, C., Wagenschutz, H., & Hein, J. (2018). Promoting leadership and teamwork development through Escape Rooms. *Medical Education*, 52(5), 561-562. <https://doi.org/10.1111/medu.13557>



Jenny Field



**Patricia
McClunie-Trust**



Celine Kearney



Jane Jeffcoat

About the authors: Jenny Field, MA(Hons), Appld MPhil, is a senior academic staff member in the Centre for Languages, Wintec (Waikato Institute of Technology), Hamilton, New Zealand, and chair of Diversity Counselling New Zealand.

Patricia McClunie-Trust, RN, PhD, is a principal lecturer in the Centre for Health and Social Practice, Wintec, Hamilton, New Zealand. Her correspondence address is: patricia.mcclunie-trust@wintec.ac.nz

Celine Kearney, PhD, MA(Hons), is an academic staff member in the Centre for Languages, Wintec, Hamilton, New Zealand.

Jane Jeffcoat, RN, NP, MHSc, is a nurse practitioner at Te Korowai Hauora o Hauraki, Waikato, New Zealand.

LANGUAGE AND COMMUNICATION: A VITAL COMPONENT OF HEALTH FOR PEOPLE WITH REFUGEE BACKGROUNDS

ABSTRACT

Aim: This article reports on a collaborative project that explored transdisciplinary understandings of the implications of learning English for the health and well-being of people who have come as refugees to Aotearoa New Zealand.

Background: It is important to understand learners' backgrounds and wider social worlds to best offer them opportunities for learning the English language, which is in most cases a significant factor in health literacy and in being able to access health care.

Methodology: Secondary analysis was used to analyse the health implications of an emergent data set from a primary research study with learners who were refugees. Sixty adults of refugee backgrounds participated in the primary research. Ages of participants ranged from 18 to 64 years, and the participants were predominantly female.

Findings: The key themes developed from the secondary analysis were: complexity of life experience, challenges to living and learning, family responsibilities, challenges to "peace of mind" and mental health, and personal agency. Eliciting narratives about who people are, where they are from, and how migration affects them at all levels of daily life, and therefore their health and well-being, is integral to culturally safe practice with people with refugee backgrounds.

Conclusions: The health of new New Zealanders is a social equity issue that nurses and other health and social-care professionals need to be concerned with, especially in creating culturally safe conditions for people with refugee backgrounds to engage well with health services.

This article was accepted for publication in November 2020.

KEY WORDS

Refugee, language development, health and well-being, nursing.

INTRODUCTION

This article argues for professions to work together to better meet language development and health needs of people who migrate to Aotearoa New Zealand as refugees. The article grew out of a conversation at a research seminar where the language teacher authors were presenting the findings of language

development research with learners who were refugees. The two nurses present recognised the health implications of these findings and we have undertaken a joint transdisciplinary secondary analysis process to translate the findings of the primary study into a health care context for nursing.

The primary research on language development reported here is

part of a wider research project focused on the learning and teaching needs of learners with emerging literacy (Field, 2019; Kearney, 2019; Field & Kearney, in press). In many cases, new New Zealanders may already be orally fluent in one or more languages or dialects, but need to develop oral and written English language skills to function in our society, which is dominated by English. Many of these people are learning to write in English without having first been able to write in any other language.

This article backgrounds the current situation in Aotearoa New Zealand for arrival of people with refugee backgrounds. It briefly reviews literature on learning a language and a transdisciplinary frame suggested for this, and relevant nursing and health literature. It introduces the researchers, their intentions for the research, methodology and methods and theories underpinning these. Following that, we highlight the voices of some English language learners from refugee backgrounds, and analyse and reflect on these short narratives and their relevance for primary health care and nursing practice.

BACKGROUND

Aotearoa New Zealand had a yearly quota of 750 refugees for more than 30 years, from 1987 to 2018. The number then increased to 1000 people and in July 2020, the quota was scheduled to increase to 1500 (Immigration New Zealand, 2018). This effectively doubles the number of people each year who will require support from education and health services, and to find a home and employment, or to generate income from their own business (Beaglehole, 2005). The United Nations High Commission for Refugees makes a distinction between a “refugee” and a “migrant”. A refugee is someone forced from their home by conflict or persecution, whereas a migrant voluntarily moves in search of better fortunes (McNamee, 2017).

These new New Zealanders from refugee backgrounds, who are welcomed into the country under the auspices of Te Tiriti o Waitangi as tauiwi, “people from afar” (Walker, 2004), spend an initial six weeks at Auckland University of Technology’s (AUT) Mangere refugee immigration centre in Manukau City. They complete a programme which includes English language and literacy classes, health checks, other skills and an opportunity to reflect on the challenges of moving into a new society (Refugee Education Centre, 2020). Informal reports reveal that the welcoming ceremony, with a formal pōwhiri led by Māori, is a powerful experience for people who have been homeless or in danger in their homelands, moving from country to country, possibly escaping war (Hayward, 2019).

In earlier years, community groups, church groups and individuals took responsibility for helping these people into new homes. As numbers of refugees and migrants have increased, the Government has taken over and now contracts the New Zealand Red Cross and other non-governmental organisations (NGOs) to provide resettlement and employment services for new refugee families and individuals. Eight reception centres have been developed over the decades: Auckland region, Hamilton, Palmerston North, Wellington region, Nelson, Christchurch, Dunedin and Invercargill. The scheduled increase in refugee numbers means that six new settlement centres are being developed: Whanganui, Levin, Masterton, Blenheim, Ashburton and Timaru (Immigration New Zealand, 2018).

English language lessons for people with migrant and refugee

backgrounds have been provided by individuals and home tutors for more than 40 years. The national home tutor network for English as a Second Language (ESOL), renamed English Language Partners in the 1990s, is contracted by government to provide community-based classes, as well as home tutors. In 2019, English Language Partners operated 22 centres nationally, had 7199 adult learners and 1705 trained volunteer language teachers (English Language Partners New Zealand, 2019). Language lessons are also offered in government institutions of technology, private educational businesses, and a variety of community-based organisations and communities, such as churches, mosques and temples and a range of NGOs.

LITERATURE REVIEW

Key literature guiding this inquiry includes research on English literacy development in Aotearoa New Zealand and related issues, such as learners’ health challenges; a transdisciplinary framework on learning a second language; and cultural safety in the delivery of health care.

Literacy development and related challenges

Research into the broader needs of people with migrant and refugee backgrounds in New Zealand (White et al. 2002) finds that learning a language requires both individual and community investment. Focusing specifically on adults learning English, research by Benseman (2014) and Shamem et al. (2002) has shown that individual language learning trajectories can often be influenced by their previous experiences. This is particularly so for learners from refugee backgrounds, who may be orally fluent in one or two languages, but able to write in neither. It is a longer process to learn to write in English, without being able to write in a first language (Tarone et al. 2009). English language teachers may need to direct learners to health services, for both physical and mental health. Hope’s (2013) research into the perceived benefits of a community-based ESOL literacy programme for migrant and former refugee women found that 11 of the 15 participants rated learning communication skills for “*speaking with the doctor*” as a benefit of the programme (p.19).

Elliot (2015) points out that over the last 25 years, people of refugee backgrounds in New Zealand have moved past being passive recipients of welfare assistance and services and being spoken for by others, to having their own strong voice. These include the development in 2009 of the National Refugee Network (NRN), a collective national voice for former refugees. It was composed of representatives from the regional Strengthening Refugee Voices grouping, an initiative of the Immigration Department to strengthen voices at a local level (Elliot & Yusuf, 2014). The Otago Stocktake (Cunningham et al. 2018), which focused on structural determinants of mental health and well-being, highlighted the importance of recognising the resilience and resourcefulness of those who have been displaced and forced to resettle in a new country. They cite Betts et al.’s (2015) emphasis on enabling “bottom-up innovation” in refugee communities and the significant well-being benefits this may provide. Literacy teachers need to be aware of community-based networks which can help learners with their health and other challenges. The stocktake highlighted the importance of language and communication to health and well-being. It cites Shrestha-Ranjit et al. (2017), who identified access to interpreters and culturally-

safe services as key to providing effective care and support. Lack of access to professional interpreters has been identified as a barrier to providing health care, particularly mental health care, for people from refugee backgrounds in Aotearoa New Zealand (Cunningham et al., 2018).

A transdisciplinary frame

As language teachers and health professionals, it is important for us to be aware, as the Douglas Fir Group (2016) explains, that when individuals are moving from the micro-level of social activity to the meso (middle) level of wider family, schools, neighbourhoods and larger institutions and organisations, that social, economic, cultural and political conditions are significant influences on them (p. 37). They also say learners' access to specific types of social experiences, and their ability and willingness to participate, are shaped by these conditions. Organisations at that wider social level would include health-care facilities, including primary health care and mental health services. Educationalist and linguist Bonnie Norton (2000, 2013) says that individuals have multiple aspects to their social identity, which change over time and potentially cause stress in the process of that change. Social identities are aspects of a person that reflect their different relationships to the world (Douglas Fir Group). Learning English is influenced by individuals' senses of identity and agency, and the power dynamics they must negotiate at multiple levels (Norton, 2000, 2013).

Research illustrates the complexity of the social identities and experiences of refugee learners. Isshi (2017) followed one adult male former refugee for 18 months. His findings suggested that migrants' everyday interactions with others shape their perceptions of who they are and their understandings of the community in which they live. Thiruselvam (2019) applies a post-colonial feminist analysis to the New Zealand context after the mosque killings in Christchurch in March 2019. She highlights many challenges that people of refugee and migrant backgrounds face, which she believes are a consequence of New Zealand's colonial settler history. In the face of the violence that she experienced, and her experience of being "othered", she concludes that *"finding a community of people with a shared view and experience of the world is an act of resistance. The care and validation we give and receive within our communities are often so healing"* (p.69). Equally critical is Chile (2002) on the experience of racism and marginalisation experienced by black African communities in this country. These insights about the complexity of experience signpost that it is important to find out about people's backgrounds and wider social worlds. This helps us offer them better opportunities to improve their English and to access health services.

Cultural safety

Cultural safety guidelines were first written by Irihapeti Ramsden in 1991, informed by Māori experiences of health services, and adopted by the New Zealand Nursing Council in 1992. Cultural safety is defined as: *"The effective nursing practice of a person or family from another culture and is determined by that person or family. Culture includes, but is not restricted to, age or generation; gender; sexual orientation; occupation and socioeconomic status; ethnic origin or migrant experience; religious or spiritual belief; and disability"* (Nursing Council of New Zealand, 2012). Ramsden highlighted the importance of nurses' behaviour and attitudes towards patients,

and their ability, or otherwise, to create trust (Manchester, 2002, p.21). De Souza (2015) has a chapter on culturally safe care for ethnically and religiously diverse communities, in an edited collection of professional perspectives on cultural safety in Aotearoa New Zealand. This acknowledges the need for New Zealand nurses to be able to respond appropriately to the growing and varied communities of people with migrant or refugee backgrounds in Aotearoa.

Clendon and Munns (2018) highlight the importance of cultural safety in the delivery of primary health care. They recommend viewing culture through a critical lens, suggesting *"understanding individuals comes from exploring their history, behaviour and particular view of the world as it is embedded in their culture, but distinctive in their patterns of attitude and behaviour"* (p. 248). We believe willingness to understand and respect cultural differences is as important in teaching literacy as it is in delivering primary health care. As teachers, we need to be aware of learners' backgrounds and take this into account where possible in the classroom. As health professionals, we also need to understand the consequences of the life experiences of former refugees who are using health services.

METHODOLOGY

The primary research

Participants in the primary study (2017-2019) were 60 adults of refugee backgrounds from Somalia, Cambodia, Colombia, Pakistan, Democratic Republic of Congo and Afghanistan. Ages ranged from 18 to 64 years old, and participants were predominantly female. They were invited to participate in the research because they had been attending ESOL literacy classes provided through English Language Partners, or at a government-funded tertiary institute in one provincial city.

The secondary research

Secondary research involves analysing data that were originally collected for another purpose. The supplementary analysis approach to secondary research involves a deeper analysis of aspects of the data that were not fully explored in the original study (Heaton, 2008; Johnston, 2014). Finding a good fit between the primary research dataset and a new research question for the secondary analysis is key to using that existing data well. The specific area of interest for the secondary analysis was identified because data from the research interviews indicated potential influences on health and well-being, and factors affecting access to health care. Our secondary analysis focused on the research question: *What are the health impacts of migration as a former refugee?*

An inductive approach to thematic analysis (Flick, 2018; Patton, 2015) provided the methodological framework. We read and re-read the transcribed responses to the interview questions, initially colour-coding to identify categories. In this article, we highlight constraints to accessing health services, which fell into broad areas: health, family and learning challenges. We chose narratives from the primary research interviews that clearly articulated health challenges in the participants' accounts of their experiences. In the secondary analysis, we found that the participants whose data we had selected for analysis shared the same country of origin. As Table 1 (see p46) shows, they were predominantly women, which was to be expected as the 60 learners interviewed for the primary research were predominantly female.

