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High demand, high commitment work: What residential aged care staff actually do minute by minute: A participatory action study

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Abstract

This article explores staff work patterns in an Australian residential aged care facility and the implications for high-quality care. Rarely available minute by minute, time and motion, and ethnographic data demonstrate that nurses and care staff engage in high degrees of multitasking and mental switching between residents. Mental switching occurs up to 18 times per hour (every 3 min); multitasking occurs on average for 37 min/h. Labor process theory is used to examine these outcomes and to explore the concepts of high demand and high commitment as core components of work intensification. These conditions of work result in high levels of cognitive burden and stress on staff in managing the multitasking and mental switching, exacerbated by lack of knowledge about residents associated with labor force casualization. These new interpretations of data in relation to mental and manual labor can contribute to understanding, and, therefore, problem solving, in the aged care sector.

KEYWORDS
high commitment, high demand, labor process theory, mental switching, nursing, residential aged care, staff ratios, time and motion

1 | INTRODUCTION

Internationally, the COVID-19 pandemic has placed a spotlight on many aspects of long-term care. That spotlight has focused with particular intensity on the high death rates among residents experienced in many countries. It has also highlighted key aspects of the characteristics and circumstances of the residential aged care workforce, including staffing ratios, qualifications, skill levels, conditions of work, remuneration, and personal safety (Organisation for Economic Co-operation and Development [OECD], 2020). In Australia,

the same forces and consequences have occurred, but brought into sharp relief events played out in the context of an already highly publicized and pre-existing Royal Commission into Aged Care Quality and Safety (RCACQS). The Royal Commission began its deliberations in October 2018, and issued its Interim Report in October 2019, uncompromisingly titled *Neglect* (RCACQS, 2019), well before the events associated with the pandemic began to play out in the residential aged care sector.

It now appears widely accepted that Australian residential aged care services require additional staff if they are to provide high-quality

care, and that the issues go beyond simple numbers to include skills mix, education, skills and training, terms and conditions of employment, remuneration, retention, career pathways, leadership, and workforce planning. These key issues were extensively documented through submissions and analyses undertaken for the Royal Commission (RCACQS, 2020a).

The residential aged care workforce has undoubtedly become big news in Australia. It is also old news. Between June 2018 and June 2020, no less than five official reports containing workforce-related recommendations were released (Aged Care Workforce Strategy Taskforce, 2018; Department of Health [DoH], 2019; House of Representatives Standing Committee on Health Aged Care and Sport, 2018a, 2018b; Senate Community Affairs References Committee, 2019). And while concern about the residential aged care workforce may have spiked since 2018, the problems were expounded in a plethora of reports since 2005 (Office of the Royal Commission, 2019).

Minimum staffing standards are a contested and ongoing part of the residential aged care workforce debate in Australia, despite their acceptance in a number of countries including England, Canada, Germany, Japan, and New Zealand (Eagar, Westera, et al., 2019). Support waxed and waned in various government reports, supported for example by the *Inquiry into the Quality of Care in Residential Aged Care Facilities in Australia* (House of Representatives Standing Committee on Health Aged Care and Sport, 2018a, 2018b) and opposed in the Legislated Review of Aged Care (DoH, 2017a) and the report of the Aged Care Workforce Strategy Taskforce (2018). In its final report, however, the Royal Commission on Aged Care Quality and Safety came down on the side of mandated minimum staffing standards, recommending from October 1, 2023, that a minimum of 200 min of care per day for an average resident, of which at least 40 min to be provided by a registered nurse, and at least one registered nurse on site for at least one shift, with subsequent increases recommended (RCACQS, 2021, Vol. 1). The Australian Government accepted the recommendation, as well as a recommendation that residential aged care services be required to report total care staffing minutes by registered nurses, enrolled nurses and personal care workers on a quarterly basis (DoH, 2021b).

These recommendations and commitments are significant as the Australian government had previously refused to require documentation and reporting of the number of staff working in facilities on a regular basis, let alone setting staffing standards. Earlier attempts to legislate for quarterly reporting to improve transparency repeatedly failed. The Aged Care Amendment (Staffing Ratio Disclosure) Bill 2018 lapsed in April 2019 despite the recommendation of a House of Representatives Standing Committee to pass the Bill (House of Representatives Standing Committee on Health Aged Care and Sport, 2018a), and the subsequent Aged Care Amendment (Staffing Ratio Disclosure) Bill 2019 was removed from the Notice Paper in February 2020. Moreover, quarterly reporting on the residential aged care workforce was not supported by Australia's Aged Care Workforce Industry Council (2020), the body charged with the implementation of the National Aged Care Workforce Strategy.

If the planned quarterly reporting occurs as currently scheduled, the first data may become available in late 2023, although no plan for public release has been announced. There are, however, relatively recent workforce data available from a census of providers conducted by the DoH in late 2020. Previous iterations of the National Aged Care Workforce Census and Survey were conducted by an independent academic unit at Flinders University (in 2003, 2007, 2012, and 2016), and incorporated both a census of aged care providers and a survey of staff. The absence of staff survey and interview data is an important limitation in the 2020 collection, and there are other shortcomings (Gibson, 2022). The response rate was comparatively low at 49%, down from 76% in 2016, and 96% in 2012 (DoH, 2021a; King et al., 2013; Mavromaras et al., 2017). The weighting method historically used in these collections takes account of size and geographic location, but does not include other factors such as ownership (for profit vs. not for profit) and State or Territory, an issue that was of less relevance at the higher response rates of earlier years. At a time when restructuring of the aged care sector is critical, and the reform of the residential aged care workforce is a core component of required change, there is inadequate information on the nature of the workforce. In particular, there are limited national data on the conditions under which the people doing the work are employed, and even less information on the nature of the work itself and the way in which care is provided. In Australia, there is little national evidence on the precarity of permanent part-time work in residential aged care, although there are indications from the community care sector (Charlesworth & Malone, 2017), and Charlesworth and Heap (2020) have argued that casualized work practices may emerge within permanent part-time work.

The 2020 Aged Care Workforce Census reports 71% of the direct care workforce are permanent part-time, 6% are permanent full-time, 19% are casual or contract workers, and 3% agency staff. While the high proportion of permanent staff suggests a degree of job security, there are other indications suggesting the residential aged care workforce is subject to considerable earnings and working time insecurity, with 30% of the direct care workforce wanting to work more hours and 9% reporting working in more than one job (Mavromaras et al., 2017). The pattern of working for multiple employers or at multiple sites emerged clearly as a key factor in COVID-19 infection transmissions in residential aged care and Government financial payment were implemented to support single-site work (Andrews, The Hon Daniel, 2020). Yet there continues to be very limited evidence on its nature and extent.

