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Coping Strategies and Social Support Needs of Experienced and Inexperienced Nurses Performing Shift Work

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Impact Statement.

This article explores experienced and inexperienced nurses' perspectives of the daily challenges of working in shifts. The results provide information on practical ways to negotiate the temporal changes to professional work and life patterns associated with working in shifts. These findings can be used by universities and training organisations to advise student nurses on ways to mitigate some of the deleterious impacts of shiftwork. This information may also be useful for human resource management departments to aid in their decision making about the rostering, management, work environments and other resources to assist new nurses employed in shiftwork with a view to improving retention rates in this profession.

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CONFLICT OF INTEREST.

No conflict of interest has been declared by the authors.

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ABSTRACT

Aim: The aim of this investigation was to compare perceptions of nurses exposed to short or longer term shift work and their experiences working under this type of scheduling.

Background: Shift work is a crucial component of nurses' working lives, ensuring continuous care for patients. This study fills a research gap around the personal experiences of shift working nurses and the strategies used to manage the impacts of shift work.

Design: Qualitative case study design.

Methods: Constructivist methodology, including in-depth semi-structured interviews conducted in 2015, was used for the study. Iterative review and inductive analysis of transcripts from nine recently graduated nurses and twelve experienced nurses enabled identification and verification of key themes.

Findings: Three main areas of difference between new and experienced nurses relating to shift work challenges in a nursing environment emerged: perceptions about the utility of working in shifts, coping strategies and social support at home and work. Most experienced nurses found shift work advantageous, especially those with dependents. Coping strategies included flexible shift arrangements in both groups. Experienced nurses detailed the importance of support from family and friends while inexperienced nurses described feeling disconnected from social supports. Experienced nurses cited a lack of support from nursing managers as problematic.

Conclusions: Findings suggest shift selection mitigated challenges of shift work for both inexperienced and experienced nurses, indicating autonomous roster selection is critical. Similarly, social support at work from senior nurses and management and at home played an important role in nurses' coping.

Keywords: shift work, nursing, coping strategies, social support, experienced nurses, inexperienced nurses, inexperienced nurses.

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SUMMARY STATEMENT

Why is this research or review needed?

- Workplace stress is ubiquitous in nursing work place environments and compounded by shift work.
- Shift work, a necessity for many nurses contributes to high attrition rates amongst nurses in most industrialised countries and particularly amongst newly graduated nurses.
- Understanding daily stressors from shift work for experienced and inexperienced nurses and the coping mechanisms and support networks they use to minimise these stressors provides an opportunity to learn from nurses who remain in the sector.

Key findings

- Experienced and graduate nurses reported similar stressors associated with shift work and cited the importance of sleep, rest and social support.
- The groups differed, in where this social support was received and how they coped with the challenges of shift work.
- Inexperienced nurses described feeling increasingly isolated and disconnected from family and friends within a short time frame of commencing shift work.

How these findings can be used to influence policy/practice/research/education

- Findings provide inexperienced nurses with practical ways to negotiate the temporal changes to their lives and professional work associated with working in shifts.
- Universities and training organisations can use the findings to assist students nurses to mitigate some of the deleterious impacts of shift work.

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- Organisations can use findings to aid in their decision making about rostering, management, work environments and other resources to assist nurses employed in shift work.

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INTRODUCTION.

Shift work represents an important human resource management practice worldwide where work is organised into shifts for various economic, technical and societal purposes (Vogel et al., 2012). Evidence indicates that shift work has an impact on the health and wellbeing of employees in numerous ways, with adverse effects on both acute and chronic health outcomes (Costa, 2010). Research suggests that altered sleep / wake cycles associated with shift work disrupts the bodys' normal circadian rhythm and the organisation of domestic daily activities (Costa,2003).

BACKGROUND.

Globally shift working for nurses is not a new phenomenon (Matheson et al., 2014), with numerous aspects of aged and health care requiring continuous care for patients (de Cordova et al.,2012). The term shift work is used for the organisation of different hours and shifts across days and time and may vary considerably dependent on the work context (Vogel et al., 2012). The definition of shift work used in this study is work outside of normal daytime hours that includes late evening or overnight work (Antunes et al., 2010).