ETHICS

Ethical approval to conduct the primary research was obtained from the Wintec Human Ethics Research Committee. In collecting data for the research, particular attention was given to the potential vulnerability of the participants, including challenges with language in the process of seeking consent. A translator explained the research to the class, the language of the consent form was simplified, and written consent was obtained from each participant before commencing data collection. Pseudonyms were used for the participants' names.

FINDINGS

The key themes developed from the secondary analysis were: complexity of life experience, challenges to living and learning, family responsibilities, challenges to "peace of mind" and mental health, and personal agency.

Complexity of life experience

We offer two short narratives first, to illustrate the complexity of life experience of two women (women were the predominant participants in this inquiry):

"I left school early as I needed to look after my three siblings and my father. My mother died when I was eight. After the children grew up, I married at 30. No school for me. Then my husband passed away and I needed to work. I had children then so needed to work to provide for them. I was in Pakistan for five years and then came to New Zealand. I can read the Quran in Dari. I used to read it with my neighbour in Afghanistan." (Shantika)

"I have lived in New Zealand for 10 months. I have six children. They are all living here. 20, 16, 14, 12 and six and three. I didn't go to school. There was no school available. I can read Dari but can't write. I think it will take about four years to do everything by myself such as taking children to the doctors and solving my problems." (Sabina)

These narratives illustrate that, for these two women, their caring roles within their family, and later for their own children, have largely shaped their lives. Neither narratives reveals any formal schooling, though both can read some Dari. Consequently, embarking now on formal classes in English, they have the added challenge of learning to write in another language, without having learned that skill in their earlier language/s. New Zealand research (Benseman 2014; Shamem et al., 2002) shows that learners like these women take longer to learn English, as their progress is often interrupted by responsibilities for children and family.

The process for adult preliterate learners in learning to read and write is very different from the process for children in a print-literate culture. Adult language learners with no experience of print literacy have to learn to understand that marks on a page can become letters and words, and that written words can represent a story or a message, just as spoken words and pictures can.

Other conventions associated with written English – such as written texts having a beginning, middle and end; and that English is read from left to right and from top to bottom of the page – all need to be acquired (Burt et al., 2008). Phonemic awareness – the

connection between letters and sounds – is also a pre-reading skill. These concepts take time to learn and progress can be incremental, but in time these literacy concepts will be built. The implication for this in the health sector is that during the first years of resettlement, people may need to bring family members to fill in health forms, or need an interpreter. Participant responses revealed that 45 percent of the 60 participants in the primary study experienced physical or mental health challenges that had an impact on their learning. The four following themes emerged from participants' responses relating to health.

Challenges to living and learning

Managing health challenges had an impact on how participants were able to learn, to support their future. Similarly, other family members' health influenced whether or not participants were able to attend English language class.

"If I am well, I am learning well. Sometimes I am not well. I was in a lot of pain. I had an x-ray for my stomach and my back." (Haleema)

"I come every day, but I have two children and if they are sick I can't come. The other time I get stressed is if I phone my parents and if they are not doing well, then I get stressed." (Soraya)

Given the experiences described in these two responses, and many others, language teachers need to allow for irregular attendance by some learners because they are ill, or because family members are sick. This can mean their learning progress is continually interrupted, making development of skills slower. Slower progress has implications for how people with refugee backgrounds are able to interact with people in social institutions. It is important that challenges to living and learning for people with refugee backgrounds are recognised and understood by the representatives of social institutions who interact with them. Living with the consequences of trauma and illness experienced before, or in the process of migration, may have an impact on how they are able to take up opportunities offered to them in their host country. They may also struggle to develop the language and educational skills they need to navigate their new life.

Family responsibilities

Being responsible for family members, having health problems, and depending on children for help to meet activities of daily living, all affect a migrant or refugee's ability to interact with social institutions, including health services. Learning English is key to finding work.

"I rely on my sons for everything. I want to be independent. If my sons are not there, I can't go out, like go to the doctor." (Hindra)

"I am aware how the building procedure goes. My problem is my health. If my health improves, I might look at building or business and of course when my English is better. Stopping learning. I live with my elderly mum and I get worried when she gets sick. My mum is very old. She recently had an eye operation. She is 83." (Ahmed)

"My difficulty is I can't talk so whenever I go somewhere, I have to take my daughters with me. So I have to wait for a chance to

Table 1. Background information for participants who made contributions about their experiences (2017-2019)

Pseudonym	Age	Gender	Country of origin	Languages spoken on arrival	Years of prior education	Years living in NZ	Other features of interest
Shantika	48	F	Afghanistan	Dari Urdu	0	2	Lived in Pakistan for 5 years. Learned Urdu.
Sabina	38	F	Afghanistan	Dari	0	6 months	
Haleema	57	F	Afghanistan	Dari	4	3	Lived in Pakistan for some years.
Soraya	30	F	Afghanistan	Pashto	0	2	
Hindra	57	F	Afghanistan	Dari	0	2	
Ahmed	45	M	Afghanistan	Dari	8	2	Learned to read and write in Dari at the Madrasa. Leg injuries from the conflict.
Rani	31	F	Afghanistan	Dari	0	2	Lived in Pakistan for 9 years.
Bira	42	F	Afghanistan	Dari	0	3	
Fatima	53	F	Afghanistan	Dari	6 months	3	

do this as I have a health problem.” (Rani)

These three narratives, related to health and well-being, illustrate how responsibility for and dependence on family members can constrain opportunities in life. The two women rely on their children to accompany them to a doctor or health-care appointment because their language skills are not sufficient to understand or communicate. These participants are engaged in family roles as mothers and caregivers with little potential time or other resources for self-care. The male participant also notes his family responsibilities and concerns about his ageing mother. What seems significant for these participants is that migration has distanced them from the family and other social support that may have been available to them in their home country.

Challenges to ‘peace of mind’ and mental health

Participants associated challenges to “peace of mind” and mental health with complex and threatening experiences involving the loss of family members and the stress of living in a country at war. This stress was complicated when family members had been left behind.

“My mind is not settled. My mind is in (home country). I think about my children and how they doing. During the whole of my life I have been in war. I am thinking about my daughters. When they go out the door I don’t know if they will come back. My family who have been killed. My sister and my brother are lost. We don’t know where he is. Until today I am still waiting.” (Bira)

“At school we learn something but when we go home we forget. We are thinking of our families back home when we go home and so our memory is affected.” (Fatima)

These narratives show that participants’ minds are occupied with deep and lasting concerns, focused on the loved ones they have lost, and the worry and grief associated with that loss, while at the same

time endeavouring to find a place in their host country. As language teachers, we need to try to understand learners’ backgrounds. And we need to adapt our teaching style to create a safe, accepting environment in class, where each learner can feel respected and accepted, with supportive cooperative engagement between teacher and learners. Understanding the unique circumstances that have brought former refugees to New Zealand and the mental health impact of those experiences is also critical for health professionals.

Personal agency

We have chosen this short narrative because it clearly illustrates the power of human agency, as Norton (2013) describes it. This participant has decided that attending class is the way forward to create change in her circumstances, so she attends, despite her health challenges:

(Soraya) “I am sick, but I still come because if I sit at home nothing will change.”

This narrative shows how the participant is courageous in her daily life and understands that even while experiencing challenges to her health, she has power to influence her circumstances through her own actions.

DISCUSSION

People who migrate to New Zealand as refugees are likely to experience profound challenges to their social identity (Norton, 2000, 2013). As migrants, refugees are likely to have less power in relationships with people and institutions in their host country, and as Thiruselyam (2019) and Chile (2002) clearly illustrate, particularly when accessing health care. It is important that nurses are aware of refugee populations and the challenges they face in becoming new New Zealanders. Primary health care workers need to find out from former refugees information about their background, where they are from, and how their experiences have affected them, including effects

on their health and well-being. This is a skill that health professionals need to deploy with sensitivity, so the individual can feel safe and trust the health-care worker. As we explain later in the discussion, this understanding of who people are is particularly important for culturally safe practice with people of migrant or refugee backgrounds. This is important, because migration results in a far-reaching reordering of migrants' daily lives at all levels of social activity (Douglas Fir Group, 2016), which has significant health consequences. These health consequences may be amplified for people who have experienced significant trauma while leaving their home countries. While migrants have chosen to relocate, refugees may have had little choice in leaving their home country (McNamee, 2017).

The impact of experiences before migration is a potential negative influence on health (Castaneda et al., 2015). One participant in this study noted, *"my mind is not settled"*, indicating the impact of past trauma and worry about family left behind in their country of origin. Many people with refugee backgrounds have experienced traumatic events that have an ongoing impact on their mental health. They may also have physical health conditions that require long-term support from health-care services. Participants in this study shared how the negative health effects of prior events and experiences are ongoing, even after they have settled in a country where previously experienced threats no longer exist. The effect of past trauma on people with refugee backgrounds should not be under-estimated (George, 2010). Research in Canada (Pottie et al., 2011) found that all migrants, even those who were healthy on arrival, had a subsequent decline in health. This finding was attributed to differing health needs of migrants, owing to exposure to disease, migration experiences, genetic predispositions and living conditions in the host country.

Social isolation or exclusion in the process of becoming settled in their host country have negative impacts on the health of people with refugee backgrounds. Separation from family, and the loss of familiar social norms and cultural practices, may affect their mental health, causing anxiety and depression. Davies et al. (2009) acknowledge that migrants' ongoing health may be determined by their ability to be included in communities and access appropriate and acceptable health services in their host country. The demands of daily living, family responsibilities and communication barriers can impede migrants' ability to feel at home in a community and to seek help to manage their health and living requirements. Davies et al. also note that cultural differences in understanding of mental health may also affect health-seeking behaviour. Where family are present or have migrated together, the support that family provide may ease migrants' worries. However, for people with refugee backgrounds, migrating with family members is not always possible.

Anderson (2008) suggests that migrants use multiple strategies to navigate the New Zealand health-care system, but this ability is influenced by their knowledge and experience of health services before migrating. For people with refugee backgrounds, barriers to engagement with health services may be related to language problems, health literacy and a lack of understanding about how the New Zealand health system works and what they are entitled to. Social networks provide essential support when migrants do not know where to go for help when they get sick, or how to engage with health services. The level of comfort people with refugee backgrounds have with specific health services may be informed by

their experiences of health services in their own country. This may also be true for how they evaluate which health services they prefer to attend.

Health literacy – the ability to access, understand or apply health information – is a key factor in the health of people with refugee backgrounds (Davies et al., 2009; Wångdahl et al., 2014). Some participants in this study were illiterate in their own language, having had limited opportunities for schooling in their home countries. They were learning to read for the first time in English, a process that may take them a number of years to achieve some proficiency. People with refugee backgrounds who have lower levels of education, or less cultural knowledge of the host country, may be less likely to seek health care and engage in healthy behaviour (Dowling et al., 2019). They highlight the importance of supporting the education needs and health literacy of migrants to help prevent their health declining.

Nurses need to engage with people who have refugee backgrounds in culturally safe ways to support them in managing their health and well-being (de Souza, 2015; Nursing Council of New Zealand, 2012). The health inequalities that exist between migrants and other populations in New Zealand are partly attributable to lower use of the health service. However, providing culturally safe care for people with refugee backgrounds can be complex. It is challenging for health professionals to overcome language barriers and to fully understand the experiences migrants bring to health-care encounters. The availability of high quality translation is essential for working with migrants who are not yet fluent in English (Suphanchaimat et al., 2015). While some people with refugee backgrounds rely on family members to interpret for them, positioning family members in this way carries its own challenges in terms of confidentiality and the power dynamics in family relationships. The use of male interpreters for women seeking health care may constrain the ability of these women to communicate with health-care providers, particularly concerning women's health issues. The same concerns may arise for male migrants with female interpreters. Gaining the trust of people with refugee backgrounds, and developing personalised relationships with them, is essential for nurses to provide them with the best care (Ministry of Health, 2012).

CONCLUSIONS

This transdisciplinary inquiry has been transformational for the researchers, because it has taken us beyond the scope of our own disciplines. The narratives have allowed us insight into aspects of the participants' lives. People with migrant backgrounds, especially people who come to New Zealand as refugees, are exposed to unique factors affecting their physical and mental health, and consequently their ability to learn a new language. The health of these new New Zealanders is a social equity issue that nurses need to be concerned with. They need to create culturally safe conditions so migrant populations can engage effectively with health services. An understanding of the specific challenges relating to migration and the unique experiences of new New Zealanders would enhance these encounters.

RECOMMENDATIONS

Promoting community-level engagement with primary-care services may help to reduce inequalities for refugee populations. As advocates for people with refugee backgrounds, nurses need to

influence policy makers to recognise the individual, social, cultural and historical factors that affect the health of migrants. Following the Otago Stocktake (Cunningham et al., 2017), this will require an acknowledgement of the multi-lingual environment in New Zealand and explicit policy to ensure that important signs are regularly reproduced in several languages, including te reo Māori.

Health services should engage with people with refugee backgrounds in culturally safe and responsive ways, showing understanding of their unique experiences. This requires a diverse health workforce, both at policy development level and at on-the-ground service level.

Nurses should also recognise the importance of social networks in overcoming the unique constraints migrants encounter in using health services. These constraints include communication barriers, challenges in attending appointments, and different cultural and social interpretations of health and illness. Nurses, and other health professionals, also require contemporary evidence-based clinical guidelines to inform how they work with migrants and refugees.