Taken together these data suggest a degree of casualization in the residential aged care workforce that may be greater than the categories reported in the census. The conditions of work are important not only because of their consequence for the workforce, but also, they, in turn, influence the conditions of care (Baines & Armstrong, 2018).

These conditions of work become even more important when combined with a more detailed understanding of the way in which care is delivered in the real world of residential aged care. Such an understanding requires a very different kind of data to that normally

collected—detailed time and motion data combined with an observational component to describe what residential aged care workers do, minute by minute and hour by hour. There has been very little work done on this topic, and nothing in recent years (Qian et al., 2012, 2016). These previous studies suggest the average duration of most activities is brief (less than 1 min) and communication and direct care are the most time-consuming aspects of the work. It is this lens of the day-to-day experiences of how staff provide care that is the focus of this article. Understanding how staff work to respond to the needs of individual residents and competing demands in their workplace is a potentially neglected part of planning for the aged care workforce of the future. Labor process theory is one way of examining these arrangements (Braverman, 1974). Drawing on labor process theory, specifically _demanding and high-commitment work_, this article demonstrates how the mental aspects of the work are intensified through processes such as multiskilling and mental switching (Boxall & Macky, 2014; Findlay & Thompson, 2017).

The composition of what "care work" actually is warrants understanding to address issues in the sector, but there is remarkably little information on the division between mental and manual labor in aged care work (Baines et al., 2021). There are detailed studies on the nature of the manual labor performed in residential aged care that demonstrate significant missed care because of work intensity (Meagher et al., 2019; E. Willis, Price, et al., 2016), however, the distinct pattern of mental labor has not been thoroughly explored. Concepts drawn from labor process theory can be used to demonstrate the unique ways in which this mental labor is intensified, which in turn impacts on the manual labor. This provides new theory application about the interconnections between multitasking and task switching and demanding and high-commitment work (Boxall & Macky, 2014; Findlay & Thompson, 2017).

First articulated by Braverman (1974), labor process theory argues that under modern capitalism, technology has allowed owners and managers to take control over both the mental and manual side of labor. Braverman argued that technology, and we would argue the managerial mechanisms of New Public Management and austerity, allow the owner or manager to set the pace of work, to determine the daily quota, and to organize the way it is performed. This, in turn, allows the substitution of skilled for unskilled workers and consequently reduces costs. In taking control over the production process, management takes from the worker their creative engagement and enables the process to be broken down into multiple fewer complex tasks (Braverman, 1974). These technologies are not limited to machinery or computer technologies; they include payment instruments, metrics, and organizational technologies.

The Australian Aged Care Funding Instrument that categorizes residents on the severity of need and assigns caring responsibilities that are legitimized through funding is a powerful example of the shift from person-centered to technologically rationalized constructed care (DoH, 2017b). It operates as a government-managerial technology that controls the labor process, the number of staff on a shift, the profit margins, and the skill set within the residential aged care home demonstrating a rationalized Taylorism to care work (Braverman, 1974). As a consequence, this has led to increasing fragmentation and standardization of work tasks, with control of the speed of labor in the hands of owners and managers. For the worker, the design is alienated from the production and has resulted in an increased division of labor between registered nurses and care workers and to highly intensified mental and manual labor.

Studies over the last two decades identified this increase in work intensification within residential aged care (Ansell & Coombe, 2019; Baines et al., 2021). Examples can be found in the impact of long hours, multitasking, up-skilling, role-substitution, the replacement of workers with technology, outsourcing, the privatization of core services, reduction in bed numbers, and staff redundancies on the cognitive load and stress levels of health workers (Anttiroiko & Valkama, 2016; Baines et al., 2021; Bray et al., 2005; Henderson, Willis, Toffoli, et al., 2016). Each of these factors contributes to work intensification, although the direct links are not always clear. The traditional definition of work intensification assumes long hours of work and/or an increased speed (E. Willis, Toffoli, et al., 2016). Both long hours and increased pace primarily engage the worker in manual labor. However, there are other terms linked to work intensification that are part of new public management, such as _working smarter_, _discretionary effort_, or _lean_ (Attwood-Charles & Babb, 2017). These terms are usually defined as efficiency measures and an underlying assumption is that the work process can be modified by either management or the worker to increase productivity. The changes require mental attention to the labor process and are where our interest lies.

This article addresses the lack of information on the nature of work intensification in residential aged care, presenting rarely available minute by minute time and motion and ethnographic data on the nature of residential aged care work—specifically on how aged care workers spend their time—and analyses these data in relation to mental and manual sides of labor using labor process theory.

2 | METHODOLOGY

This article reports a segment of baseline data collected during an independent evaluation of the implementation of a new health information technology at a nursing home in Canberra, Australia (Bail et al., 2020). The aim of the evaluation was to assess the acceptability, efficiency, and quality of the new health information system implementation using a 2-year, three-stage participatory action research design, with concurrent mixed methods data collection from residents, staff, and administrative databases. The pre-implementation data reported here were collected in March 2019. This article presents data from the staff time and motion study, supplemented by ethnographic field notes collected in the course of the time and motion work.

2.1 | Measurement

Time and motion data were collected using a direct observation tool derived from previous research (Qian et al., 2016; Westbrook et al., 2011) to record data on staff time and activities for each minute over 1-h intervals at preselected times. Within each minute, activities were coded by four broad categories (direct care, indirect care, hunting and gathering and system care), by specific task (e.g., bathing or showering a resident, medication preparation, searching for documentation), by location (e.g., bathroom, bedroom, or hallway) and where staff switched focus between residents. Multiple categories of activity, tasks, locations, and switches of focus were observed and recorded within individual minutes. Four team members conducted observations. Twenty percent of observations were tested for interrater reliability. Interrater scores were calculated for two observers for 1 and 10 min of observation time. Interrater reliability ranged from 91.2% to 99.7% agreement, respectively. Using observational fieldwork data collected (ethnographic fieldnotes) in the course of the time and motion study, and following R. Willis (2019), "composite case studies" were derived to protect the identity of residents and staff, while illustrating the complex nature of care work.

2.2 | Analysis

The constructs "care minutes" and "care minutes per hour" (c-m/h) were employed to capture multiple tasks conducted within an observation minute. This metric captures the extent and nature of multitasking. A staff member performing two activities within the same minute yields two "care minutes," three activities yields three "care minutes," and so on; due to multitasking there are more than 60 c-m/h in this metric in this metric. The activities may be simultaneous or sequential and may be more mental (e.g., communication) than manual (e.g., preparing equipment). This research design is used to specifically incorporate the interruptions and multitasking that is a normal part of care work (Westbrook et al., 2011; Yen et al., 2018).