Occupational stress for nurses is characterised by high work demands (Lim et al.,2010), physical and intense workloads (Dawson et al.,2014) and, for many nurses, shift work (Johnston et al.,2016). Impacts of this stress include negative outcomes for nurses' health and wellbeing, increased rates of absenteeism (Gaudine et al., 2013) and high levels of staff turnover and intention to leave (Coomber and Barriball, 2007). The working environment is a key component contributing to attrition rates (Dawson et al.,2014) with the retention of nurses an integral part of the sustainability of the health care sector (Eley et al., 2014) in western societies.

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Research suggests that shift work can provide benefits for some nurses in their workplace. These include increased opportunities to improve and develop clinical skills (Nasrabadi et al., 2009), more time to spend with patients (Jahromi et al., 2013), increased autonomy (Powell, 2013) and lower levels of job demand (Unruh and Nooney, 2011).

Looking beyond the workplace, research points to possible benefits from shift work through increased opportunities to participate in social and family activities (Powell, 2013), higher remuneration through shift allowances (Shen and Dicker, 2008) and more available time to assist with managing work-life conflicts (Costa et al., 2014). Work-life conflict occurs when psychosocial stress and time demands from home and work accumulate or compete (Allan et al., 2007). Being able to choose or have control over shifts may alleviate some of the negative impacts that shift work can have on nurses' social and home lives with perceived control over working schedules inversely linked to work-life conflict (Pisarski et al., 2008).

As shift work is a necessity for many nurses, it is imperative for their long - term employment to develop self-coping skills to mitigate some of the challenges and stressors of shift work. Coping is described as 'behaviours and cognitive efforts used to adapt and survive in stressful situations' (Folkman and Greer, 2000); it is linked to improved mental health outcomes (Samaha et al., 2007). Coping strategies can be divided into external or problem focused coping, where the emphasis is on managing the problem and internal or emotional focused coping through the regulation of emotional responses (Lim et al., 2010). Folkman and Lazarus' theory of cognitive appraisal of stressors considers how an individual personally interprets a particular event and their reaction or how to cope with this stressful situation (Morimoto, Shimada & Tanaka. 2015). Therefore, in the case of nurses, how they perceive and adapt to workplace stress is an important determinant for coping adaptations. These

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strategies may have important outcomes relating to high turnover and attrition rates identified in nursing (Medland et al.2004).

Evidence suggests that social support from family and friends in the form of talking about problems and issues, a type of emotional based strategy, can ease some of the workplace stresses for student nurses (Chapman and Orb,2001) and assist with shift work adaptation and tolerance (Costa, 2003, Saksvik, 2011). Research links social support from supervisors and co-workers with reduced levels of burn out and increased job satisfaction in nursing (AbuAlrub, 2004), with supervisory support identified as a form of coping strategy for job related stress in nurses (Kipping, 1998).

Shift work typically forms part of a nurses' working life and consequently better ways to cope with and manage the challenges of shift work may improve work-life outcomes for nurses. The phenomenon of high attrition rates in nursing is well documented and many cite shift work as a contributing factor for their departure (Dawson et al.,2014). However, nurses choosing to remain in the health care sector are likely to adopt coping and adjustment strategies to mitigate the challenges of shift work. This study is significant as the results can provide valuable information on practical ways to negotiate temporal changes to the professional and home lives of nurses working under shift work scheduling. Findings can support opportunities to train and teach inexperienced nurses to assist in protecting themselves from some of the impacts of an adverse work environment. This study investigates the challenges of shift work using a constructivist framework to record the perspectives of experienced and inexperienced nurses, in their own voices, to elucidate support mechanisms which allow longevity in the nursing profession.

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THE STUDY.