LIMITATIONS

This study involved a relatively small sample of people who came to New Zealand as refugees, so the findings of this research may not be generalisable to other migrant populations either here or overseas.

However, the stories told by the participants are likely to be echoed in the lives of refugees who are yet to settle in Aotearoa New Zealand. Data for this study were originally gathered to understand more about how learners with refugee backgrounds experience learning English, rather than having a specific focus on health. This secondary analysis of an existing data set could be considered a limitation in the methodology. The importance of language skills, both written and spoken, is a key factor which links both disciplines. This, in our opinion, reduces the limitation. However, this analysis provides a stepping-off point – a potential focus for further research on the relationships between people with refugee or migrant backgrounds and the health services and health professionals they engage with. Further research may point the way to a greater level of equity in our primary health care services.

REFERENCES

- Anderson, A. (2008). Understanding migrants' primary healthcare utilisation in New Zealand through an ethnographic approach. *Diversity in Health and Social Care*, 5, 291–301.
- Beaglehole, A. (2005). Story: Refugees. *Te Ara – the encyclopaedia of New Zealand*. <http://www.TeAra.govt.nz/en/refugees/page-1-6>
- Benseman, J. (2014). Adult Refugee Learners with Limited Literacy: Needs and Effective Responses. *Refuge*, 30(1), 93–103. <https://doi.org/10.25071/1920-7336.38606>
- Betts, A., Bloom, L., & Weaver, N. (2015). *Refugee innovation: Humanitarian innovation that starts with communities* [report]. Refugee Studies Centre.
- Burt, M., Peyton, J. K., & Schaetzel, K. (2008). *Working with adult English language learners with limited literacy: Research, practice, and professional development*. Center for Applied Linguistics. <https://lincs.ed.gov/professional-development/resource-collections/profile-347>
- Castañeda, H., Holmes, S. M., Madrigal, D. S., Young, M. E. D., Beyeler, N., & Quesada, J. (2015). Immigration as a social determinant of health. *Annual Review of Public Health*, 36, 375–392. <https://doi.org/10.1146/annurev-publhealth-032013-182419>
- Chile, L. M. (2002). The imported underclass: Poverty and social exclusion of black African refugees in Aotearoa New Zealand. *Asia Pacific Viewpoint*, 43(3), 355–366. <https://doi.org/10.1111/1467-8373.00182>
- Clendon, J., & Munns, A. (2018). *Community Health and Wellness: Principles of primary health care*. Elsevier Health Sciences.
- Cunningham, R., Kvalsvig, A., Peterson, D., Kuehl, S., Gibb, S., McKenzie, S., & Every-Palmer, S. (2018). *Stocktake report for the mental health and addiction inquiry*. University of Otago. <https://mentalhealth.inquiry.govt.nz/assets/Summary-reports/Otago-stocktake.pdf>
- Davies, A. A., Basten, A., & Frattini, C. (2009). Migration: a social determinant of the health of migrants. *Eurohealth*, 16(1), 10–12. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.462.6286&rep=rep1&type=pdf>
- De Souza, R. (2015). Culturally safe care for ethnically and religiously diverse communities. In D. Wepa (Ed.), *Cultural Safety in Aotearoa* (2nd ed., pp. 189–201). Cambridge University Press.
- Douglas Fir Group. (2016). A Transdisciplinary Framework for SLA in a Multilingual World. *The Modern Language Journal* 16, 19–47. <https://doi.org/10.1111/modl.12301>
- Dowling, A., Enticott, J., Kunin, M., & Russell, G. (2019). The association of migration experiences on the self-rated health status among adult humanitarian refugees to Australia: an analysis of a longitudinal cohort study. *International Journal for Equity in Health* 18, 130. <https://doi.org/10.1186/s12939-019-1033-z>
- Elliot, S. (2015). Toward equal participation: An autoethnography of facilitating consultation in the refugee sector. *Aotearoa New Zealand Social Work*, 27(3), 57–67.
- Elliot, S., & Yusuf, I. (2014). 'Yes we can; but together': Social capital and refugee resettlement. *Kōtuitui: New Zealand Journal of Social Sciences Online*, 9(2), 101–110. <http://dx.doi.org/10.1080/1177083X.2014.951662>
- English Language Partners New Zealand. (2019). <https://www.englishlanguage.org.nz/>
- Field, J. (2019, August). *Whenever I go somewhere, I have to take my daughters with me: An enquiry into the progress and strategies used for L2 literacy acquisition by former refugee adults in New Zealand*. Paper presented at the Literacy Education and Second Language Learning for Adults Conference (LESLLA), USA. <http://researcharchive.wintec.ac.nz/7048/9/LESLLA%20Presentation9.pdf>
- Field, J., & Kearney, C. (In press). Partnership in resettlement and adult education: Former refugees and host communities. Chapter to be published in *Chapter Refugee Education across the Lifespan: Mapping Experiences of Language Learning and Use*.
- Flick, U. (2018). *An Introduction to Qualitative Research*. Sage Publications Ltd.
- George, M. (2010). A Theoretical Understanding of Refugee Trauma. *Clinical Social Work Journal* 38, 379–387. <https://doi.org/10.1007/s10615-009-0252-y>
- Haywood, M. (2019, August). *The pōwhiri as an authentic welcome to newcomers*. Presentation at Manaakitanga: Welcoming refugee background learners. Refugee Education Centre, Auckland University of Technology.
- Heaton, J. (2008). Secondary analysis of qualitative data: An overview. *Historical Social Research/Historische Sozialforschung*, 33(3), 33–45. <https://doi.org/10.12759/hsr.33.2008.3.33-45>
- Hope, C. (2013). *"A thousand steps, a long time, a lot of words": The perceived and observed benefits of a community based ESOL literacy programme for migrant and former refugee women*. Centre for Languages, Waikato Institute of Technology, New Zealand. Research Monograph ISBN: 978-1-877510-07-6

- Immigration New Zealand. (2018). *Immigration Factsheets: Refugees and Asylum Seekers*. <https://www.immigration.govt.nz/>
- Isshi, D. (2017). Agency from an adult refugee's perspective. *New Zealand Studies in Applied Linguistics*, 23(2), 5-24.
- Johnston, M. P. (2014). Secondary Data Analysis: A Method of Which the Time has Come. *Qualitative and Quantitative Methods in Libraries*, 3(3), 619-626.
- Kearney, C. (2019, November). *Aotearoa 2020: Accommodating limited literacy background learners*. Applied Linguistics Association of Australia/Applied Linguistics Association of New Zealand Conference, Curtin University, Perth, Australia.
- McNamee, G. (2017). Of Sanctuary, Refuge, Migrants and Refugees. *Virginia Quarterly Review*, 93(2), 192-192.
- Manchester, A. (2002). Challenging and changing the culture of nursing. *Kai Tiaki Nursing New Zealand*, 8(1), 20-21.
- Ministry of Health. (2012). *Refugee Health Care: A handbook for health professionals*. <https://www.health.govt.nz/system/files/documents/publications/refugee-health-care-a-handbook-for-health-professionalsv2.pdf>
- Norton, B. (2013). *Identity and language learning: Extending the conversation*. Multilingual Matters.
- Norton, B. (2000). *Identity and language learning: Gender, ethnicity and educational change*. Pearson Education Ltd.
- Nursing Council of New Zealand, Te Kaunihera Tapui o Aotearoa. (2012). *Tikanga Whanonga: Code of conduct for nurses*. www.nursingcouncil.org.nz/Public/Nursing/Code_of_Conduct/NCNZ/nursing-section/Code_of_Conduct.aspx
- Patton, M. (2015). *Qualitative research and evaluative methods: Integrating theory and practice* (4th ed.). Sage Publications Inc.
- Pottie, K., Greenaway, C., Feightner, J., Welch, V., Swinkels, H., Rashid, M., Narasiah, L., Kirmayer, L., Ueffing, E., MacDonald, N., Hassan, G., McNally, M., Khan, K., Buhrmann, R., Dunn, S., Dominic, A., McCarthy, A., Gagnon, A., ... & coauthors of the Canadian Collaboration for Immigrant and Refugee Health. (2011). Evidence-based clinical guidelines for immigrants and refugees. *CMAJ*, 183(12), E824-E925. www.cmaj.ca/content/183/12/E824.short
- Refugee Education Centre. (2020). Auckland University of Technology. www.aut.ac.nz/.../aut-centre-for-refugee-education
- Shamem, N., McDermot, K., Martin Blaker J., & Carryer, J. (2002). *Through Language to Literacy: A Report on the Literacy Gains of Low Level and Pre-literate Adult ESOL learners in Literacy Classes*. Auckland, New Zealand: Unitec, AUT, ESOL Home Tutor Service. www.educationcounts.govt.nz/publications/tertiary_education/education-literacy/28063/section-5
- Shrestha-Ranjit, J., Patterson, E., Manias, E., Payne, D., & Koziol-McLain, J. (2017). Effectiveness of primary health care services in addressing mental health needs of minority refugee population in New Zealand. *Issues in Mental Health Nursing*, 38(4), 290-300. <https://doi.org/10.1080/01612840.2017.1283375>
- Suphanchaimat, R., Kantamaturapoj, K., Putthasri, W., & Prakongsai, P. (2015). Challenges in the provision of healthcare services for migrants: a systematic review through providers' lens. *BMC Health Services Research*, 15(1), 390. <https://doi.org/10.1186/s12913-015-1065-z>
- Tarone, E., Bigelow, M., & Hansen, K. (2009). *Literacy and second language oracy*. Oxford University Press.
- Thiruselvam, N. (2019). Care ethics and narratives of the 'grateful refugee' and 'model minority': A postcolonial feminist observation of New Zealand in the wake of the Christchurch terror attacks. *Women's Studies Journal*, 33(1) 62-70.
- Walker, R. (2004). *Ka whawhai tonu matou: Struggle without End*. Penguin Books Ltd.
- Wängdahl, J., Lytsy, P., Mårtensson, L., & Westerling, R. (2014). Health literacy among refugees in Sweden – a cross-sectional study. *BMC Public Health*, 14(1), 1030. <https://link.springer.com/article/10.1186/1471-2458-14-1030>
- White, C., Watts, N., & Trlin, A. (2002). New Zealand as an English-language learning environment: Immigrant experiences, provider perspectives and social policy implications. *Social Policy Journal of New Zealand*, 18, 148-162.



Peta Taylor



Heather Josland



Natalia Batyaeva

About the authors: Peta Taylor, RN, RM, PhD (medicine), BSc(hons), GradCertNurs, DipTch(tert), is a senior academic staff member in the Department of Health Practice, Ara Institute of Canterbury, Christchurch, New Zealand.

Her correspondence address is: peta.taylor@ara.ac.nz

Heather Josland, RN, MHLthSci, PGCert ClTch, is a senior academic staff member in the Department of Health Practice, Ara Institute of Canterbury, Christchurch.

Natalia Batyaeva, RN, PGDipHlthSci, is a staff nurse in acute inpatient services at Hillmorton Hospital, Christchurch.

This article was accepted for publication in October 2020.

LITERATURE REVIEW: THE CASE FOR APPOINTING PARKINSON'S DISEASE NURSE SPECIALISTS

ABSTRACT

Aim: To identify gaps in the management of Parkinson's disease, and limitations in the education and role of Parkinson's nurses; and to recommend changes that optimise the well-being of the person with Parkinson's and minimise the health-care burden, including the establishment of a Parkinson's nurse specialist role.

Background: Parkinson's is a progressive, incapacitating neurodegenerative disorder which is rapidly increasing in incidence. It is debilitating and socially isolating for the person and leads to an increased risk of falls, fractures and hospital admissions.

Method: Literature exploring recent key aspects of Parkinson's was sourced from textbooks and databases including Science Direct, ProQuest, PubMed, Google Scholar and the website of Dr Toni Pitcher of the New Zealand Brain Research Institute, Christchurch.

Findings: Gaps in Parkinson's care include incomplete understanding of Parkinson's-specific care by health-care professionals and inconsistent medication administration or compliance, resulting in falls and fractures. In New Zealand there is a shortage of neurologists with resultant dependence on general practitioners. There is no formal education of Parkinson's nurses and limited coordination of Parkinson's care. In contrast, the development and education of dedicated Parkinson's nurse specialists in Europe has optimised care and medication use, thus reducing the risk of falls.

Conclusion: Establishing a New Zealand programme to educate Parkinson's nurse specialists and general practitioners could be an important strategy to support other health carers and ensure a co-ordinated interprofessional approach to optimise function, independence and social interaction of people with Parkinson's, and avoid unnecessary injuries. Improved knowledge and delivery of health care for this vulnerable group may be a cost-effective way to reduce hospital admissions and the economic burden of Parkinson's health care.

KEYWORDS

Parkinson's, chronic neurological disorder, older person's health, specialist nurse, economic burden, falls risk.