2.3 | Participants

Participants were direct care staff on shift during the study period and who consented to participate in the study. Direct care is provided by registered nurses, enrolled nurses, and personal care workers (see text box below for definitions). The observations were conducted in 1–2-h blocks depending on staff consent, between 7 and 11 a.m., chosen as a rich observation sample as this is when a large amount of direct and indirect care occurs (Yen et al., 2018). Approximately 2 weeks of data collection were sought as a meaningful range and depth of data to inform the results of the study (Qian et al., 2016; Westbrook et al., 2011).

> A registered nurse has a minimum of 3–4 years University level specialist education, and holds a Bachelor's degree. They are registered health professionals.

> An enrolled nurse has 1–2 years of specialist education and will hold either a Certificate IV or Diploma in Nursing from a Technical and Further Education College. They are registered health professionals.

> A personal care worker has 0–1 years of specialist education. The role requires either on-the-job training or a Certificate III from Technical and Further Education College. They are not registered health workers.

2.4 | Setting

The research site is a medium-sized (169-bed) residential aged care home located in a metropolitan setting. The staffing levels are comparatively high in an Australian context. At time of data collection, registered nurses provided >44 min per resident per day, and total care staff provided 242 min of care per resident per day, meeting the requirements for a "4-star level" as recently recommended by Counsel Assisting the Royal Commission (Recommendation 1) (RCACQS, 2020a, 2020b). Only 15% of Australian residents are in homes meeting the standard for 4–5 stars (Eagar, McNamee, et al., 2019).

2.5 | Recruitment

Given the study setting, the consent process required careful management. Before commencement, information about the project and the consent process, including phone numbers for the project team were shared via short message service (SMS) (for staff), email (for residents and relatives), via the aged care home newsletter, and posters were displayed throughout the facility. Detailed information packs were distributed to staff members and residents. Staff were offered an AU$25 gift voucher on return of a signed consent form as a token of appreciation for their time to participate. All staff providing direct care were eligible to participate (i.e., nurses and care workers, but not cleaners or kitchen staff). The study was not registered as a clinical trial.

Further methodological information including details of the consent process in relation to residents is available elsewhere (Bail et al., 2020, 2022). Ethics approval was obtained from the relevant University Human Research Ethics Committee.

3 | RESULTS

A total of 43 observation hours are reported here. Thirteen hours relate to six different nurses and 30 h to 25 different personal care workers. Data are presented separately for "nurses" (registered nurses and enrolled nurses combined) and personal care workers.

3.1 | Multitasking and mental switching

In our research, we documented both mental switching and physical multitasking on a minute by minute basis. Examples of physical multitasking included communication with a resident while assisting with showering or meal, or preparing equipment while communicating with a colleague. "Mental switches" occur when a staff member is talking with "Bob" (pseudonym) and providing assistance with eating, then responds to a question about another resident "Elaine" (pseudonym), and then returns to assisting "Bob."

On average, staff switched which resident they were thinking about 18 times per hour, or every 3 min (range 3–46 per hour). Nurses switched between residents on average 26 times per hour. Care workers switched between residents 14 times per hour. And as they switched focus between residents, staff were simultaneously multitasking. On average, staff were multitasking for 37 min in every hour, over 50% of the time.

A statistically significant Pearson's correlation was identified between the number of staff switches of resident focus and interruptions from colleagues ($r = 0.41$, $p = 0.006$) and interruptions by other residents or visitors ($r = 0.32$, $p = 0.04$). This indicates that it is common interruptions that cause staff to mentally switch from one resident to another. This is consistent with the "surveillance" role nurses and carers play while providing "hands on" care, where they are simultaneously assessing and intervening to respond as matters arise.

The composite case studies (vignettes) presented in Figure 1 illustrate the work of aged care staff; its multitasking, competing demands, interruptions, and constant switching of focus between people and activities. Even the word activity can be misleading, as it fails to convey the combinations of observations, communication, and tasks that are constantly occurring.

The simple example of "opening bananas" illustrates observation (aware of the missing banana), the delegation of task and communication (the request to get the banana), providing the banana (task), observation (the banana is unpeeled and the resident cannot eat it) and task (peeling the banana to meet the resident need). Composite case study 3 "managing the moment" illustrates the complexity of combining staff supervision, staff shift changeovers, and resident care, including the management of interaction between residents, and the absence of time to document "what worked" for other staff faced with a similar confrontation.

While the composite case studies demonstrate complexity, all three also illustrate the importance of staff who are familiar with residents. The second composite case study illustrates how a casual staff member who is new to a wing, and does not have time to become familiar with the documentation for five residents, relies on the knowledge of another staff member to inform and sequence her work, allowing the process of care to occur in the way that the residents prefer, but also with a higher level of efficiency. Given the time-pressured environment, efficiency is valuable to meet all the residents' needs. For example, if they are not showered and to table in time, their meal may be removed before they have time to eat it.

3.2 | How staff spent their time

Nurses averaged 129 c-m/h spending most time in Direct Care (50 c-m/h) and Indirect Care (61 c-m/h). Care workers averaged 113 c-m/h, spent mainly in Direct Care (64 c-m/h) and Indirect Care (42 c-m/h) (for detailed breakdowns, see Bail et al., 2020). The remaining activities fell into the categories of either "Hunting and Gathering" such as looking for documentation or endeavoring to contact colleagues or relatives (13 c-m/h for nurses, 3 c-m/h for care workers) and "System Care" including meetings, handover and personal care breaks (5 c-m/h for nurses and 4 c-m/h for care workers).

3.3 | Direct and indirect care

3.3.1 | Nurses

Nurses spent a great deal of their time on communication and managing medication. Communication was with residents and their visitors (26 c-m/h), but also with colleagues providing or seeking information or advice (15 c-m/h). Medication-related activity involved both preparation (23 c-m/h) and administration (16 c-m/h). Documentation, including both reading and recording information, was also a common activity (16 c-m/h), with a further 4 c-m/h spent on searching for documentation. Other activities included hydration and nutrition (5 c-m/h), handwashing, gloving and gowning (4 c-m/h), preparing equipment (3 c-m/h), clinical observations (2 c-m/h), and skin and wound care (1 c-m/h).