Aim. This study examined the perceptions of challenges and benefits of working under shift work scheduling held by nurses exposed to different lengths of time to shift work. Therefore, as part of the investigation, the particular focus was the identification of coping strategies. By elucidating the coping mechanisms implemented by experienced nurses to assist them with shift working, inexperienced nurses can be better trained and prepared for the challenges that they may face when employed under similar rostering.

Design.

Constructivist enquiry was used as this open ended and interpretative approach (Creswell and Miller, 2000) is recommended for capturing detailed and rich descriptions of the participants' personal experiences (Petty et al, 2012). To provide increased understanding of the central phenomenon of shift work, a case study approach was selected as this is best applied to real life situations and where the researcher has minimal control over proceedings (Yin, 2011). Therefore, two groups of workers exposed to different lengths of time to shift work were studied with the aim of identifying any differences and similarities in the perceptions of the challenges of shift work.

Participants.

This case study design sampled two groups of participants exposed to different lengths of time in shift work. Experienced nurses (n=12) were sampled using snowball sampling, which was considered an acceptable strategy for the purposes of this research as it was implemented in a purposeful way, rather than for convenience (Yin, 2011). Inclusion criteria were nurses with a working life longer three years in shift work; they were recruited through the personal and professional contacts of the research team. Inexperienced nurses (n=9) were considered those who had recently graduated with tertiary nursing qualifications and worked in shifts for

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less than one year. Inexperienced nurses were recruited in the last semester of nursing studies at either Griffith University or private nursing college and followed up between three to six months after starting work as nurses in shifts. Purposeful sampling was applied to this second group of nurses as it enabled the investigation of a particular group of interest (Creswell, 2012); nurses exposed to shift work.

Ethical considerations.

Griffith University approved this study in line with relevant ethics policies and procedures (EHR/07/14/HREC) including informed consent, the right to withdraw and confidentiality of participants' information maintained.

Data Collection.

Data were collected in 2015 through individual interviews with a semi-structured approach being used (Petty et al., 2012). This qualitative method is recommended as a tool to determine in-depth information from shift workers based on their own specific experiences, situations and contexts (Braun and Clarke, 2006). A research protocol, consisting of open ended questions, was developed covering the scope of this research to capture the personal views of the interviewee (Flick, 2011). Examples of these questions / prompts are given in Table 1.

Data Analysis.

Thematic analysis was used for the study as this methodology provides explanations of social processes and interactions, discovered through the analysis of the collected data (Petty et al., 2012). Initial analysis included verbatim transcription of recorded interviews (Braun and Clarke, 2006). Codes were identified from the raw text (Yardley et al., 2004) using first cycle coding, where codes were applied to gerund words or those ending in 'ing' using procedures

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described by Saldaña (Saldaña,2009). Second cycle coding was then employed to systematically reorganise and condense the first cycle codes into a smaller number of categories and themes (Gale et al., 2013). The next analysis component involved categorising the nurses' information into two groups of experienced and new nurses and identifying patterns, differences and similarities before final themes were developed (Saldaña,2009). Three main themes were elucidated: working in shifts, coping with shift work and support of family and friends and senior nursing managers.

Rigour.

A parallel perspective, as described by Lincoln and Guba (Lincoln and Guba, 1985), was applied to this study to test for rigour and quality using measures of confirmability, dependability, credibility and transferability (Petty et al., 2012). These included the construction of an audit trail, a self-reflexive stance taken, purposeful sampling and thick descriptions of participants' experiences (Tracy, 2010). Rigour was further increased through the interpretation and coding of some of the raw data by an independent researcher to assess for the reproducibility of emergent codes (Popping, 2010). Ten per cent of the interviews were re-coded giving an inter-rater reliability score of ninety per cent, considered a high degree of agreement (Campbell et al., 2013).

