

# Interventions for Managing Occupational Burnout Among Residential Aged Care Staff: a Systematic Review and Meta-analysis Protocol

Yin Siu Low (✉ [jlow@swin.edu.au](mailto:jlow@swin.edu.au))

Swinburne University of Technology - Hawthorn Campus: Swinburne University of Technology  
<https://orcid.org/0000-0001-9067-5471>

Sunil S Bhar

Swinburne University of Technology - Hawthorn Campus: Swinburne University of Technology

Won Sun Chen

Swinburne University of Technology - Hawthorn Campus: Swinburne University of Technology

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## Protocol

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# Abstract

**Background:** Staff who are employed in residential aged care settings face a unique set of challenges and stressors in their workplaces which intensify their risks of occupational stress and burnout. Staff also experience low job satisfaction, increased sick time and absenteeism and high job turnover rates as a result of occupational burnout. As the population ages, there is an increased need for residential aged care (RAC) staff in Australia. It is both urgent and necessary to explore interventions that can prevent the likelihood of occupational burnout on RAC staff. A systematic review will be conducted on the effectiveness of interventions for preventing occupational burnout in RAC staff, with a view to determine the most effective type or types of intervention for such staff.

**Objective:** To evaluate the effectiveness of interventions compared to inactive control intervention (usual care or practice) for preventing occupational burnout in RAC staff.

**Methods:** This protocol was developed in accordance to the reporting standards of Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P). Included studies that meet the eligibility criteria will be identified by systematic searches of electronic databases. The PRISMA flowchart will also be utilised to record the selection process. Two reviewers will extract data and assess the quality of each study independently. The Standardised Mean Differences (SMDs) with 95% confidence intervals (CIs) will be utilised in order to combine different burnout measures or scales. Extracted studies which are sufficiently similar will be included for meta-analyses. The Cochrane risk of bias (RoB 2) tool will also be utilised in order to assess the methodological quality of randomised controlled trials.

**Results:** Systematic searches will begin at the end of 2021. Data extraction will commence in early to mid-2022. Data analyses and writing will start in late 2022.

**Conclusions:** Intervention studies from systematic searches of databases will be identified and recommendations will be made regarding the effectiveness of interventions for RAC staff.

## Background

In Australia, residential aged care (RAC) is for older adults who are not able to live at home and whose demands require greater care and support than is feasibly provided in the community (Department of Health, 2021). Residential aged care facilities (RACFs) provide residents with accommodation, assistance with personal care and other tasks such as showering and dressing, cleaning and cooking, as well as access to medical and mental health services and social entertainment (Department of Health, 2021). In 2020, there were a total of 189,954 people utilising permanent or respite RAC, of whom 58% were above the age of 85 (Australian Institute of Health and Welfare, 2021). According to the 2020 Aged Care Workforce Census Report, there were 2716 RACFs in Australia (Australian Government Department of Health, 2021). Most aged care residents have poor health: 93% have circulatory disease with hypertension ranking as the top condition (62%), 58% are diagnosed with dementia, and 54% have significant symptoms of depression (Lind et al., 2020).

There are approximately 277,671 aged care staff employed in RACFs (Department of Health, 2020). Of these, 208,903 are involved in direct care work with older adults (Department of Health, 2020). Personal care workers (PCWs) (70%) make up the largest proportion of direct care staff in RACFs, followed by nurses (23%), and allied health professionals (7%) (Department of Health, 2020). Direct care refers to the provision of care services by RAC staff to older adults as a main component of their roles (Mavromaras et al., 2017). In Australia, residential aged

care (RAC) staff who provide direct care include nurse practitioners (NP), registered nurses (RN), enrolled nurses (EN), community care workers (CCW), allied health professionals (AHP), allied health assistants (AHA) and personal care attendants (PCA) (Mavromaras et al., 2017). Non-direct care staff within RACFs include care managers or co-ordinators, administration, spiritual or pastoral care and ancillary care (Mavromaras et al., 2017).