INTRODUCTION/BACKGROUND

Parkinson's is a slowly progressive neurodegenerative condition which leads not only to motor impairments like tremor, rigidity and bradykinesia, but also to diverse non-motor symptoms caused by damage to neurons in the central and peripheral nervous systems (Kalia & Lang, 2015; Marinus et al., 2018). In Sweden, the United Kingdom and parts of Australia, Parkinson's nurse specialists are appointed to optimise care for patients with this debilitating and socially isolating condition. This article briefly reviews the burden of

Parkinson's in New Zealand. It draws attention to the need for education facilities, along with other stakeholders, to consider establishing a New Zealand Parkinson's nurse specialist role and a more holistic model of care. This could improve Parkinson's services, and reduce the risk of falls and the need for acute hospital admissions. A new model of care would involve nurses with diverse responsibilities ranging from the education sector to primary and tertiary care and management. It is important to first clarify the pathology, risk factors, clinical manifestations, and current care of Parkinson's.

METHOD

Aim

To explore the current management of Parkinson's, identify any relevant gaps and strengths and make recommendations for an improved model of care which would enhance patient health, and reduce the burden on the health system. Key concepts were drawn from the literature to investigate the validity of establishing a Parkinson's nurse specialist role.

Search strategy

The standard search strategy explored articles from electronic databases, including Science Direct, ProQuest, PubMed, CINAHL and Google Scholar. The search was refined by peer-reviewed articles or research papers published in English from 2010 to 2020 to obtain the most up-to-date and reliable information. Search terms using appropriate codes, parentheses and Boolean operators ("AND", "OR") in the abstract field were: Parkinson's disease AND nurse OR nurse specialist; Parkinson's disease AND Lewy bodies OR neurologist OR falls risk OR inter-professional OR economic burden OR nursing care OR caregiver OR medical practitioner.

Inclusion criteria, which determined relevance, specified that abstracts incorporated Parkinson's disease or chronic neurological disorder and clinical manifestation, management/treatment, nurse, economic burden, risks or care model. Excluded were articles which focused on detailed genetic mutations or animal studies, or did not include information related to Parkinson's in humans, or nursing or medical management of people with Parkinson's (PwP). The final selection included articles relating to understanding the pathology and clinical application of managing Parkinson's. Articles found in the databases were: Science Direct (20), ProQuest (4), PubMed (2), Google Scholar (15) and CINAHL (4). A further hand search of references of relevant literature was also done.

Relevant articles were appraised, and key data was extracted, evaluated and discussed to achieve optimal recommendations for future Parkinson's management

FINDINGS

Incidence

Neurological disease has become the main cause of disability internationally (Dorsey et al., 2018). In particular, the recorded incidence of Parkinson's has doubled between 1990 and 2015, making it not just the second major source of neurological disability and mortality, but a rapidly-increasing source (Dorsey et al.; Skelly et al., 2015; Vos et al., 2015). In 2016, Parkinson's affected an estimated 6.1 million individuals worldwide. Of these, 41,016 PwP lived in Australia and 6249 lived in New Zealand (Dorsey et al.). Incidence in New Zealand is predicted to increase in a linear pattern to 19,700 in 2038 (Myall et al., 2017). With this potential rise, there is an increased need for intervention.

Most ethnic groups in New Zealand's multicultural society are reported to have a lower incidence of Parkinson's per 100,000 people – 114 in the Māori population; 160 in the Pasifika; and 174 in the Asian populations – than the 233 in the New Zealand European population (Alamri, 2020). However, the incidence among Māori could be underestimated due to poorer access to health care and delayed diagnosis (Pitcher et al., 2018).

Risk factors

Factors suspected to lead to increased incidence of Parkinson's include intensified production and use of pesticides and other industrial chemicals, and presence of other pollutants (Dorsey et al., 2018). Parkinson's may be idiopathic, but infection and head injury have also been implicated (Marsh, 2019). It is slightly more common in males (Kalia & Lang, 2015; Nicoletti et al., 2017). Parkinson's may develop as a result of complex interactions between these environmental factors and genetic factors (Aarsland, 2016; Kalia & Lang), but the main risk factor is increasing age. Parkinson's is rare in those under 20 years of age (Dorsey et al.). Approximately 4 percent of those with Parkinson's are aged under 50 years (Dorsey et al.). More commonly, it is diagnosed at age 55-65 years (Foltynie & Kahan, 2013). Incidence peaks at age 85-89 years (Dorsey et al.). Prevalence of Parkinson's is highly likely to increase further as populations age (Kalia & Lang) and industrial development and pollution intensifies (Dorsey et al.). The projected increase in numbers of PwP makes it urgent to gain deeper understanding of the aetiological mechanisms of Parkinson's (Vallerga et al., 2020).

Pathology

Parkinson's develops as particularly vulnerable neurons are progressively damaged and die (Dickson, 2018). The neurons most notably affected are those in the substantia nigra of the midbrain. These neurons normally supply the inhibitory neurotransmitter, dopamine, to the basal nuclei, which in turn, initiate, manage and finely regulate body movement (Barton & Johnston, 2017; Johnston, 2017; Marsh, 2019). With reduced dopamine, the excitatory cholinergic neurotransmitter, acetylcholine, dominates in the basal nuclei (Barton & Johnston). The loss of dopamine and its inhibitory effects leads to loss of voluntary and smooth muscle function (Harris & Fry, 2017), and to motor dysfunction, including bradykinesia and rigidity (Kalia & Lang, 2015).

A further key feature in the development of Parkinson's is the presence of Lewy bodies, which are protein deposits in the cytoplasm of neuronal cells. Lewy bodies contain abnormal, insoluble accumulations of the miss-folded protein, α -synuclein, and are found in the neurons of the peripheral and central nervous systems (Kalia & Lang, 2015). Lewy bodies are associated with cognitive decline (Aarsland, 2016; Kalia & Lang; Weil et al., 2017). The α -synuclein is also thought to aggregate in the presynaptic terminal, reducing the release of neurotransmitters (Kalia & Lang; Marsh, 2019; Weil et al.). A third feature of Parkinson's that is being researched is neuroinflammation and oxidative stress (Kalia & Lang).

Clinical manifestations, treatment, and management

Optimal management of Parkinson's depends on understanding its diverse clinical manifestations. Table 1 (see p52-53) lists some of these common manifestations, which depict physical and mental dysfunction, with increased risk of falls and injury (Tinelli et al., 2016). They also lead to social isolation and stress for spouses, who are the predominant caregivers for PwP (McLaughlin et al., 2011). The earliest symptoms are usually non-motor, including olfactory impairment, constipation, pain, sleep disorders, fatigue and anxiety (Kalia & Lang, 2015; Pfeiffer, 2016). These can subtly present many years before the classic primary and secondary motor symptoms (Kalia & Lang). The primary motor symptoms include resting tremor,

Table 1. Clinical manifestations and their impact on patient function	
Clinical manifestation	Description/impact on patient function
	Primary motor manifestations
Tremor	• Resting tremor, initially unilateral in distal extremities (Moustafa et al., 2016).
Bradykinesia	• Slow movement (Moustafa et al., 2016).
Rigidity/loss of flexibility	• Increased resistance of a muscle to passive stretching (Moustafa et al., 2016).
Postural instability	• Impaired postural reflexes make it difficult to maintain balance (Kalia & Lang, 2015; Moustafa et al., 2016). • Maintaining a flexed position and leaning forward with a stooped posture (Marsh, 2019).
	Secondary motor manifestations
Compromised gait	• Shuffling movement, which includes difficulty raising feet from the floor during the swing phase, so the individual is unable to lift their toes much from the ground, and has difficulty moving their legs and thrusting forward (Moustafa et al., 2016).
Festination	• Rapid, accelerating steps (Moustafa et al., 2016).
Freezing of gait	• Sudden inability to move as if the feet are glued to the floor. Exacerbated in the stress of trying to answer the phone in a hurry or executing a manoeuvre difficult for a PwP. Major cause of imbalance and falls (Moustafa et al., 2016).
Flat foot walking instead of heel to toe	• (Moustafa et al., 2016).
Impaired handwriting – micrographia	• Small writing with a spiky contour (Moustafa et al., 2016).
Impaired speech	• Speech difficult to hear, monotonous, slow or slurred and hard to understand due to tongue or throat muscle weakness (Moustafa et al., 2016).
Limited precision grip	• Between index finger and thumb (Moustafa et al., 2016).
Loss of facial expression	• Reduced ability to interpret facial expressions in others. The cause may be complex (Marsh, 2019; Ricciardi et al., 2017).
	Sensory manifestations
Olfactory impairment	• Reduced sense of smell is present in up to 90% of PwP on testing (Bhat et al., 2018; Pfeiffer, 2016).
Visual impairment	• Retinal thinning or retinal deposits of α-synuclein cause a variety of symptoms including reduced contrast or reduced colour perception. (Pfeiffer, 2016).
Pain	• Musculoskeletal pain is the most common pain experienced. Pain distinctly reduces quality of life. (Pfeiffer, 2016).
	Behavioural manifestations
Depression	• Depression may be present (Bhat et al., 2018; Pfeiffer, 2016) before the diagnosis of Parkinson's. The main features are a depressed mood, lack of appreciation of pleasure and loss of interest. It is diagnosed using the criteria in the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (Marinus et al., 2018).
Anxiety	• Anxiety may be present in 25-40% of patients and include generalised anxiety disorder, panic or phobia (Bhat et al., 2018; Pfeiffer, 2016).
Impulse-control disorders	• These may involve impulsiveness, failure to resist temptation, compulsions and behaviour that may be harmful (Marinus et al., 2018). Women are more likely to binge eat and men to exhibit excessive sexual behaviour. They add to the challenges facing the caregiver (Marinus et al., 2018).

Dementia	• Mild but increasing cognitive impairment may lead to dementia in 80% of PwP with duration of greater than 20 years (Pfeiffer, 2016). It includes apathy and indifference, hallucinations and attention and memory deficits (Marinus et al., 2018).
Apathy and indifference	• May be present in 40% of PwP (Pfeiffer, 2016). Apathy involves reduced initiative and lack of concern for daily routines. The patient may lose interest in a pursuit (Marinus et al., 2018). Apathy and depression may occur together (Marinus et al., 2018).
Autonomic dysfunction	
Orthostatic hypotension	• This may present as feeling weak or faint or as unclear thinking or blurred vision on standing (Pfeiffer, 2016).
Inappropriate sweating	• Sporadic incidents of heavy sweating occur in some patients (Pfeiffer, 2016).
Gastrointestinal disturbances	• Gastroparesis (delayed movement of food into the small intestine) (Tinelli et al., 2016). This may cause bloating, abdominal fullness, anorexia, nausea, vomiting and weight loss. It may also hinder absorption of medications, and cause constipation (Pfeiffer, 2016).
Dysphagia/drooling	• Reduced ability to swallow may lead to drooling. This increases the risk of aspiration. It also adds to social embarrassment and isolation (Pfeiffer, 2016).
Cystitis	• Urine tract infections may be present in 25-50% of patients (Pfeiffer, 2016). Urinary retention may contribute to infection.
Detrusor hyperactivity	• Frequency, nocturia, urgency and urge continence may be present (Pfeiffer, 2016).
Sexual dysfunction	• Erectile dysfunction in males and low libido in females (Pfeiffer, 2016).
Sleep disturbances	• Insomnia and frequent night waking and broken sleep is common for PwP (Marinus et al., 2018; Pfeiffer, 2016).
Fatigue	• Fatigue is one of the most incapacitating features of PD (Pfeiffer, 2016).

bradykinesia, muscular rigidity and postural instability (Moustafa et al., 2016). Secondary motor symptoms encompass a shuffling gait, impaired handwriting and soft/dysarthric speech (Moustafa et al.). Diagnosis of Parkinson's is based on evidence of these symptoms.

Treatment is symptomatic, because no medications are available to slow or reverse the degenerative pathology (Kalia & Lang, 2015). A dopamine agonist is recommended to control initial symptoms in younger patients, with levodopa added to the regime when it is no longer totally effective (Tinelli et al., 2016). The addition of a dopamine agonist in early Parkinson's is thought to delay the need for administration of levodopa, thereby avoiding motor fluctuation side effects associated with levodopa (Tinelli et al.). Levodopa is the medication of choice for tremor, stiffness, slow movement, poor balance, reduced mobility and limited muscle control (Tinelli et al.). Monoamine oxidase type-B inhibitors such as selegiline are also effective (Tinelli et al.). Antidepressants may be prescribed where appropriate (Kalia & Lang). The aim of these treatments is to relieve the impact of Parkinson's, optimise quality of life and facilitate independence. Therefore, administration, side effects and compliance need to be managed by skilled prescribers and caregivers (Harris & Fry, 2017). Another important aspect of care is to minimise risk of falls, and this includes managing confusion, delirium and dementia (Harris & Fry).

Currently, the role of Parkinson's nurses in New Zealand is to provide home visits, and to advise on mobility, medication,

exercise, educational seminars, social activities and support groups. They can also organise referrals, family/whānau meetings, and, where necessary, advocate with employers or hospital specialists (Parkinson's New Zealand, 2018). These services would be enhanced by increasing the number of Parkinson's nurses and by providing them with specialist Parkinson's education.