3.3.2 | Care workers

Communication was also a major focus of care worker activity, particularly with residents or their visitors (30 c-m/h), but also sharing or seeking information with other staff. Preparing equipment (hoists, linen, incontinence aids) was a common activity (15 c-m/h). Personal care activities including bathing, showering, and mouthcare (6 c-m/h), hydration and nutrition (7 c-m/h), and toileting (3 c-m/h) were the major focus of activity. Other activities included assisting residents with mobility (7 c-m/h), skin and wound care (4 c-m/h), and handwashing, loving and gowning (4 c-m/h). Even when all aspects of documentation were combined (reading and recording information, searching for records), care workers averaged only 1.5 c-m/h. However, supplementary information from documentation diaries and observational data indicate care workers spend on average 20 min on documentation at the end of their shifts.

Composite Case 1 –OPENING BANANAS

The nurse Judy stopped her medication round and asked one of the care workers to get Phil a banana from the kitchenette. The researcher asked 'how did you know he wanted a banana?' Judy said she noticed he hadn't been given it as per his usual routine. The casual care worker got a banana, and put it on Phil's tray, where Phil sat alert, with his hands resting on the table and with no appearance of any physical limitations. Judy then went to Phil and opened the banana for him, as he mentally couldn't connect how to open and peel a banana. 'Delicious banana!' Phil said.

Composite Case 2–READING TAKES TIME

The casual staff member hadn't worked the wing before so wasn't sure how to look after the five residents she was allocated. The team leader kept yelling down the corridor 'Mrs Bingle will be ready for breakfast now, walk her down', 'Mrs Waters likes her shower after breakfast, if you get the towels and clothes ready now she will do it herself afterwards'. 'Help me with Sir Henry's hoist transfer now, and then you can get Mr Bonif's wheelchair ready while he shaves'.

Composite Case 3–MANAGING THE MOMENT

It was the beginning of the afternoon shift, with four new afternoon staff starting and three morning staff due to finish, go on break, or start their documentation. At the same time, two residents Tom and Ruby, were 'escalating' in their behaviours (increasing non-blinking eye contact, raising voices, posturing, unclear intent). The team leader Mohammed was trying to talk down and re-orient the residents, instruct afternoon staff as to their priorities, and delegate to morning staff how to de-escalate the situation. After the residents had been re-oriented, the staff returned to completing the tasks immediately at hand. Documentation of the contributing factors, or the care response that successfully re-oriented Tom and Ruby, did not occur.

FIGURE 1 Three composite case studies

4 | DISCUSSION

These findings highlight the nature of multitasking and mental switching within the labor process itself. These two workplace tasks are invariably listed in accounts of functional flexibility as outcomes of restructuring or austerity measure, but rarely described in detail or categorized as demanding and high-commitment work that intensified labor (Boxall & Macky, 2014; Findlay & Thompson, 2017). This paper provided some of the detail of what this intensification looks like. We argue much of this work intensification arises out of the casualization of the workforce as these staff do not know the residents. This is a hiring strategy frequently raised by unions in terms of staff working conditions and precariousness, but less so from either the perspective of its impact on worker relationships, including the stress incurred by other staff, or the impact on resident care. Regular staff with regular staffing patterns are an integral part of improving the quality of care (Chenoweth et al., 2014). Casual staff do not have time to familiarise themselves with resident care plans thus exacerbating the multitasking and task-switching of permanent staff. A workforce plan to reduce the proportion of casual, short-term, and agency staff, as well as the proportion of staff on minimum-hours contracts, is urgently needed for the well-being of residents and staff alike. Three interconnected issues arise from the theoretical arguments and minute by minute time and motion and ethnographic data presented in this article.

4.1 | High-frequency multitasking and mental switching

First, the natural cadence of aged care work involves high-frequency multitasking and mental switching, and this has implications for the cognitive burden on staff, the structure of care, and for workforce planning. While some levels of both multitasking and mental

switching are not unusual in care work, aged care operates in a physical and social context where multiple interactions among staff and residents occur simultaneously, increasing both the opportunity and the likelihood of "mental switching" and multitasking sequentially and at the same time for staff. The vignettes identify the burdensome demand of these activities, and the tacit knowledge required of staff to manage the work intensity, much of it exacerbated by casualization. The vignettes illustrate the consequence on work demands of funding shortfalls and working arrangements along with the deep commitment of staff. While much of the multitasking is likely an integral and effective form of care delivery (communicating while providing care), opportunities to identify preventable or unnecessary multitasking, and avoiding system failures to reduce mental pressures (Abdelhadi et al., 2022), are avenues for investigation in efficiency, safety and satisfaction of care delivery.

This intensification of mental labor can be seen through the lens of Green (2006) "demanding work" theory, defined as increased teamwork, multitasking, and performance-related pay. Findlay and Thompson (2017) go further to argue that managers draw on workers tacit knowledge and skills in "demanding work." Demanding work is unrelenting manual and mental engagement in the organization and its functioning and requires a high level of effort. It is not a cohesive package of managerial strategies, or for that matter overtones, but is any work process that is physically, mentally, and relentlessly demanding (Findlay & Thompson, 2017). It also aligns neatly with the concept of high performance, high involvement, and high commitment work. These terms are usually employed to demonstrate the range of strategies implemented by management to increase productivity through processes of worker empowerment. However, the concept of high commitment can also lead to work intensification, rather than work satisfaction and as a consequence, challenge any idea of empowerment (Boxall & Macky, 2014). The complexities of multitasking (manual labor) and mental switching (mental labor) are two such workplace skills that arise out of high-demand, high-commitment workplaces as demonstrated by this data.

Multiskilling, up-skilling, multitasking, and task-switching are all subsets of functional flexibility. Some terms are defined as adjusting work practices and skills to fit the organization; for example, up-skilling, multiskilling (Sutcliffe & Callus, 1994). Task switching is "defined as pausing a task to handle an incoming task, and multitasking is adding a task in parallel to an existing task" (Walter et al., 2014, p. 231). Multitasking, interruptions, and mental switching tend to be conflated as phenomena within research (Odberg et al., 2018; Yen et al., 2016). Mental switching or cognitive stacking is also an example of functional flexibility where service workers are required to think about a patient or resident while simultaneously physically (and sequentially mentally) caring for another resident. Multitasking is defined as a core skill of the expert nurse who may perform a patient assessment at the same time as they provide medication, change an intravenous line, or do a wound dressing (Willis, 2009). Similarly, the skill of cognitive stacking is used in nursing to describe the mental adjustments nurses make in reorganizing the tasks to be done for patients under their care

(Patterson et al., 2011; Potter et al., 2005). This reprioritization is invariably required as a result of time pressures, understaffing, and oversupervising, but is presented in the literature as a core capability achieved when the nurse moves from novice to expert (Hoffman et al., 2009). These activities form part of the mental labor of the caring professions and occupations and along with medical and nursing knowledge underpin the physical tasks. They are also part of the tacit knowledge of the carer and are shaped by the formal bureaucratic requirements of the job, arising from care plans, safety, and quality metrics and accreditation standards that regulate residential aged care. While "core capability" is an important recognition as "normal care work," labor process theory highlights that it can also be a source of tension if workplaces are over-reliant on staff capacity to adapt and multitask.