By 2050, in Australia, there will be a workforce shortage of 330,000 RAC staff, according to the National Aged Care Workforce report (King et al., 2013). The number of Australians aged 65 or older is estimated to increase from 15% in 2017 to between 21% and 23% in 2066 (Australian Bureau of Statistics, 2018). With the numbers of older adults rising, there will be a greater need for aged care services as well as greater economic pressures on the Australian Government to support this population (Australian Commission on Safety and Quality in Health Care, 2019). Hence, it is vital to focus on the well-being of RAC staff.

RAC staff experience high levels of occupational burnout due to workplace stressors (Ayalon, 2008; Harrad & Sulla, 2018; Hunter et al., 2016). More than 50% of RAC staff face workplace stressors such as understaffing, time pressures, challenging residents' behaviours and the deterioration of residents' health (Anderson, 2008; Evers et al., 2002; Maslach et al., 2001; Yeatts et al., 2018). These negative workplace experiences can have an adverse effect on RAC staff's well-being (Harrad & Sulla, 2018; Woodhead et al., 2016). The ongoing exposure to such stressors can result in occupational burnout (Maslach & Jackson, 1981), which in turn can have a negative impact on the care delivered to aged care residents (Hunter et al., 2016; McHugh et al., 2011).

The World Health Organization (2019) defines burnout as "chronic stress" related to one's workplace which are not well-managed by the individual. According to Maslach and Jackson (1981), burnout involves three dimensions: emotional exhaustion, depersonalization and reduced personal accomplishment. People who are feeling tired both physically and mentally meet the definition of being emotionally exhausted. Depersonalization, refers to the onset of being cynical, having negative feelings towards clients and being detached from one's workplace (Maslach & Jackson, 1981; Maslach et al., 2001). Reduced personal accomplishment refers to negative feelings and dissatisfaction with work accomplishments (Maslach & Jackson, 1981; Maslach et al., 2001).

McHugh et al. (2011) surveyed 95,499 nurses in the United States and found that nurses working in hospitals and nursing homes who provided direct care to aged care clients had greater levels of burnout as compared to those who are working in other healthcare settings such as public and community health, ambulatory care and noninstitutionalized environments. Similarly, in a study conducted in the Netherlands, Boekhorst et al. (2008) found that traditional nursing home staff experienced higher levels of burnout compared to their counterparts employed in group living homes (house-like setting for a small number of older adults with dementia where domestic and personal needs are taken care of by a few nursing staff (Boekhorst et al., 2008). Such higher burnout levels were attributed to having less control, greater demands and less social support from their colleagues (Boekhorst et al., 2008).

In the last decade, there have been three systematic review on the effectiveness of burnout interventions for health care workers who provide direct care to older adults; however none have focused on RAC staff. In 2014, a systematic review of 16 studies on burnout interventions for staff working in a wide range of geriatric settings (e.g. Joen et al., 2012; Kuske et al., 2009) identified seven type interventions that reduced staff burnout; two interventions were classified as "work-directed", two as "person-directed" and three as "combined approaches" (Westermann et al., 2014). Work-directed interventions were those approaches that altered occupational aspects such as work responsibilities and job techniques (Ruotsalainen et al., 2015). Person-centred interventions were

cognitive, behavioural and relaxation strategies that assisted staff to cope better with their personal stressors (Ruotsalainen et al., 2015). Combined interventions were those that combined these approaches (Westermann et al., 2014). Westermann et al (2014) concluded that work-directed and combined approaches studies had greater longer-term effects (between 1 month to more than a year) on occupational burnout. They suggested that person-directed interventions reduced levels of burnout in the short term (up to 1 month).

A second systematic review by Ruotsalainen et al (2015) found no difference between person and work-directed interventions for reducing occupational stress of health care staff; both were equally more effective when compared to no intervention. A third systematic review (Stewart & Terry, 2014) of interventions to reduce burnout in nurses and care workers employed in prisons and forensic mental health units found that that clinical supervision and psychological intervention training reduced burnout for these care workers.