One of the most important skills of the Parkinson's nurse is expertise in monitoring medication, because precise medication administration has a profound effect on PwP. Poor adherence to prescribed medications has been reported; it results in fluctuation of medication levels, reduced control of symptoms and increased hospital admissions (Tinelli et al., 2016). However, the view of New Zealand Parkinson's nurse Helen Skene, is that PwP are "highly adherent to medication" (personal communication, August 12, 2020). Parkinson's medication is a complex "niche medication", and its administration can be disrupted during hospitalisation if an individual's medication regime is inadvertently changed by medical or nursing staff. Disrupted medication may be the most problematic aspect of care, compromising motor function and reducing mobility (Oguh & Videnovic, 2012). It may also cause anxiety for the PwP who has had control taken away from something they or their partner have been capably managing. An interprofessional approach, particularly on medication regimens is recommended (Oguh & Videnovic). The problem could be mitigated by a unified policy for management of PwP on admission and a pharmacy review, and by increased

availability, recognition of, and consultation with, Parkinson's nurses.

Gaps in current care

A gap in care can also occur in the community, when people with chronic conditions have needs that are inadequately addressed by current management systems (Boehmer et al., 2019). This is particularly true for PwP in rural areas, where patients have limited timely access to general practitioners (GPs) or nurses (NZRGPN, 2019). The majority of PwP live at home and are cared for by their spouse (McLaughlin et al., 2011). They may initially have little understanding of Parkinson's (Shippee et al., 2015). Health-care workers in hospitals and residential care facilities aim to deliver competent basic nursing care. However, Parkinson's is a complex condition with diverse symptoms and therefore particularly challenging to manage effectively. Without good understanding of Parkinson's care, gaps will exist.

If the PwP's mobility is not assessed frequently enough as the disease progresses, and corresponding levels of medication are not adjusted precisely enough, there is a greater risk of falls and fractures, resulting in increased time in ED and acute hospital care (Harris & Fry, 2017). These are not just stressful for the patient but result in the health dollar being spent in acute care, instead of more prudent spending in preventative medicine.

The specific needs of hospitalised PwP are demanding for staff. Lack of understanding and inability to anticipate common issues for PwP may lead to falls and injuries and prolonged hospitalisation (Ahlskog, 2014). An analysis of in-hospital care of PwP by geriatricians, neurologists and Parkinson's specialist nurses in 65 institutions in the United Kingdom (UK) reported that care was "satisfactory" rather than "good/very good" and more than 20 percent rated care as "poor" (Skelly et al., 2015). This study found 61 percent of these experts were not certain that Parkinson's medication was given on "bang on time", a critical factor in managing symptoms well. Another small study in the Netherlands revealed limited understanding of Parkinson's concerns by health professionals (van Rumund et al., 2014). It also identified poor timing of levodopa administration. They reported a deficiency of emotional support and empathy (van Rumund et al., 2014). Aged care – whether acute hospital or long-term residential – is not always adequate for the PwP. It is the extensive and diverse needs of the PwP that create the difficulties in providing optimal care.

Providing care for PwP is also taxing for GPs, who have the initial challenge of diagnosing Parkinson's in the protracted prodromal stage which features many common mild symptoms like anxiety and fatigue (Postuma, 2019). Furthermore, some GPs have limited understanding of Parkinson's and its management (McLaughlin et al., 2011). Ideally, GP appointments for PwP should be extended from the standard 15 minutes to one hour, to allow enough time to address the diverse symptoms, or the PwP may not have their physical and psychological needs met. A New Zealand study of 500 participants with self-reported Parkinson's revealed that more than half of Parkinson's patients relied solely on their GP for management of PD (Buetow et al., 2008). In the view of 30 percent of the cohort, the doctor provided limited information, and according to 38 percent, and did not invite their patient to participate in care planning (Buetow et al.). The shortage of neurologists in New Zealand and other developed countries (Burton, 2018) forces greater reliance on GPs to assess and manage this neurological specialty. Access

to physiotherapists was also limited (Buetow et al.). Buetow et al. concluded there should be more Parkinson's education and support for GPs. Greater coordination of care for Parkinson's is needed in New Zealand, and more recent research is required (Buetow et al.). Parkinson's nurse specialists could have a significant role in raising awareness of optimal treatment of Parkinson's and coordinating interprofessional team care.

Economic burden of PD

Because of its debilitating nature and risk of falls, the economic burden of Parkinson's is far greater than its incidence. This was reported in a review of Parkinson's expenditure over 11 countries in Europe, the United States and Russia (Mateus & Coloma, 2013). In Australia, costs related to Parkinson's exceed \$8.3 billion annually (Harris & Fry, 2017). Harris and Fry investigated emergency admissions in one Sydney hospital and noted the particularly high rate of falls and emergency department admissions in patients with Parkinson's, and longer subsequent hospital stays (Harris & Fry).

An enhanced model of care

Sweden and the UK have developed education programmes for nurses to become skilled Parkinson's nurse specialists, with an in-depth understanding of Parkinson's, its treatment and management (Hellqvist & Berterö, 2015). Parkinson's nurse specialists are also employed in Australia (Lee et al., 2015) and in Ireland (Ward & Browne, 2014). These nurse specialists work in outpatient clinics as well as providing home visits. They regularly assess their patients both physically and psychologically and evaluate the effectiveness and side effects of medications (Hellqvist & Berterö). The Parkinson's nurse specialist consults with the GP when medications need to be adjusted to improve motility and reduce risk of falls (Skelly et al., 2015), or the Parkinson's nurse specialist can adjust medications immediately, if they are a nurse prescriber (Ward & Browne). The Parkinson's nurse specialist can communicate with, and refer patients to, other members of the inter-professional team, such as doctors/specialists, pharmacists, physiotherapists and speech therapists (Hellqvist & Berterö).

In Sweden and the UK, a patient-centred model has been developed where an assigned Parkinson's nurse specialist increases continuity of care by listening to and taking an interest in the patient and their spouse, providing education, counselling and emotional support, and easing the burden of PD for both patients and their carers (Hellqvist & Berterö, 2015; Lee et al., 2015; Skelly et al., 2015). PwP valued the high level of professional skills, knowledge and experience these nurse specialists provided (Hellqvist & Berterö). They also appreciated suggestions which increased their independence. The Parkinson's nurse specialist contacted them regularly, and was available to them (Hellqvist & Berterö). When difficulties arose, people felt able to get in touch with their Parkinson's nurse specialist, rather than having to explain their background to a new health professional (Hellqvist & Berterö). This created a sense of security and trust. Dealing with Parkinson's may leave people with negative feelings and anxiety, so they valued the emotional support provided by Parkinson's nurse specialists and their help to set positive goals (Hellqvist & Berterö). The person's social and emotional health is also enhanced by an inter-professional approach, involving speech therapists, cognition and behaviour therapy, dance, music therapy, occupational therapy and physiotherapy (Bloem et al., 2015).

PwP may have many additional risk factors which combine to increase likelihood of frequent falls, resulting in minor injuries or fractures (van der Marck et al., 2014). In advancing Parkinson's, the postural reflex becomes impaired or is absent (Rinalduzzi et al., 2014) and, combined with cognitive decline, greatly increases the falls rate. However, falls are not inevitable and can be mitigated by developing a "falls and fracture prevention plan" with each patient (van der Marck et al.). They reported that optimal management should involve identifying particular risk factors for each individual and implementing prevention strategies, using an inter-professional team of a GP, geriatrician, neurologist, Parkinson's nurse specialist, and ophthalmologist, physiotherapist and occupational therapist as appropriate (van der Marck et al.). This will reduce the personal distress to the patient and economic burden to the health system.

A further development has occurred in the Netherlands, where a modern web-based technology, in the form of online health communities, was created to offer easy access to professional advice for people with chronic conditions including Parkinson's (van der Eijk et al., 2013). This online service provides comprehensive support, medical advice and continuous, skilful expertise, becoming an essential communication system for Parkinson's specialists and their patients. A local Parkinson's nurse facilitates essential communication between patients and the inter-professional team, coordinates patient care, and guides and supports patient health services (van der Eijk et al.). Such technology stimulates patient involvement in decision-making about their own health. It also helps improve collaboration within a multi-specialised team and reduce chronic disease burden nationwide. Although the implementation of web-based health services is a promising way of improving patient care, this innovative approach requires reviewing health policies, restructuring the system, substantial financial resources and internet availability (van der Eijk et al.).

Closer to home, Parkinson's NZ Charitable Trust (Parkinson's NZ) employs a dedicated team of Parkinson's nurses to provide clinical assessment, advice and education in a person's own home. In 2019, the annual survey of patients on the Parkinson's NZ database (n=3007) generated 1145 responses, with 70 percent of PwP and their carers reporting they felt better able to manage their condition due to the involvement of the Parkinson's NZ nursing service.

Education to reduce the care gap

Education is an important step towards addressing the care gap. NZBRI Parkinson's nurse Helen Skene said that in New Zealand, Parkinson's nurses have advanced skills and knowledge, and educate and role-model best practice to health-care workers. However there were too few of them to provide accessible care across the country, and they did not have formal education to make them Parkinson's nurse specialists. They might have a background in neuroscience nursing or research, and some might have had access to a short course in Parkinson's, but this group of dedicated nurses were likely to have been self-taught, gleaned informal learning from GPs or neurologists, movement disorder journals and NZBRI publications (personal communication, August 12, 2020).

Although there is value in self-directed learning, this trial-and-error method could be superseded by a formal Parkinson's nurse specialist course or programme that addresses the complexities of Parkinson's and current trends in management. A formal qualification would provide a mechanism of greater recognition for the work already

being done by Parkinson's NZ nurses, advancing them to the role of a Parkinson's nurse specialist and encouraging more nurses into the field.

RECOMMENDATIONS

A formal nationally-recognised education programme for Parkinson's nurse specialists could reduce the care gap. It would be even more effective if the course included inter-professional education that would attract GPs, physiotherapists and other health professionals. It would improve collaboration between GPs and Parkinson's nurse specialists in meeting the needs of PwP. This could also help to address the limited specialist Parkinson's supervision due to current shortage of neurologists in New Zealand (Burton, 2018).

The role of district health boards (DHB) in implementing policy for Parkinson's is beyond the scope of this study, but Helen Skene recommended that DHBs provide a New Zealand-wide policy for Parkinson's management, including the hospital admission process, treatment and education and care in the community. This would need to be in partnership with Parkinson's NZ and could be an area of future investigation.

Tammy Ramsey-Evans, director of clinical services at Parkinson's NZ, supports the development of clinical pathways for PwP that include the community-based Parkinson's nurse to ensure that from the point of diagnosis, PwP have access to the right information, education and support they need to manage their condition well (personal communication, September 22, 2020).

A further recommendation is for DHBs to employ enough Parkinson's nurse specialists to educate hospital and residential care staff and provide an acute consultation service for inpatients with Parkinson's who would benefit from a review. This preventative approach has the potential to reduce falls risk and costly acute hospital admissions.

Ramsey-Evans said there was an increasing demand on Parkinson's NZ services from DHBs and residential care facilities, with an average of 80 new referrals per month. This puts considerable pressure on the resources of Parkinson's NZ, which is a non-profit charitable trust, reliant mainly on grants and donations, and a very small amount of government funding. *"The growing reliance on our services across Aotearoa, without investment from the Ministry of Health and /or DHBs is simply not sustainable in the long term."* (personal communication, September 22, 2020)

CONCLUSION

Neurological diseases are the main cause of disability internationally, with Parkinson's the second most common neurological disease. Ageing populations are expected to amplify the incidence of Parkinson's and increase the health-care burden. They will also exceed the capacity of Parkinson's NZ to continue to provide the current level of care unless there is recognition and investment by health funders to address this gap. For these reasons, it is time to establish strategies to manage Parkinson's more effectively.

Parkinson's is a multifaceted, debilitating and socially isolating disorder. Ideal management could involve an assigned Parkinson's nurse specialist who can provide ongoing, expert support and advice. The Parkinson's nurse specialist can link the patient with an inter-professional team to form an effective individualised plan to reduce falls risk and optimise function, independence and social interaction.

The urgency to update Parkinson's management is driven by the need for inter-professional strategies to deal with the predicted burden of disease. Consideration needs to be given to establishing management strategies that are more in line with international models. The development of inter-professional courses could help Parkinson's specialist nurses and GPs, who can, in turn, support other health professionals, particularly in view of the shortage of neurologists in New Zealand. Implementing this service should be cost effective, because it involves preventative medicine rather than more expensive acute care. Proficient Parkinson's specialist nurses could be strategically placed as key co-ordinators to facilitate holistic care of PwPs in future policies.

LIMITATIONS AND FUTURE RESEARCH

We interviewed one Parkinson's nurse in the South Island, but this

could skew our current view of Parkinson's nursing. In the future, interviews need to take place with larger numbers of Parkinson's nurses to validate these findings on a national level. However, the opinions of Tammy Ramsey-Evens, the director of clinical services at Parkinson's New Zealand Charitable Trust, have provided a national overview. Future research could also investigate the management of Parkinson's in hospitals and community health by professionals and family caregivers.

ACKNOWLEDGEMENTS

The authors would like to acknowledge the contributions of Helen Skene, Parkinson's nurse for the New Zealand Brain Research Institute/Canterbury District Health Board; and Tammy Ramsey-Evens, RN, MPH, the director of clinical services for the Parkinson's New Zealand Charitable Trust.