RESULTS

A summary of the results is found in Table 1. Experienced nurses (n=12) had worked from 3-47 years as shift working nurses with a mean duration of 20 years. These nurses had an average age of 43 years. Approximately half of these nurses worked in public hospitals in emergency departments with the other half employed at private hospitals in cardiac care units

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and one nurse working in aged care. Inexperienced nurses (n=9) had worked from 3-6 months in shifts with a mean time of 5 months. These nurses had an average age of 33 years. Two worked in aged care with the remainder working in ward settings in public hospitals. Comparisons in the critical variables between the two groups of nurses found differences in the average age, length of time worked in shifts, places of work and type of ward. Both groups of nurses had similar amounts of three shift rotating rosters. Inexperienced nurses were mostly single with only one nurse from this group having dependent children. Almost half of these nurses were living with partners and had domestic commitments. In comparison, experienced nurses were more likely to be partnered with some having dependent children. However, there was still a large proportion of single nurses in the experienced nurses group. All of the participants in this study were female.

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Working in Shifts.

Shift work is an imperative for many nurses to provide twenty four hour care to patients. Most experienced nurses believed shift work helped in their lives to allow for improved work-life balance. An experienced nurse spoke of her preference for shift work:

“Shift work gives you more free time definitely. I mean if you work 8-4, there is only a little bit of day left when you get home. If you work the whole day on a 12 hour shift, the whole day is gone. But at least you have the next day or the following whole day to do things. So in that regard shift work is a whole lot better.”

Fewer inexperienced nurses described shift work as being beneficial to them, with most stating their preference to not work in shifts. An inexperienced nurse described her own situation:

“I find I don’t mind doing it, it is the weekends that like I struggle doing. So like, I rarely get to see my partner or my family, if I am working all weekend. It is just, you know, I would prefer to not do shift work, but because nursing is what I want to do, I suppose, you have got to make that sacrifice.”

In spite of most experienced nurses describing shift work as being beneficial to them, most said that shift work was worse than they expected before commencing working in shifts. An experienced nurse described shift work as:

“Much worse. The constant fatigue and the changing sleep patterns; messes around your system.”

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By comparison, most inexperienced nurses described shift work as being mostly what they expected before starting work. An inexperienced nurse spoke of her shift work experiences:

“Yeah, it is. I wasn’t really surprised by anything. Like, I was expecting that I would have trouble on night shifts and it is not actually as bad as I thought it would be, to be honest.”

Coping with Shifts.

Being able to cope with the challenges of working in shifts is important for nurses to mitigate potential adverse effects of shift work. Most of the nurses from both groups described the best coping strategy was to ensure enough rest and sleep before and after shifts. An experienced nurse spoke of her own personal experiences:

“It’s just I have learnt just to try and get to bed as well; not to stay up late. I actually go to bed and get longer hours of sleep. That is excellent. So instead of trying to do things, like previously you may have stayed up late doing ironing. I might have stayed late to watch a movie to wind down, but now I just try and get to sleep as I know that, especially having kids, you get what you can basically.”

The second most common way to cope with shift work, described equally by both groups, was being able to request their own rosters, self-roster or to request a specific day off. Described by many as ‘making shifts work for me’, an experienced nurse detailed requesting shifts:

“And then I suppose we’ve got, like, a request system on our rosters. So I try to request my rosters to try and suit me. So I’ll do lates on the weekends and do more earlys during the week.”

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Support from family, friends and senior nurses.

Nurses from both groups detailed the need for the support of their families and friends to assist them in their work in shifts. More experienced nurses described how they depended on their family to help with child care duties and other domestic chores. An experienced nurse spoke of how her family help her at home:

“Oh, they are just very, very helpful. I am very fortunate and my mother-in-law is with me, so she does most of the washing, ironing and cooking. Just a very supportive husband who allows me to sleep when I want to.”

Nurses from both groups spoke of how shift work has an impact on their friendships and missing out on family, friends and social occasions. An experienced nurse described her own view on how shift work affected her:

“[Shift work] it’s just different. I think the worst thing about it is if you get invited out, you can’t always go and everyone is having a good time while you’re working. That is probably the worst part of it.”