This paper describes the protocol for a planned systematic review of interventions for occupational burnout for RAC staff in order to determine the effectiveness of work and person-directed interventions for reducing burnout in this cohort.

## Objectives

To evaluate the effectiveness of work and person-directed interventions compared to inactive control intervention (usual care or practice) in reducing occupational burnout in RAC staff.

## Protocol and Registration

This protocol was developed in accordance to the reporting standards of Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) (Moher et al., 2015). This systematic review will be conducted and reported in a manner consistent with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) standards (Page et al., 2021). The review was registered with the International Prospective Register of Systematic Reviews (PROSPERO, XXXX).

## Methods

### *Eligibility criteria for the review*

### *Types of studies*

This review will include empirical, quantitative studies that are randomised controlled trials including parallel, cross-over and cluster-randomised designs.

### *Participants*

The review will consider work and person-directed interventions for direct-care staff employed in RACFs. Interventions involving aged care staff not employed in direct-care roles in RACFs, aged care staff not employed in RACFs or other family members caring for the older adults will be excluded. For studies involving some RAC staff and some family members as carers, data from RAC staff are included if datasets for these staff were reported separately.

### *Settings*

Residential aged care facilities (RACFs) are defined as aged care homes that provide respite or long term care for older adults who are not able to live at home and whose demands require greater care and support (Productivity Commission, 2019). RACFs, are known by different names globally, such as nursing homes, long-term care facilities and care homes (Rayner et al., 2019). For studies conducted across settings such as community and residential care, data from residential care settings are included if datasets for these staff are reported separately. Studies from all geographical locations will also be considered.

### ***Interventions***

This review will consider work and person-directed interventions for preventing occupational burnout in RAC staff employed in RACFs. Person-directed interventions are defined as interventions that are focussed on the individual and can include educational training, engaging in mental and physical relaxation, utilising cognitive behavioural therapy (CBT) and combined approaches including CBT and relaxation (Ruotsalainen et al., 2015). Work-directed interventions are defined as interventions that focused on changing the work environments of staff members such as having organisational support and improving their work schedules (Ruotsalainen et al., 2015). Prevention can be defined as interventions focussed on healthy individuals without a diagnosable condition (Ruotsalainen et al., 2015).

### ***Time frame***

In this review, studies from 1 January 2000 to 31 October 2021 will be searched.

### ***Outcome measures***

This review will consider studies that focus on occupational stress and burnout prevention as outcome measures. Burnout can be measured by the various burnout scales such as Maslach Burnout Inventory, Burnout Measure, Oldenburg Burnout Inventory and Copenhagen Burnout Inventory. The effects of such interventions on related phenomena such as stress and anxiety will also be measured. Secondary outcome measures can include psychological symptoms such as depression, anxiety and stress.

### ***Search methods for identification of studies***

This review will consider published peer-reviewed studies, written in English. Electronic databases for published data used for this search will include Medical Literature Analysis and Retrieval System Online (MEDLINE), EMBASE, PsycINFO and CINAHL. Filters to identify randomised controlled trials will be applied where applicable. The search terms used will be as follows:

(burnout OR "occupational stress" OR "psychological stress") AND

(intervention OR effect\* OR evaluation) AND

(healthcare OR staff or employ\* OR job OR work\* OR nurs\*) AND

("long-term care" OR "residential aged care" OR "aged care" OR "nursing home\*" OR "assisted living" OR "care facilit\*" OR "residential home\*" OR "care home\*" OR "residential care") AND

("random\* controlled trial\*")

Handsearching of reference lists of systematic reviews will also be conducted. For studies with missing data or ambiguity in research design and methods, the researchers will attempt to contact authors of the study twice for further clarification.

### ***Data collection and analysis***

#### ***Selection of studies***

Studies will be selected by two reviewers independently using Cochrane's software, Covidence. Titles and abstracts of articles will be retrieved and screened. Next, the reviewers will screen the full text of relevant studies to assess their eligibility for inclusion. Should there be differences in opinion amongst the two reviewers, the reviewers will attempt to resolve these differences by discussion. If disagreement persists between the reviewers, a third reviewer will be consulted to reach a majority agreement.