4.2 | Knowing the resident

Second, knowing the resident is an essential component of high-quality and efficient person-centered residential aged care, and this has implications for work efficiency and effectiveness. It is important to remember that efficiency is cost in relation to outcomes, and improved efficiency can be a result of improved outcomes as well as reduced cost. The importance of knowing the resident emerges most clearly in the vignettes, but is also an inherent part of mental switching and multitasking—staff need to know about the residents and their needs and preferences to cognitively stack (reprioritize the work) in this fashion. Increased staffing hours and a more appropriate skills mix as recommended by Counsel to the Royal Commission (RCACQS, 2020b) (and numerous other inquiries and reports) can be expected to reduce the level of cognitive stacking required, and may even (by reducing interruptions) improve efficiency, but the basic nature of the work will not change, and knowing the resident will remain central to the quality of person-centered care requiring permanent staff with high levels of commitment.

The analysis provided here offers new insights on mental switching as part of work intensification, complementing previous research on multitasking in aged care (Baines et al., 2016, 2021; Henderson, Willis, Xiao, et al., 2016; E. Willis, Price, et al., 2016) and "cognitive stacking" in health care (Patterson et al., 2011). Previous research has tended to utilize the quality and safety lens and avoid theorizing from the perspective of the worker, focusing rather on patient safety, adverse events, staff behavior, and financial incentives. These concerns are all developments from new public management and state austerity mechanisms and assume worker compliance: they utilize a top-down governance approach rather than a bottom-up person and relational-focussed approach. The focus of previous research concentrates on identifying how healthcare staff might manage the intensified work or interruptions while maintaining patient safety and productivity (Brixey et al., 2005; Fong & Ratwani, 2018; Grundgeiger & Sanderson, 2009; Magrabi et al., 2010; Odberg et al., 2018; Shearer et al., 2019; Singh, 2014) with the theoretical insights drawing on cognitive psychology to ensure

workers have the necessary skills to safely manage the cognitive load (Grundgeiger & Sanderson, 2009). These new findings highlight a need to complement managerial approaches by better understanding the "minute by minute" task requirements that are experienced by residents and staff, and how staff use those multitasking minutes to remain person-focussed and provide individualized care, if there is to be realistic transformation of the aged care work environment.

4.3 | Understanding the nature of the work

The third issue relates to how a better understanding of the minute by minute, hour by hour nature of aged care work might contribute to better outcomes for residents and workers. The data generated in this study details the high levels of stressful mental labor staff in aged care are required to perform. This mental labor is highly integrated with physical tasks and is also contingent on skill level. This "real world" of care work challenges tidy notions such as allocating 30 min of registered nurse care time per resident per day as recommended by Counsel Assisting the Royal Commission (RCACQS, 2020a, 202b) but does not negate them. These "real-world care minutes" serve as a useful reminder that in the context of residential aged care, the allocation of 30 min of registered nurse care per resident per day will play out (and bring benefits) at an aggregate level, supporting care hours across multiple residents, rather than individual by individual allocations. After all, residential aged care does not only occur at the bedside. A significant proportion of care occurs in common areas including lounges, dining rooms, and hallways. For residents accommodated in four-person rooms even the bedside can be shared space, and some forms of care require "doubles" (two staff to undertake an activity with a particular resident). Residents interact with each other as well as with staff, and as in any group or home context, not everyone gets along. Managing resident interactions is an important area of work for staff. It is also why much of the multitasking and task switching is required. The data and composite case studies highlight the importance of regular staffing and the need to reduce reliance on casual and agency staff and on staff working on minimum-hours contracts and across multiple sites.

Following Braverman (1974), we have demonstrated the way in which managers and owners take control of the mental side of labor in aged care and by default determine the speed required for manual labor. This is not a straightforward affair. Human service occupations have always had some autonomy within the labor process. This is of necessity given the nature of the work, and the need for the capitalist class to capture the creative power of workers to respond to changing markets (Littler & Salaman, 1982). Many accounts separate out the manual from the mental side of professional labor, assuming the worker has considerable creative control over the mental side of their work. The ethnographic accounts here demonstrate the way in which managers intrude into the very cognitive operation of the professional as a result of work intensification, casualization, and inadequate staff-to-resident ratios. What the composite case studies highlight is the impact of these employment practices on the mental

side of the labor process, particularly the activity of task switching. This mental activity has a number of outcomes. It compounds what is already stressful physical labor and exploits the worker's professional expertise so that more tasks must be done in the time than allocated. As a form of work intensification, it generates surplus value for the owner drawing on the worker's physical skill, and capacity to multitask, while simultaneously mentally task-switching. As the study demonstrates, managers and owners have a number of mechanisms for controlling labor; but they are softer than originally outlined by Braverman and one of these strategies is to rely on the high commitment of care workers to perform this demanding work (Thomson, 2009).

As a single-site study, the research benefits from the richness and level of detail possible in the focused case study of this kind. At the same time, a single-site study is limited in terms of its generalisability. The research project was undertaken in an aged care service with comparatively high levels of staffing; extending this approach to collect data at multiple sites with different staffing levels would have yielded additional insights. A larger scale study, incorporating analyses of different work patterns in multiple settings, and expanding observation hours beyond the peak care and staffing intensity time of 7–11 a.m. is recommended as an essential resource in building capacity to deliver high-quality care.

5 | CONCLUSION

Workforce labor theory interpretations of observational data of residential aged care nurses and carers have highlighted three new contributions to complement research on resident safety and quality of care: first, aged care work involves high-frequency multitasking and mental switching, and this has implications for the cognitive burden on staff, the structure of care, and for workforce planning and are avenues for investigation in efficiency, safety and satisfaction of care delivery; second, knowing the resident will remain central to the quality of person-centered care requiring permanent staff with high levels of commitment; third, a better understanding of the minute by minute, hour by hour nature of aged care work highlights the importance of regular staffing and the need to reduce reliance on casual and agency staff, and minimum hours contracts.