REFERENCES

- Aarsland, D. (2016). Cognitive impairment in Parkinson's disease and dementia with Lewy bodies. *Parkinsonism & Related Disorders*, 22, S144-S148. <https://doi.org/10.1016/j.parkreldis.2015.09.034>
- Ahlskog, J. E. (2014). Parkinson Disease Treatment in Hospitals and Nursing Facilities: Avoiding Pitfalls. *Mayo Clinic Proceedings*, 89(7), 997-1003. <https://doi.org/10.1016/j.mayocp.2014.02.018>
- Alamri, Y., Pitcher, T., & Anderson, T. (2020). Variations in the patterns of prevalence and therapy in Australasian Parkinson's disease patients of different ethnicities. *BMJ Open Access*, 2(e000033), 1-4. <http://dx.doi.org/10.1136/bmjno-2019-000033>
- Barton, M., & Johnston, A. N. B. (2017). Alterations of neurological function across the lifespan. In J. A. Craft & C. J. Gordon (Eds.), *Understanding Pathophysiology* (pp. 194 -232). Elsevier.
- Bhat, S., Acharya, U. R., Hagiwara, Y., Dadmehr, N., & Adeli, H. (2018). Parkinson's disease: Cause factors, measurable indicators, and early diagnosis. *Computers in Biology and Medicine*, 102, 234-241. <https://doi.org/10.1016/j.combiomed.2018.09.008>
- Bloem, B. R., de Vries, N. M., & Ebersbach, G. (2015). Nonpharmacological Treatments for Patients with Parkinson's Disease. *Movement Disorders*, 30(5), 567-573. <https://doi.org/10.1002/mds.26363>
- Boehmer, K. R., Holland, D. E., & Vanderboom, C. E. (2019). Identifying and addressing gaps in the implementation of a community care team for care of patients with multiple chronic conditions. *BioMed Central Health Services Research*, 19(843), 1-8. <https://doi.org/10.1186/s12913-019-4709-6>
- Buetow, S., Giddings, L. S., Williams, L., & Nayar, S. (2008). Perceived unmet needs for health care among Parkinson's Society of New Zealand members with Parkinson's disease. *Parkinsonism & Related Disorders*, 14(6), 495-500. <https://doi.org/10.1016/j.parkreldis.2007.11.011>
- Burton, A. (2018). How do we fix the shortage of neurologists? *The Lancet*, 17(6), 502-503. [https://doi.org/10.1016/S1474-4422\(18\)30143-1](https://doi.org/10.1016/S1474-4422(18)30143-1)
- Dickson, D. W. (2018). Neuropathology of Parkinson disease. *Parkinsonism & Related Disorders*, 46, S30-S33. <https://doi.org/10.1016/j.parkreldis.2017.07.033>
- Dorsey, E. R., Elbaz, A., Nichols, E., Abd-Allah, F., Abdelalim, A., Adsuar, J. C., Ansha, M., Brayne, C., Choi, J., Collado-Mateo, D., Dahodwala, N., Do, H., Edessa, D., Endres, M., Fereshtehnejad, S., Foreman, K., Gankpe, F., Gupta, R., Hankley, G., ... Murray, C. J. L. (2018). Global, regional, and national burden of Parkinson's disease, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. *The Lancet Neurology*, 17(11), 939-953. [https://doi.org/10.1016/S1474-4422\(18\)30295-3](https://doi.org/10.1016/S1474-4422(18)30295-3)
- Foltynie, T., & Kahan, J. (2013). Parkinson's disease: an update on pathogenesis and treatment. *Journal of Neurology*, 260(5), 1433-1440. <https://doi.org/10.1007/s00415-013-6915-1>
- Harris, M., & Fry, M. (2017). The utilisation of one district hospital emergency department by people with Parkinson's disease. *Australasian Emergency Nursing Journal*, 20(1), 1-5. <https://doi.org/10.1016/j.aenj.2016.12.004>
- Hellqvist, C., & Berterö, C. (2015). Support supplied by Parkinson's disease specialist nurses to Parkinson's disease patients and their spouses. *Applied Nursing Research*, 28(2), 86-91. <https://doi.org/10.1016/j.apnr.2014.12.008>
- Johnston, A. N. B. (2017). The structure and function of the neurological system. In J. A. Craft & C. J. Gordon (Eds.), *Understanding Pathophysiology* (pp. 97-145). Elsevier.
- Kalia, L. V., & Lang, A. E. (2015). Parkinson's disease. *The Lancet*, 386(9996), 896-912. [https://doi.org/10.1016/S0140-6736\(14\)61393-3](https://doi.org/10.1016/S0140-6736(14)61393-3)
- Lee, J. M. Z., Shine, J. M., & Lewis, S. J. G. (2015). What matters to people with Parkinson's disease living in Australia? *Journal of Clinical Neuroscience*, 22(2), 338-341. <https://doi.org/10.1016/j.jocn.2014.06.097>
- Marinus, J., Zhu, K., Marras, C., Aarsland, D., & van Hilten, J. J. (2018). Risk factors for non-motor symptoms in Parkinson's disease. *The Lancet Neurology*, 17(6), 559-568. [https://doi.org/10.1016/S1474-4422\(18\)30127-3](https://doi.org/10.1016/S1474-4422(18)30127-3)
- Marsh, J. D. (2019). Chronic Disorders of Neurologic Function. In J. L. Banasik & L. Copstead, C. (Eds.), *Pathophysiology* (pp. 915-935). Elsevier.
- Mateus, C., & Coloma, J. (2013). Health Economics and Cost of Illness in Parkinson's Disease. *European Neurological Review*, 8(1), 6-9. <https://doi.org/10.17925/ENR.2013.08.01.6>
- McLaughlin, D., Hasson, F., George Kernohan, W., Waldron, M., McLaughlin, M., Cochrane, B., & Chambers, H. (2011). Living and coping with Parkinson's disease: Perceptions of informal carers. *Palliative Medicine*, 25(2), 177-182. <http://dx.doi.org/10.1177/0269216310385604>
- Moustafa, A. A., Chakravarthy, S., Phillips, J. R., Gupta, A., Keri, S., Polner, B., Frank, M., & Jahanshahi, M. (2016). Motor symptoms in Parkinson's disease: A unified framework. *Neuroscience & Biobehavioral Reviews*, 68, 727-740. <https://doi.org/10.1016/j.neubiorev.2016.07.010>
- Myall, D. J., Pitcher, T. L., Pearson, J. F., Dalrymple-Alford, J. C., Anderson, T. J., & MacAskill, M. R. (2017). Parkinson's in the oldest old: Impact on estimates of future disease burden. *Parkinsonism & Related Disorders*, 42, 78-84. <https://doi.org/10.1016/j.parkreldis.2017.06.018>
- Nicoletti, A., Vasta, R., Mostile, G., Nicoletti, G., Arabia, G., Iliceto, G., Lamberti, P., Macroni, R., Morgante, L., Barone, P., Quattrone, A., & Zappia, M. (2017). Gender effect on non-motor symptoms in Parkinson's disease: are men more at risk? *Parkinsonism & Related Disorders*, 35, 69-74. <https://doi.org/10.1016/j.parkreldis.2016.12.008>
- NZRGPN. (2019). *New Zealand Rural General Practice Network Annual Report 2019*. https://zrj5q1lzkbu23f1k61c91kp1-wpengine.netdna-ssl.com/wp-content/uploads/2020/08/NZRGPN_AR2019_%C6%92_web-FINAL.pdf

- Oguh, O., & Videnovic, A. (2012). Inpatient Management of Parkinson disease: current challenges and future directions. *The Neurohospitalist*, 2(1), 28-35. <https://doi.org/10.1177%2F1941874411427734>
- Parkinson's New Zealand. (2018). *Parkinson's Clinical Support*. www.parkinsons.org.nz/get-support/parkinsons-clinical-service
- Pfeiffer, R. F. (2016). Non-motor symptoms in Parkinson's disease. *Parkinsonism & Related Disorders*, 22, S119-S122. <https://doi.org/10.1016/j.parkrel-dis.2015.09.004>
- Pitcher, T. L., Myall, D. J., Pearson, J. F., Lacey, C. J., Dalrymple-Alford, J. C., Anderson, T. J., & MacAskill, M. R. (2018). Parkinson's Disease Across Ethnicities: A Nationwide Study in New Zealand. *Movement Disorders*, 33(9), 1440-1448. <https://doi.org/10.1002/mds.27389>
- Postuma, R. B. (2019). Prodromal Parkinson disease: do we miss the signs? *Nature Reviews Neurology*, 15(8), 437-438. <https://doi.org/10.1038/s41582-019-0215-z>
- Ricciardi, L., Visco-Comandini, F., Erro, R., Morgante, F., Bologna, M., Fasano, A., Ricciardi, D., Edwards, M., & Kilner, J. (2017). Facial Emotion Recognition and Expression in Parkinson's Disease: An Emotional Mirror Mechanism? *PLoS One*, 12(1). <https://doi.org/10.1371/journal.pone.0169110>
- Rinalduzzi, S., Trompetto, C., Marinelli, L., Alibardi, A., Missori, P., Fattaposta, F., Pierelli, F., & Currà, A. (2014). Balance dysfunction in Parkinson's disease. *BioMed Research International*, 2015, 1-10. <http://dx.doi.org/10.1155/2015/434683>
- Shippee, N. D., Domecq Garces, J. P., Prutsky Lopez, G. J., Wang, Z., Elraiayah, T. A., Nabhan, M., Brito, J., Boehmer, K., Hasan, R., Firwana, B., Erwin, P., Montori, V., & Murad, M. H. (2015). Patient and service user engagement in research: a systematic review and synthesized framework. *Health Expectations*, 18(5), 1151-1166. <https://doi.org/10.1111/hex.12090>
- Skelly, R., Brown, L., Fakis, A., & Walker, R. (2015). Hospitalization in Parkinson's disease: A survey of UK neurologists, geriatricians and Parkinson's disease nurse specialists. *Parkinsonism & Related Disorders*, 21(3), 277-281. <https://doi.org/10.1016/j.parkrel-dis.2014.12.029>
- Tinelli, M., Kanavos, P., & Grimaccia, F. (2016). *The Value of Early Diagnosis and Treatment in Parkinson's Disease*. <http://www.lse.ac.uk/business-and-consultancy/consulting/assets/documents/the-value-of-early-diagnosis-and-treatment-in-parkinsons-disease.pdf>
- Vallerga, C. L., Zhang, F., Fowdar, J., McRae, A. F., Qi, T., Nabais, M., Zhang, Q., Kassam, I., Henders, A., Wallace, L., Montgomery, G., Chuang, Y., Horvath, S., Ritz, B., Halliday, G., Hickie, I., Kwok, J., Pearson, J., Pitcher, T. . . Gratten, J. (2020). Analysis of DNA methylation associates the cystine-glutamate antiporter SLC7A11 with risk of Parkinson's disease. *Nature Communications*, 11(1), 1-10. <https://doi.org/10.1038/s41467-020-15065-7>
- van der Eijk, M., Faber, M. J., Aarts, J. W. M., Kremer, J. A. M., Munneke, M., & Bloem, B. R. (2013). Using Online Health Communities to Deliver Patient-Centred Care to People With Chronic Conditions. *Journal of Medical Internet Research*, 15(6). <http://doi.org/10.2196/jmir.2476>
- van der Marck, M. A., Klok, M. P. C., Okun, M. S., Giladi, N., Munneke, M., & Bloem, B. R. (2014). Consensus-based clinical practice recommendations for the examination and management of falls in patients with Parkinson's disease. *Parkinsonism & Related Disorders*, 20(4), 360-369. <https://doi.org/10.1016/j.parkrel-dis.2013.10.030>
- van Rumund, A., Weerkamp, N., Tissingh, G., Zuidema, S. U., Koopmans, R. T., Munneke, M., Poels, P., Bastiaan, R., & Bloem, B. R. (2014). Perspectives on Parkinson Disease Care in Dutch Nursing Homes. *Journal of the American Medical Directors Association*, 15(10), 732-737. <https://doi.org/10.1016/j.jamda.2014.05.009>
- Vos, T., Barber, R. M., Bell, B., Bertozzi-Villa, A., Biryukov, S., Bolliger, I., Charlson, F., Davis, A., Degenhardt, L., Dicker, D., Duan, L., Erskine, H., Feigin, V. L., Ferrari, A. J., Fitzmaurice, C., Fleming, T., Graetz, N., Guinovart, C., Haagsma, J. . . Murray, C. J. L. (2015). Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. *The Lancet*, 386(9995), 743-800. [https://doi.org/10.1016/S0140-6736\(15\)60692-4](https://doi.org/10.1016/S0140-6736(15)60692-4)
- Ward, R., & Browne, P. (2014). Continuing education: Brain disease: Nurse specialist interventions in Parkinson's disease. *World of Irish Nursing & Midwifery*, 22(8), 53-56. <https://www.inmo.ie/7956>
- Weil, R. S., Lashley, T. L., Bras, J., Schrag, A. E., & Schott, J. M. (2017). Current concepts and controversies in the pathogenesis of Parkinson's disease dementia and Dementia with Lewy Bodies. *F1000 Research* 6(1604), 1-12. <https://dx.doi.org/10.12688/f1000research.11725.1>

REGISTERED NURSE TURNOVER IN THE ACUTE SETTING

About the author: Janine Ellison, RN, masters candidate, is a nurse educator in the professional development unit, portfolio: older persons and rehabilitation, Waikato District Health Board, Hamilton, New Zealand. Her correspondence address is: Janine.ellison@waikatodhb.health.nz



Janine Ellison

Key words

Nurse, attrition, retention, nurse turnover, acute care hospital

Aim

The aim of this integrative review was to explore the reasons behind nurse turnover in the hospital environment. The research question was: *Why do registered nurses leave the acute setting?*

Background

Increasing nurse turnover has become a major concern globally, with the World Health Organization (2016) insisting countries institute policies to stem the attrition of nurses. In the New Zealand context, with current district health board (DHB) debt, and the cost of nurse turnover, retaining nurses in the workplace is imperative. Nurses comprise 65 percent of the regulated health workforce in New Zealand (Huntington et al., 2011). New Zealand has some of the poorest statistics for nurse retention in the developed world, with a nurse turnover rate of 44.3 percent, nearly three times higher than Australia (Hughes, 2017). There is no turnover data related directly to the acute setting; however in 2017, 39 percent of New Zealand registered nurses (RNs) worked in the acute DHB environment (NCNZ, 2017). Thus most of the nursing workforce is employed in the acute setting, so understanding the reasons why nurses are leaving the acute workforce is important.