#### ***Data extraction and management***

Two reviewers will extract and manage the data independently. Covidence software will be utilised to record data of relevant studies. The extracted data will include some items from the template for intervention description and replication (TIDieR) checklist (Hoffmann et al., 2014) such as the following: brief name of study (item 1), theory related to the intervention (item 2), materials used in the intervention (item 3), procedures (item 4), who provided the intervention (item 5), how was the intervention delivered (item 6), where the interventions occurred (item 7), when and how much- number of sessions, schedule, duration, intensity and dose (item 8).

#### ***Assessment of methodological quality of included studies***

Assessment of the quality of included studies will be conducted by two reviewers independently. This review will utilise the Cochrane RoB 2 tool (Higgins et al., 2019) which can help assess the methodological quality of randomised controlled trials. The tool consists of 5 types of bias domain including bias arising from the randomization process, deviations from intended interventions, missing outcome data, measurement of the outcome and selection of the reported result (Higgins et al., 2019).

#### ***Measures of treatment effect***

The intervention effect will be estimated using the SMD with 95% CIs.

#### ***Assessment of heterogeneity***

We will assess heterogeneity by visually inspecting the forest plots and by using a standard chi-square test with a significance level of  $\alpha = 0.1$  (Deeks et al., 2019). In view of the low power of the test, the  $I^2$  statistics, which quantifies inconsistency across trials to assess the impact of heterogeneity on the meta-analysis, will also be considered (Higgins & Thompson, 2002; Higgins et al., 2003). In the event of substantial clinical or methodological heterogeneity, we will not report trial results as the pooled effect estimate in a meta-analysis.

#### ***Assessment of reporting biases***

If 10 or more trials are included to examine a particular outcome, we will use funnel plots to assess small-trial effects. Potential justifications to account for funnel plot asymmetry include true heterogeneity of effect with respect to trial size, poor methodological design and publication bias (Boutron et al, 2019).

## ***Data synthesis***

The quality of included studies will be assessed using the GRADE system and similar studies will be combined in meta-analyses. Standardised Mean Differences (SMDs) will also be utilised in order to combine studies with different burnout scales or measures. Results will be presented in a table format. Any person-directed and work-directed interventions for preventing burnout will be grouped in a single comparison in order to address whether person-directed or work-directed interventions for burnout is effective. A standard meta-analysis will be conducted where person-centred interventions will be compared to inactive control interventions (usual practice or care). In the event where there is sufficient data, separate meta-analyses will be considered to examine the effects of specific types of person-centred interventions (for example, educational training, mental and physical relaxation, teaching CBT and combined CBT and relaxation). When a specific person-centred intervention comprise multiple components, the main feature of the intervention must be clearly defined and categorised accordingly.

## **Results**

Systematic searches will begin at the end of 2021. Data extraction will commence in early to mid-2022. Data analyses and writing will start in late 2022.

## **Discussion**

Limitations of this systematic review will be outlined. For instance, some of the included studies may not be sufficiently similar (for example, there may be different scales used to measure burnout levels from included studies) to be analysed together. Sub-group analysis of the effectiveness of work and person-directed interventions related to the different roles of RAC staff can also be considered where possible in order to explain possible heterogeneity among intervention effects. We will discuss the quality of person and work-directed interventions published within the last 20 years. We will also discuss the effectiveness of person and work-directed interventions compared to inactive control interventions (usual practice or care) for burnout in RAC staff employed in residential aged care settings. This will also inform the impacts of burnout and future recommendations to mitigate burnout in RAC staff.

## **Declarations**

### *Ethics approval and consent to participate*

Not applicable.

### *Consent for publication*

Not applicable.

### *Availability of data and material*

Not applicable.

### *Competing interests*

The authors declare that they have no competing interests.

## Funding

The authors declare that there is no funding involved.

## Authors' contributions

All authors contributed to the design of this study, analysis and write-up of this manuscript. All authors have read and approved the manuscript.

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