Despite the wide range of carer and nursing education and training internationally, and different health service structures and funding, the primary mechanisms of nursing and care work, and associated challenges remain constant. To make a difference to the quality of resident care, recognition of the unintended consequences of business decision-making upon the care environment is needed. Managers, health service administrators, and policy-makers need to consider the leverage points to facilitate. (1) Systems, including digital health, that are user-friendly to the multitasking and mental switching of aged care workers and nurses; (2) permanent staff who can develop rapport and relationships with residents to foster person-focussed care; (3) incentivisation of worker-friendly environments through safe staffing policies. Many countries are

battling the simultaneous impact of ageism—where people in need are provided more resources and interventions if they are younger, and care-ism—where society/policies values financial expenditure on curative medical interventions rather than the expensive costs of 24/7 care. This paper highlights the consequential costs to the nursing and care workforce and the ultimate impact upon resident recipients if we ignore the unique characteristics of this workforce. Workforce and workflow planning worldwide need to consider these factors to impact on efficiency and effectiveness of aged care health delivery.

AUTHOR CONTRIBUTIONS

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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REFERENCES

Abdelhadi, N., Drach-Zahavy, A., & Srulovici, E. (2022). Work interruptions and missed nursing care: A necessary evil or an opportunity? The role of nurses' sense of controllability. *Nursing Open*, 9(1), 309–319. https://doi.org/10.1002/nop2.1064

Aged Care Workforce Industry Council. (2020). *Aged Care Workforce Industry Council response to the Royal Commission's (Counsel Assisting) recommendations on workforce*. Australian Government Department of Health. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwj4i7W86c_5AhWIRmwGHZR4B4MQFnoECBAQAQ&url=https%3A%2F%2Fagedcare.royalcommission.gov.au%2Fsystem%2Ffiles%2F2020-9%2FAWF.650.00100.0001.pdf&usg=AOvVaw1ArQNMQkM5I6ngP30-uiyb

Aged Care Workforce Strategy Taskforce. (2018). *A matter of care: Australia's aged care workforce strategy*. Australian Government Department of Health. https://www.health.gov.au/resources/publications/a-matter-of-care-australias-aged-care-workforce-strategy

Andrews, The Hon Daniel. (2020). Support for aged care residents and aged care workers across Victoria [Press release]. Victorian Government Department of the Premier. https://www.premier.vic.gov.au/support-aged-care-residents-and-aged-care-workers-across-victoria

Ansell, C., & Coombe, J. (2019). *Fixed staffing ratios in residential aged care: Submission*. RCACQS. Tab 013-AWF.001.02143.01. Commonwealth of Australia. https://agedcare.royalcommission.gov.au/media/18606

Anttiroiko, A. V., & Valkama, P. (2016). Post-NPM-style service integration: Partnership-based brokerage in elderly care. *International Journal of Public Sector Management*, 29(7), 675–689. https://doi.org/10.1108/IJPSM-12-2015-0220

Attwood-Charles, W., & Babb, S. (2017). Deployment of lean production in healthcare. *Research in the Sociology of Work*, 30, 87–115. https://doi.org/10.1108/S0277-283320170000030005

Bail, K., Kozlovskaia, M., Redley, B., Strickland, K., Gibson, D., Gibson, J., Merrick, E., & Hind, A. (2020). *Evaluation of ACE in residential aged care: The impact of a digital point-of-care system on residents and staff. Baseline & Interim Reports*. University of Canberra. https://www.canberra.edu.au/about-uc/faculties/health/research/ageing-research-group/our-research/Evaluation-of-ACE-in-residential-aged-care_Baseline-and-Interim-Reports.pdf

Bail, K., Merrick, E., Gibson, D., Hind, A., Strickland, K., & Redley, B. (2022). A co-designed health information system implementation into residential aged care: A mixed-method evaluation. *Journal of Nursing Scholarship*. https://doi.org/10.1111/jnu.12840

Baines, D., & Armstrong, P. (2018). Promising practices in long term care: Can work organisation treat both residents and providers with dignity and respect? *Social Work & Policy Studies: Social Justice, Practice and Theory*, 1(001), 1–26. https://openjournals.library.sydney.edu.au/index.php/SWPS/article/view/11736

Baines, D., Charlesworth, S., & Daly, T. (2016). Underpaid, unpaid, unseen, unheard and unhappy? Care work in the context of constraint. *Journal of Industrial Relations*, 58(4), 449–454. https://doi.org/10.1177/0022185616655981

Baines, D., Dulhunty, A., & Charlesworth, S. (2021). Relationship-based care work, austerity and aged care. *Work, Employment and Society*, 36(1), 139–155. https://doi.org/10.1177/0950017020980985

Boxall, P., & Macky, K. (2014). High-involvement work processes, work intensification and employee well-being. *Work, Employment and Society*, 28(6), 963–984. https://doi.org/10.1177/0950017013512714

Braverman, H. (1974). *Labor and monopoly capitalism*. Monthly Review Press.

Bray, M., Stanton, P., White, N., & Willis, E. (2005). The structure of bargaining in public hospitals in three Australian states. In P. Stanton, E. Willis, & S. Young (Eds.), *Workplace reform in the healthcare industry* (pp. 63–90). Palgrave MacMillan.

GIBSON ET AL.

Brixey, J., Robinson, D., Tang, Z., Johnson, T., Zhang, J., & Turley, J. (2005). Interruptions in workflow for RNs in a level one trauma center. *American Medical Informatics Association Annual Symposium Proceedings*, *2005*, 86–90. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1560877/

Charlesworth, S., & Heap, L. (2020). Redressing gendered undervaluation in New Zealand aged care: Institutions, activism and coalitions. *Journal of Industrial Relations*, *62*(4), 608–629. https://doi.org/10.1177/0022185620925102

Charlesworth, S., & Malone, J. (2017). Re-imagining decent work for home care workers in Australia. *Labour & Industry: A Journal of the Social and Economic Relations of Work*, *27*(4), 284–301. https://doi.org/10.1080/10301763.2017.1400420

Chenoweth, L., Merlyn, T., Jeon, Y. H., Tait, F., & Duffield, C. (2014). Attracting and retaining qualified nurses in aged and dementia care: Outcomes from an Australian study. *Journal of Nursing Management*, *22*(2), 234–247. https://doi.org/10.1111/jonm.12040

Department of Health (DoH). (2017a). *Legislated review of aged care 2017 report*. Australian Government Department of Health. https://www.health.gov.au/resources/publications/legislated-review-of-aged-care-2017-report