The start of nurse attrition from an area can cause a cascading effect, where staff that remain become overworked and they in turn leave – this is categorised as secondary turnover (Buffington et al., 2012; Rondeau & Wagar, 2016). Adverse patient events and medication errors increase in areas of high nurse turnover, and when this turnover leads to inadequate staffing, then patient mortality rates increase (Buffington et al., 2012; Fagerstrom et al., 2018; Hairr et al., 2014; Perrine, 2009). It is important that the health-care sector finds ways to improve retention of nurses, so patient safety is not compromised (Menella, 2018). The cost of nurse turnover in New Zealand is equal to half the salary of a nurse – approximately \$30,000 – due to the hidden costs involved, such as advertising, training, temporary staffing and orientation periods (North et al., 2013). Better retention of nurses in New Zealand could save DHBs a substantial amount of money every year, therefore this should be a top priority for government and DHB policy. In the year to May 2019,

20 out of the 21 DHBs in New Zealand were in debt and the total debt across the DHBs was \$423 million (Janic, 2019). Employing nurse-retention strategies could slow this attrition and save district health boards much-needed money.

Methods

The theoretical framework for this integrative review was based on Whittemore and Knafl's (2005) updated methodology for integrative reviews. Integrative reviews analyse the findings of primary studies from a range of diverse methodologies, both qualitative and quantitative. There are five stages to the integrative review framework: problem identification, literature search, data evaluation, data analysis and presentation of findings. Search terms used were: tertiary, in-patient, acute, RN, nurse, leave, retention, stay, turnover and attrition, and the timeframe for the search was 2009–2019. Electronic databases searched included CINAHL Complete, Cochrane Library, ProQuest, PubMed, MEDLINE Complete, Clinical Key, Science Direct, Health Business Elite and Nursing Reference Center Plus. Thirty-six primary studies were evaluated, and 16 met the selection criteria for inclusion in the integrated review.

Findings

Three key themes were identified through an iterative approach to data evaluation and synthesis: support, workload and professional factors. The first theme to emerge concerned support, including organisational and manager support, appreciation and relationships with co-workers. A perceived lack of support or recognition from the employing organisation and its management was a major reason why nurses intended to leave their workplace. Nurse participants in these studies described how they felt unappreciated and their skills and knowledge unrecognised by managers and the organisation (Choi et al., 2011; Choi et al., 2012; El-Jardali et al., 2009; Tuckett et al., 2015). Nurse participants also reported how their self-esteem and sense of self-worth had been adversely affected by an unsupportive manager (Choi et al., 2011; Choi et al., 2012; El-Jardali et al., 2009; Hayward et al., 2016; Tuckett et al., 2015; Walker & Clendon, 2018).

Nurses experienced a lack of support when there was poor communication between the employer organisation and nurses. “*Nobody cares at the top about nurses*” and staff are “*drowning in policies*” are examples of nurse views on this lack of support in an Australasian study conducted by Tuckett et al. (2015). Nurses equated poor organisational and coordination skills on the part of their direct manager, with chaos on the ward, and feelings of an overwhelming workload. Having a manager who didn't offer help when staff were busy, was not visible on the ward, or was insensitive to staff needs was also identified as a reason staff intended to leave (Choi et al., 2011; Choi et al., 2012; El-Jardali et al., 2009; Tuckett et al.). Unapproachable managers who did not listen to staff needs or support staff when there were complaints led to nurses expressing an intention to leave. Some nurses might have stayed at their workplace if there had been support and positive leadership from their manager and more recognition of their skills (Heinen et al., 2013; Tuckett et

al., 2015; Walker et al., 2018). Lack of support from colleagues was a further reason nurses intended to leave their workplace (Choi et al., 2011; El-Jardali et al., 2009; Labrague et al., 2018; Tuckett et al., 2015; Van Dam, Meewis & van der Heijden, 2012). Bullying, mistrust, fault-finding and disrespect among colleagues led to dissatisfaction with work and intent to leave (Choi et al., 2011; Choi et al., 2012; Walker et al., 2018). Some nurses felt that colleagues did want to provide support but were unable to due to high workloads and being “emotionally tired” from years of nursing (Tuckett et al., 2015).

The second theme related to workload, and included patient acuity, poor staffing and high nurse workload. Coupled with this workload theme was the perception that health was treated as a business and was no longer patient-centred. Nurses suggested that patients were getting more complex, but the nurse-patient ratio remained the same, and working short-staffed was becoming more common. Increased patient acuity in the acute setting was identified as the reason many nurses intend to leave their workplace (Baernholdt & Mark, 2009; Choi et al., 2011; Hayward et al., 2016). More paperwork and documentation, with less time for patient care, left nurses feeling dissatisfied and with a sense that they had not provided quality care (Alasmari & Douglas, 2012; Choi et al., 2012; Hayward et al., 2016). The higher the nurse-patient ratio, the more likely nurses were to report their workplace only provided poor to fair patient care, and nurses who felt this way were also more likely to express an intention to leave (Aiken et al., 2012). Pressure and urgency at work was an important factor, and some felt this was why new staff left their workplace (Choi et al., 2011; Moloney et al., 2018). In one study, nearly half of New Zealand nurses who had left said they would have stayed in their workplace if there had been more staff on the wards (Walker et al., 2018). Inadequate staffing led to feelings of job dissatisfaction, emotional exhaustion and burnout, as staff had less time for patient care (Baernholdt et al., 2009; Choi et al., 2011; Dimattio et al., 2010; Hayward et al., 2016; Nantsupawat et al., 2016; Walker et al., 2018). Nurses felt understaffing led to greater risk of errors and vulnerability to stress and injury for nurses, as they had to complete tasks alone that normally required two people (Choi et al., 2011; Nantsupawat et al., 2016). A perception that health care had become business-focused was a reason some nurses intended to leave their workplace (Aiken et al., 2012; Tuckett et al., 2015), because they felt nursing was no longer patient-centred and this led to less personal satisfaction in their job. Nurses felt the real rewards in nursing were forming relationships with patients and providing quality care, which was no longer possible in the business-driven model of health care (Tuckett et al.).

The third theme concerned professional factors, including career and professional development and participation in hospital affairs. Perceived poor education opportunities, along with limited possibilities to up-skill, were reasons nurses left their workplace. Nurses wanted more professional development opportunities from within the employing organisation. They wanted education that was directly related to the job they were employed to do, so when they couldn't access this learning, they felt dissatisfied and this led to intent to leave (Abdulkareem, Chauhan & Kura, 2014; Alasmari et al., 2012; Dimattio et al., 2010; Nowrouzi et al., 2016; van Dam et al., 2012). Nurses also wanted more career and job advancement prospects and a greater chance for promotion (Alasmari et al., 2012; Dimattio et al., 2010; Nowrouzi et al., 2016). However, the opposite was true in one New Zealand study, where nurses who had left

would have considered remaining if their organisation had been less demanding about them continuing with professional development (Walker et al., 2018). Nurses who felt they were not involved in hospital affairs were more likely to leave their workplace. Even though nurses were often the ones implementing policies, many felt they had no say in how these policies were made. Nurses were not involved in hospital decision-making and this lack of inclusion led them to consider leaving their workplace. Some nurses felt their employing hospital made decisions without consulting nursing staff and some of these decisions made it difficult for them to give quality patient care (Dimattio et al., 2010; Heinen et al., 2013; Nantsupawat et al., 2016). Nurses also wanted more open communication with hospital administrators and recognition of their knowledge and potential input into organisational-level decision-making (Nantsupawat et al., 2016).

Conclusion

This review identifies that a perceived lack of support from their employing organisation, management and colleagues; workload factors including acuity, nurse-patient ratio and poor staffing; and a lack of professional development opportunities along with limited potential for promotion or career advancement were all factors in nurses' decision to leave the acute setting. There are many ways to retain these nurses, through positive leadership, adequate staffing, and professional development opportunities.

References

- Abdulkareem, R., Chauhan, A., & Kura, K. (2014). Relationship between perceived organisational politics, organisational trust, human resource management practices and turnover intention among Nigerian nurses. *International Journal of Business and Development Studies*, 6(1), 53-82.
- Aiken, L., Sermeus, W., Van den Heede, K., Sloane, D., Busse, R., McKee, M., Bruyneel, L., Rafferty, A., Griffiths, P., Moreno-Casbas, M., Tishelman, C., Scott, A., Brzostek, T., Kinnunen, J., Schwendimann, R., Heinen, M., Zikos, D., Sjetne, I., Smith, H., & Kutnery-Lee, A. (2012). Patient safety, satisfaction, and quality of hospital care: cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. *BMJ*, 344, e1717. <https://doi.org/10.1136/bmj.e1717>
- Alasmari, H., & Douglas, C. (2012). job satisfaction and intention to leave among critical care nurses in Saudi Arabia. *Middle East Journal of Nursing*, 6(4), 3-12.
- Baernholdt, M., & Mark, B. (2009). The nurse work environment, job satisfaction and turnover rates in rural and urban nursing units. *Journal of Nursing Management*, 17(8), 994-1001.
- Buffington, A., Zwick, J., Fink, R., Devine, D., & Sanders, C. (2012). Factors affecting nurse retention at an academic Magnet® hospital. *Journal of Nursing Administration*, 42(5), 273-281. <https://doi.org/10.1097/NNA.0b013e3182433812>
- Choi, S., Pang, S., Cheung, K., & Wong, T. (2011). Stabilizing and destabilizing forces in the nursing environment: A qualitative study on turnover intention. *International Journal of Nursing Studies*, 48(2011), 1290-1301. <https://doi.org/10.1016/j.ijnurstu.2011.03.005>
- Choi, S., Cheung, K., & Pang, S. (2013). Attributes of nursing work environment as predictors of registered nurses' job satisfaction and intention to leave. *Journal of Nursing Management*, 21(3), 429-439. <https://doi.org/10.1111/j.1365-2834.2012.01415.x>
- Dimattio, M., Roe-Prior, P., & Carpenter, D. (2010). Intent to stay: A pilot study of baccalaureate nurses and hospital nursing. *Journal of Professional Nursing*, 26(5), 278-286. <https://doi.org/10.1016/j.profnurs.2010.06.005>

- Fagerstrom, L., Kinnunen, M., & Saarela, J. (2018). Nursing workload, patient safety incidents and mortality: An observational study from Finland. *BMJ Open*, 8(4). <https://doi.org/10.1136/bmjopen-2017-016367>
- Hairr, D., Salisbury, H., Johannsson, M., & Redfern-Vance, N. (2014). Nurse staffing and the relationship to job satisfaction and retention. *Nursing Economics*, 32(3), 142-147.
- Halter, M., Boiko, O., Pelone, F., Beighton, C., Harris, R., Gale, J., Gourley, S., & Drennan, V. (2017). The determinants and consequences of adult nursing staff turnover: A systematic review of systematic reviews. *BMC Health Services Research*, 17, 1-20. <https://doi.org/10.1186/s12913>
- Hayes, L., O'Brien-Pallas, L., & Duffield, C., Shamian, J., Buchan, J., ... North, N. (2012). Nurse turnover: A literature review – An update. *International Journal of Nursing Studies*, 49(7), 887-905. <http://doi.org/10.1016/j.ijnurstu.2011.10.001>.
- Hayward, D., Bungay, V., Wolff, A., & MacDonald, V. (2016). A qualitative study of experienced nurses' voluntary turnover: learning from their perspectives. *Journal of Clinical Nursing*, 25(9-10), 1336-1345. <http://doi.org/10.1111/jocn.13210>
- Heinen, M., van Achterberg, T., Schwendimann, R., Zander, B., Mathews, A., Kozka, M., Ensio, A., Sjetne, I., Casbas, T., Ball, J., & Schoonhoven, L. (2013). Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries. *International Journal of Nursing Studies*, 50(2013), 174-184. <http://dx.doi.org/10.1016/j.ijnurstu.2012.09.019>
- Hughes, V. (2017). Leadership strategies to promote nurse retention. *Scientific Journal of Nursing & Practice*, 1(11), 001-005. Retrieved from www.scireslit.com.
- Huntington, A., Gilmour, J., Tuckett, A., Neville, S., Wilson, D., & Turner, C. (2011). Is anybody listening? A qualitative study of nurses' reflections on practice. *Journal of Clinical Nursing*, 20, 1413-1422. <https://doi.org/10.1111/j.1365-2702.2010.03602.x>
- Janic, B. (2019, 2 August). DHB deficit explodes to \$423 million, more than double last year. *New Zealand Herald*. Retrieved from www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12255017
- Labrague, L., Gloe, D., McEnroe, D., Konstantinos, K., & Colet, P. (2018). Factors influencing turnover intention among registered nurses in Samar Philippines. *Applied Nursing Research*, 39(2018), 200-206. <https://doi.org/10.1016/j.apnr.2017.11.027>
- Lartey, S., Cummings, G., & Profetto-McGrath, J. (2014). Interventions that promote retention of experienced registered nurses in health care settings: a systematic review. *Journal of Nursing Management*, 22(2014), 1027-1041. <https://doi.org/10.1111/jonm.12105>
- Lu, H., Barriball, L., Zhang, X., & While, A. (2012). Job satisfaction among hospital nurses revisited: A systematic review. *International Journal of Nursing Studies*, 49(2012), 1017-1038. <https://doi.org/10.1016/j.ijnurstu.2011.11.009>
- Menella, H. (2018). Retention of healthcare personnel: retaining older nurses. *CINAHL Nursing Guide*. Retrieved from Cinahl Database.
- Ministry of Health. (2016). *Health of the health workforce 2015*. Wellington, NZ: Author.
- Moloney, W., Gorman, D., Parsons, M., & Cheung, G. (2018). How to keep registered nurses working in New Zealand even as economic conditions improve. *BMC*, 16(45). <https://doi.org/10.1186/s12960-018-0312-x>
- Nantsupawat, A., Kunaviktikul, W., Nantsupawat, R., Wichaikhum, O., Thienthong, H., & Poghosyan, L. (2016). Effects of nurse work environment on job dissatisfaction, burnout, intention to leave. *International Nursing Review*, 64, 91-98.
- North, N., Leung, W., Ashton, T., Rasmussen, E., Hughes, F., & Finlayson, M. (2013). Nurse turnover in New Zealand: costs and relationships with staffing practises and patient outcomes. *Journal of Nursing Management*, 21, 419-428. <https://doi.org/10.1111/j.1365-2834.2012.01371.x>
- Nowrouzi, B., Rukholm, E., Lariviere, M., Carter, L., Koran, I., Mian, O., & Giddens, E. (2016). An examination of retention factors among registered nurses in Northeastern Ontario, Canada: Nurses intent to stay in their current position. *Work*, 54(1), 51-58. <https://doi.org/10.3233/WOR-162267>
- Nursing Council of New Zealand. (2017). *The New Zealand nursing workforce: A profile of nurse practitioners, registered nurses and enrolled nurses 2016-2017*. Wellington, NZ: Author.
- Perrine, J. (2009). Recruitment and Retention Report. Strategies to boost RN retention. *Nursing Management*, 40(4), 20-22.
- Rondeau, K., & Wagar, T. (2016). Human resource management practices and nursing turnover. *Journal of Nursing Education and Practice*, 6(10), 101-109. <https://doi.org/10.5430/jnep.v6n10p101>
- Tuckett, A., Winters-Chang, P., Bogossian, F., & Wood, M. (2014). 'Why nurses are leaving the profession . . . lack of support from managers': What nurses from an e-cohort study said. *International Journal of Nursing Practice*, 21(4), 359-366. <https://doi.org/10.1111/ijn.12245>
- Van Dam, K., Meewis, M., van der Heijden, B. (2012). Securing intensive care: towards a better understanding of intensive care nurses' perceived work pressure and turnover intention. *Journal of Advanced Nursing*, 69(1), 31-40. <https://doi.org/10.1111/j.1365-2648.2012.05981.x>
- Whittemore, R., & Knafl, K. (2005). The integrative review: Updated methodology. *Journal of Advanced Nursing*, 52(5), 546-553.
- World Health Organization. (2016). *Global strategic directions for strengthening nursing and midwifery 2016-2022*. Retrieved from www.who.int.

PERCEPTIONS OF INDIAN IQNS TRANSITIONING INTO A BACHELOR OF NURSING PROGRAMME IN NEW ZEALAND



About the author: Kathy Corner, RN, MN, PGDip adult learning and teaching, ESOL teacher, is a nursing lecturer at the Universal College of Learning (UCoL), Palmerston North, New Zealand. Her correspondence address is: k.corner@ucol.ac.nz

Kathy Corner

Key words

IQN, bachelor of nursing, cultural safety, cross-cultural communication, transition, resilience

Aim

The aim of this pilot study was to gain a deeper understanding of Indian internationally qualified nurses' (IQNs) experiences of transitioning into a bachelor of nursing (BN) programme in New Zealand.

Background

IQNs transitioning into the BN are exempted from the first 18 months of the programme, through recognition of prior learning, so they enter the BN in the second year. Twenty seven percent of the New Zealand nursing workforce are IQNs (Nursing Council of New Zealand, 2017) so these nurses make an important contribution to the nursing workforce. International research has highlighted an array of issues that have a negative impact on IQNs' learning and clinical experiences, as well as the positives that have enabled them to succeed, for example resilience and good support networks (Philip et al., 2015). The experience of IQNs transitioning in New Zealand is under-researched and requires further investigation, including those IQNs who are not able to register immediately as their overseas qualification is not sufficient. The tertiary institution where this research was conducted offers IQN students an 18-month bridging course to registration. The students undertake an initial four-week programme which, on completion, enables them to transition into the BN programme part way through the second year.

Methods

A qualitative descriptive method (Braun & Clarke, 2006) was used to gain insight into the experiences of three male and one female Indian IQN student nurses who consented to participate in the research. Focus groups are useful when the researcher wishes to discover the opinions and experiences of participants from a different cultural background to their own (Liamputtong, 2010). Data was collected via a focus group, using semi-structured questions, following ethical approval to conduct the research. The digital recording of the focus group session was transcribed and data analysed using Braun and Clark's six-stage thematic analysis process. This process involved

reading, browsing, reflecting, coding, searching for themes, and defining and naming themes.

Findings

Four main themes were identified in the data analysis: adapting to a new way of learning; cultural differences in adapting to living and working in New Zealand; adapting to a different clinical environment; and cultural safety.

Significant challenges faced the participants as they adapted to new ways of learning in the BN programme. They experienced significant culture shock when adjusting to the Western pedagogy. Throughout the focus group, phrases commonly used were "everything is new to us", "we struggled", "we were under immense stress", "we had to make lots of effort". Key areas where they faced difficulties as students were in critical analysis, academic writing, and becoming accustomed to accessing and citing scholarly sources to support their discussion. Another challenge was adapting to living and working in New Zealand. Hurdles arose due to language difficulties, cultural differences and the financial pressures of having to work part-time and study. Participants were aware of living in two different worlds. They had their world of work and study which they were adapting to with increasing ease. However, socially they remained significantly separate. Despite these challenges, their overall experience of living and working in New Zealand was increasingly positive over time.

The participants were aware before they came to New Zealand that there would be clinical adaptations to be made. They explained that they wanted to change and adapt as they knew that the working environment would be better, and they wanted to work in a developed country. The participants were inexperienced in working autonomously and assessing patients. In addition, they had to learn how to think critically and make decisions, as in India they had been accustomed to working under the complete control of doctors with no expectation that they would think for themselves. A supportive clinical environment and learning critical thinking skills in simulation scenarios enabled the participants to adapt successfully.

Finally, the concept of cultural safety (Nursing Council of New Zealand, 2011) is an integral part of nursing education and clinical practice. The unique aspects of cultural safety were new concepts for the participants to grasp and apply in their clinical practice. The participants reflected on how crucial cultural safety was for safe care in New Zealand. One student commented, "it is the best thing the New Zealand health system has". Once they were in their final clinical placement, they were able to apply the concepts they had learnt and deliver safe nursing care.

Discussion

The findings of this study revealed the participants' resilience and determination. Many reasons were given for this persistence and resilience. Firstly, financially they and their family had made a significant investment in their education. To fail would have a

significantly adverse impact economically but there was also the issue of bringing shame on their family and community. A further impetus to succeed was the participants' perception that the New Zealand BN was an internationally recognised qualification leading to better employment opportunities, working conditions and pay rates, compared with those in India. The participants struggled initially with the change to learner-centred education; however they indicated that over time they came to enjoy this approach and the greater depth of knowledge that came with it. It was evident from this study that if the participants received sufficient guidance and support right at the beginning, the shift in learning approach was manageable. Another educational adaptation was the notion of reflection on practice. Reflection was a new concept for the participants, which raises questions for educators on how best to facilitate reflective practice with a diverse student group, including IQNs. The differences in learning styles can present challenges for nursing lecturers, who need to ensure they encourage an inclusive and culturally responsive pedagogy.

International literature reveals that it takes time to adapt to a new culture, and a new way of nursing, and to learn to nurse in a culturally safe manner (O'Callaghan et al., 2016; Pung & Goh, 2016). The participants in this study spoke about how they gradually learnt and adapted over the time they had been in New Zealand, and were able to reflect on how they were delivering safe care. Despite the difficulties adapting to person-centred, culturally safe care, this study and research in New Zealand by Jenkins and Huntington (2016) show IQNs acknowledge that they value the holistic way of nursing.

Conclusions

Much of the research, both internationally and in New Zealand, identifies the many challenges IQNs face when transitioning to nursing in a new culture, as well as some positives of the experience. The qualitative nature of this study means that issues have been explored in depth. However, due to the small sample size, the generalisability and transferability of the findings need to be interpreted carefully. It is vital that IQN nursing students receive adequate support and guidance right from the beginning, so they can successfully adapt to a new academic and clinical environment. In the clinical environment, it would be valuable if employers supported preceptorship training to enhance cultural awareness. Cross-cultural awareness also needs to be improved in the academic environment. The responsibility for creating a supportive learning environment lies not only with educators and leaders, but with other registered nurses in the host country (Brunton et al., 2017). IQNs may need extra support adjusting to the New Zealand health environment, to

critical thinking and decision-making, as well as managing different expectations about power relations between nurses and medical colleagues (Woodbridge & Bland, 2010). Nurse educators have the potential to have a positive impact on students, by making them aware of strategies to foster resilience.

This study highlights several issues relating to the transition of IQNs into a BN programme. Given the scant research applicable to the New Zealand context, this study has highlighted the need for larger qualitative studies to be undertaken. Further research could examine and evaluate the impact of an academic English-language support programme for IQNs and whether this could alleviate some difficulties and stress.

References

- Braun, V., & Clark, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 27-101.
- Brunton M., Cook, C., Walker, L., & Clendon, J. (2017). *Where are we? Work-place communication between RNs in culturally diverse healthcare organisations: Analysis of a 2-phase, mixed-method study*. Compiled for the New Zealand Nurses Organisation and the Nursing Education and Research Foundation McCutchan Trust Grant 2015-2017. Massey University.
- Jenkins, B. L., & Huntington, A. (2015). A missing piece of the work-force puzzle. The experiences of internationally qualified nurses in New Zealand: A literature review. *Contemporary Nurse*, 51(2-3), 220-231. doi: 10.1080/10376178.2016.1158079
- Liamputtong, P. (2010). *Performing qualitative cross-cultural research*. Cambridge University Press.
- Nursing Council of New Zealand. (2017). *Nursing Council of New Zealand Annual Report*. Retrieved from www.nursingcouncil.org.nz/index.php/content/download/1838/8208/file/Annual%20Report%202017.pdf
- Nursing Council of New Zealand. (2011). *Guidelines for Cultural Safety, the Treaty of Waitangi and Māori Health*. Nursing Council of New Zealand.
- O'Callaghan, C., Loukas, P., Brady, M., & Perry, A. (2019). Exploring the experiences of internationally and locally qualified nurses working in a culturally diverse environment. *Australian Journal of Advanced Nursing*, 36(2), 23-34.
- Philip, S., Manias, E., & Woodward-Kron, R. (2015). Nursing educator perspectives of overseas qualified nurses' intercultural clinical communication; Barriers, enablers and engagement strategies. *Journal of Clinical Nursing*, 24(17-18), 2628-2637. <https://doi.org/10.1111/jocn.12879>
- Pung, L. Y., & Goh, Y. S. (2016). Challenges faced by international nurses when migrating: An integrative literature review. *International Nursing Review*, 64(1), 146-165. <https://doi.org/10.1111/inr.12306>
- Woodbridge, M., & Bland, M. (2010). Supporting Indian nurses migrating to New Zealand: A literature review. *International Nursing Review*, 57(1), 40-48. <https://doi.org/10.1111/j.1466-7657.2009.00783.x>



Kai Tiaki
Nursing Research

Published by the NZ Nurses Organisation
Vol 11 No 1 November 2020

ISSN: 1179-772X