Department of Health (DoH). (2017b). *Aged care funding instrument user guide 2017*. Australian Government Department of Health. https://www.health.gov.au/resources/publications/aged-care-funding-instrument-acfi-user-guide

Department of Health (DoH). (2019). *Australian Government response to report of the Senate Community Affairs References Committee on effectiveness of the aged care quality assessment and accreditation framework*. Australian Government Department of Health. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjgjPPd7c_5AhXSxzgGHQ6rDy8QFnoECBYQAQ&url=https%3A%2F%2Fwww.health.gov.au%2Fsites%2Fdefault%2Ffiles%2Feffectiveness-of-the-aged-care-quality-assessment-and-accreditation-framework-australian-government-response-to-the-senate-community-affairs-references-committee-interim-report-effectiveness-of-the-aged-care-quality-assessment-and-accredi.docx&usg=AOvVaw23LJK4uXwgjycdwsN6ADjD

Department of Health (DoH). (2021a). *2020 aged care workforce census*. Australian Government Department of Health. https://www.health.gov.au/resources/publications/2020-aged-care-workforce-census

Department of Health (DoH). (2021b). *Australian Government response to the final report RCACQS*. Australian Government Department of Health. https://www.health.gov.au/resources/publications/australian-government-response-to-the-final-report-of-the-royal-commission-into-aged-care-quality-and-safety

Eagar, K., Westera, A., Snoek, M., Kobel, C., Loggie, C., & Gordon, R. (2019). *How Australian residential aged care staffing levels compare with international and national benchmarks*. AHSRI, University of Wollongong. https://ro.uow.edu.au/cgi/viewcontent.cgi?article=2120&context=ahsri

Eagar, K., McNamee, J., Gordon, R., Snoek, M., Duncan, C., Samsa, P., & Loggie, C. (2019). *The Australian National Aged Care Classification (AN-ACC): The resource utilisation and classification study*. AHSRI, University of Wollongong. https://ro.uow.edu.au/cgi/viewcontent.cgi?article=1973&context=ahsri

Findlay, P., & Thompson, P. (2017). Contemporary work: Its meanings and demands. *Journal of Industrial Relations*, *59*(2), 122–138. https://doi.org/10.1177/0022185616672251

Fong, A., & Ratwani, R. M. (2018). Understanding emergency medicine physicians multitasking behaviors around interruptions. *Academic Emergency Medicine*, *25*(10), 1164–1168. https://doi.org/10.1111/acem.13496

Gibson, D. (2022). Aged care employment and the productivity commission: Fixing the data gaps may be the most useful thing it can do. *Australasian Journal on Ageing*, *41*(4), 573–578. https://doi.org/10.1111/ajag.13113

Green, F. (2006). *Demanding work: The paradox of job quality in the affluent economy*. Princeton University Press.

Grundgeiger, T., & Sanderson, P. (2009). Interruptions in healthcare: Theoretical views. *International Journal of Medical Informatics*, *78*(5), 293–307.

Henderson, J., Willis, J., Toffoli, L., Hamilton, P., & Blackman, I. (2016). The impact of rationing of health resources on capacity of Australian public sector nurses to deliver nursing care after-hours: A qualitative study. *Nursing Inquiry*, *23*(4), 368–376.

Henderson, J., Willis, E., Xiao, L., Toffoli, L., & Verrall, C. (2016). Nurses' perceptions of the impact of the aged care reform on services for residents in multi-purpose services and residential aged care facilities in rural Australia. *Australasian Journal on Ageing*, *35*(4), E18–E23. https://doi.org/10.1111/ajag.12343

Hoffman, K. A., Aitken, L. M., & Duffield, C. (2009). A comparison of novice and expert nurses' cue collection during clinical decision-making: Verbal protocol analysis. *International Journal of Nursing Studies*, *46*(10), 1335–1344. https://doi.org/10.1016/j.ijnurstu.2009.04.001

House of Representatives Standing Committee on Health Aged Care and Sport. (2018a). *Advisory report on the Aged Care Amendment (Staffing Ratio Disclosure) Bill 2018*. Commonwealth of Australia. https://www.aph.gov.au/Parliamentary_Business/Committees/House/Health_Aged_Care_and_Sport/StaffingRatioBill/Report

House of Representatives Standing Committee on Health Aged Care and Sport. (2018b). *Report on the inquiry into quality of care in residential aged care facilities in Australia*. Commonwealth of Australia. https://www.aph.gov.au/Parliamentary_Business/Committees/House/Health_Aged_Care_and_Sport/AgedCareFacilities/Report

King, D., Mavromaras, K., Wei, Z., He, B., Healy, J., Macaitis, K., & Smith, L. (2013). *The aged care workforce 2012*. Australian Government Department of Health and Ageing. http://hdl.voced.edu.au/10707/244183

Littler, C. R., & Salaman, G. (1982). Bravermania and beyond: Recent theories of the labour process. *Sociology*, *16*(2), 251–269.

Magrabi, F., Li, S. Y., Dunn, A. G., & Coiera, E. (2010). Why is it so difficult to measure the effects of interruptions in healthcare? *Studies in Health Technology and Informatics*, *160*, 784–788. https://doi.org/10.3233/978-1-60750-588-4-784

Mavromaras, K., Knight, G., Isherwood, L., Crettenden, A., Flavel, T., Karmel, T., Moskos, M., Smith, L., Walton, H., & Wei, Z. (2017). *The aged care workforce, 2016*. Commonwealth of Australia. https://agedcare.royalcommission.gov.au/system/files/2020-06/CTH.1000.1038.0872.pdf

Meagher, G., Cortis, N., Charlesworth, S., & Taylor, W. (2019). *Meeting the social and emotional support needs of older people using aged care services*. Macquarie University, UNSW and RMIT University. https://doi.org/10.26190/5da7d6ab7099a

Odberg, K. R., Hansen, B. S., Aase, K., & Wangensteen, S. (2018). Medication administration and interruptions in nursing homes: A qualitative observational study. *Journal of Clinical Nursing*, *27*(5-6), 1113–1124. https://doi.org/10.1111/jocn.14138

Organisation for Economic Co-operation and Development (OECD). (2020). Workforce and safety in long-term care during the COVID-19 pandemic. https://www.oecd.org/coronavirus/policy-responses/workforce-and-safety-in-long-term-care-during-the-covid-19-pandemic-43fc5d50/

Office of the Royal Commission. (2019). *A history of aged care reviews*. Royal Commission on Aged Care Quality and Safety. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwj6hLS38M_5AhXtSWwGHRStCDEQFnoECAkQAQ&url=https%3A%2F%2Fagedcare.

|

royalcommission.gov.au%2Fsites%2Fdefault%2Ffiles%2F2019-12%2Fbackground-paper-8.pdf&usg=AOvVaw2_AGfXMiTPJbi-RgzXogDA

Patterson, E. S., Ebright, P. R., & Saleem, J. J. (2011). Investigating stacking: How do registered nurses prioritize their activities in real-time. *International Journal of Industrial Ergonomics*, 41(4), 389–393. https://doi.org/10.1016/j.ergon.2011.01.012

Potter, P., Wolf, L., Boxerman, S., Grayson, D., Sledge, J., Dunagan, C., & Evanoff, B. (2005). Understanding the cognitive work of nursing in the acute care environment. *JONA: The Journal of Nursing Administration*, 35(7), 327–335.

Qian, S.-Y., Yu, P., Zhang, Z.-Y., Hailey, D. M., Davy, P. J., & Nelson, M. I. (2012). The work pattern of personal care workers in two Australian nursing homes: A time-motion study. *BMC Health Services Research*, 12(1), 305. http://www.biomedcentral.com/1472-6963/12/305

Qian, S., Yu, P., & Hailey, D. (2016). Nursing staff work patterns in a residential aged care home: A time–motion study. *Australian Health Review*, 40(5), 544–554. https://doi.org/10.1071/AH15126

Royal Commission into Aged Care Quality and Safety (RCACQS). (2019). *Interim report: Neglect*. Commonwealth of Australia. https://agedcare.royalcommission.gov.au/publications/interim-report

Royal Commission into Aged Care Quality and Safety (RCACQS). (2020a). *Counsel assisting's submission on workforce*. Commonwealth of Australia. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjW-f7f7Lz2AhXOTWwGHZ26AT8QFnoECAIQAQ&url=https%3A%2F%2Fagedcare.royalcommission.gov.au%2Fsites%2Fdefault%2Ffiles%2F2020-03%2Fsubmissions-by-counsel-assisting.docx&usg=AOvVaw3ugFf2QRaKyNJ65Qt3l0q2

Royal Commission into Aged Care Quality and Safety (RCACQS). (2020b). *Counsel assisting's final submissions*. Commonwealth of Australia. https://agedcare.royalcommission.gov.au/media/29099

Royal Commission into Aged Care Quality and Safety (RCACQS). (2021). *Final report: Care, dignity and respect* (Vols. 1, 2). Commonwealth of Australia. https://agedcare.royalcommission.gov.au/publications/final-report

Senate Community Affairs References Committee. (2019). *Effectiveness of the aged care quality assessment and accreditation framework for protecting residents from abuse and poor practices, and ensuring proper clinical and medical care standards are maintained and practiced*. Senate. Commonwealth of Australia. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwi6mO2U8c_5AhX9SWwGHYcnCAAQFnoECAUQAQ&url=https%3A%2F%2Fwww.aph.gov.au%2FParliamentary_Business%2FCommittees%2FSenate%2FCommunity_Affairs%2FAgedCareQuality%2FReport&usg=AOvVaw0sTTvcR_kKpbCKxi16Dzyi

Shearer, B., Some, N., & Fortin, B. (2019). *Measuring physicians' response to incentives: Labour supply, multitasking, and earnings*. Centre de recherche sur les risques les enjeux économiques et les politiques publiques. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwiBj66o8c_5AhV6aGwGHUK9CZ8QFnoECAIQAQ&url=https%3A%2F%2Fwww.crrep.ca%2Fsites%2Fcrrep.ca%2Ffiles%2Ffichier_publications%2Fcrrep-2019-03.pdf&usg=AOvVaw1V89QlSSvMSDW_3ttBrLv8

Singh, D. (2014). Does multitasking improve performance? Evidence from the emergency department. *Manufacturing & Service Operations Management*, 16(2), 168–183. https://doi.org/10.1287/msom.2013.0464

Sutcliffe, P., & Callus, R. (1994). *Glossary of Australian industrial relations terms*. Australian Centre for Industrial Relations Research & Teaching.

Thomson, P. (2009). *Labour process theory and critical management studies*. Oxford University Press.

Walter, S. R., Li, L., Dunsmuir, W. T. M., & Westbrook, J. I. (2014). Managing competing demands through task-switching and multitasking: A multi-setting observational study of 200 clinicians over 1000 hours. *BMJ Quality & Safety*, 23(3), 231–241. https://doi.org/10.1136/bmjqs-2013-002097

Westbrook, J. I., Duffield, C., Li, L., & Creswick, N. J. (2011). How much time do nurses have for patients? A longitudinal study quantifying hospital nurses' patterns of task time distribution and interactions with health professionals. *BMC Health Services Research*, 11(1), 319. http://www.biomedcentral.com/1472-6963/11/319

Willis, E., Price, K., Bonner, R., Henderson, J., Gibson, T., Hurley, J., Blackman, I., Toffoli, L., & Currie, T. (2016). *National aged care staffing and skills mix project report: Meeting residents' care needs: A study of the requirements for nursing and personal care staff*. ANMF, Flinders University, University of South Australia. http://www.anmf.org.au/documents/reports/National_Aged_Care_Staffing_Skills_Mix_Project_Report_2016.pdf

Willis, E., Toffoli, L., Henderson, J., Couzner, L., Hamilton, P., Verrall, C., & Blackman, I. (2016). Rounding, work intensification and new public management. *Nursing Inquiry*, 23(2), 158–168. https://doi.org/10.1111/nin.12116

Willis, E. (2009). *Purgatorial time in hospitals*. Lambert Academic Publishing.

Willis, R. (2019). The use of composite narratives to present interview findings. *Qualitative Research*, 19(4), 471–480. https://doi.org/10.1177/1468794118787711

Yen, P. Y., Kelley, M., Lopetegui, M., Rosado, A. L., Migliore, E. M., Chipps, E. M., & Buck, J. (2016). Understanding and visualizing multitasking and task switching activities: A time motion study to capture nursing workflow. *AMIA. Annual Symposium Proceedings. AMIA Symposium*, 2016, 1264–1273. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5333222/

Yen, P. Y., Kellye, M., Lopetegui, M., Saha, A., Loversidge, J., Chipps, E. M., Gallagher-Ford, L., & Buck, J. (2018). Nurses' time allocation and multitasking of nursing activities: A time motion study. *AMIA. Annual Symposium Proceedings. AMIA Symposium*, 2018, 1137–1146. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6371290/