More inexperienced nurses described feeling disconnected from family and friends and being socially isolated. An inexperienced nurse spoke of her friendships:

“[my family] They are fine. I don’t think that friends in particular really understand. But my family and partner, they have always been behind me on it. But it is more friends. They constantly think you are avoiding them or not making it to things because you don’t want to. I don’t think they understand the shift work cycle.”

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Similar numbers of nurses from both groups spoke of how many of their friends were nurses as they understood the time constraints and associated impacts that shift work had on home and personal lives. An inexperienced nurse spoke told of how shift work had an impact on relationships with friends:

“Some of my friends that I would have socialised with before, I don’t see them at all. I find that if I do have day off, I will contact my nursing friends from uni, to see if any of them have got the day off and if they are looking for someone to do something with too. But it is very difficult to maintain friendships I think.”

One of the most significant findings was the difference in the reported social support of senior nurses and hospital management. Most experienced nurses described how they believed that senior nurses and hospital management did not support them in their workplace. An experienced nurse gave her perspective:

“They don’t support you at all. There is no thought from management. If you can’t do a particular shift for any reason. Or, you know, if you need to have a particular day off and you can go to them and say ‘look I need this day off because I’ve got ‘whatever on’. [They say] - ‘not my fault’. So you know management haven’t switched on to that yet. Well, they probably have, but they are just too arrogant to think about it. Management don’t help you at all.”

However, almost all of the inexperienced nurses spoke of their perceived support by senior nursing staff. An inexperienced nurse told of her experience of being supported by her nursing managers:

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“They are so supportive and helpful. If you are unwell, they care. They don’t make you feel bad for taking the day off to do your ‘mental work’. They say ‘take care of yourself and we will see you next shift’. They are just very supportive and very caring.”

This support took a variety of forms including assistance with clinical skills and practices, time management and emotional support. An inexperienced nurse spoke of her how senior nurses helped her:

“They have been really helpful since I started. Like the team leaders will just come and see how I am going or if I need help with time management. I remember during my last night shift I was having a lot trouble managing my time wisely just because I had 8 patients and there was a lot of stuff to do. The team leader noticed I was struggling a bit and gave me a few pointers on how to, during night shift, how to kind of bundle tasks together so I am not running around so much. So that was really helpful.”

DISCUSSION.

This study highlights similarities and differences between experienced and newer nurses’ perceptions of shift work and how they experience and cope with the associated stressors. Both groups reported the need for sleep, rest and social support when working in shifts. The groups differed, however, in where they received this support and how they coped with the challenges of shift work. For experienced nurses support from family and friends was critical when trying to integrate work and non-work spheres, particularly those with dependent children. This group of nurses also described shift work as being beneficial to them. This was not the case for inexperienced nurses who preferred not to work in shifts. Inexperienced

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nurses described feeling increasingly isolated and disconnected from family and friends within a time frame of three and six months of commencing shift work. New nurses also detailed perceptions of valuable support from senior nurses and management which was noted less by experienced nurses. Experienced nurses in this study were generally more senior and therefore most likely referring to higher level of management than the group of inexperienced nurses. The impact of these facets of nurses' experiences and behaviours have been hitherto neglected in research addressing shift work in nurses, but are likely to have important policy and practice implications for nurses, their supervisors, training institutions and employers.

This qualitative investigation enabled an appreciation of the complexity of nurses' domestic and working lives. Although experienced nurses' lives typically included partners and children and inexperienced nurses' living arrangements were more varied, there was still a mix of domestic arrangements in both groups. The findings of this study suggests that more experienced nurses, found shift work to be beneficial to them compared with the perceptions of inexperienced nurses. This discovery extends existing research where preferences for shift work by nurses was described (Powell, 2013) by identifying this increased inclination for shifts may typically come more from experienced nurses. A possible reason for this preference for shifts by experienced nurses is that being part of a family can moderate work strain, lead to reduced adverse work effects (Winwood et al. 2006) and improve work-life conflict (Costa et al., 2014). Although, this is no doubt valid for these nurses, there was as mentioned no consistent differences in responses to shift work by the experienced nurses at different life stages. Additionally, it is proposed that only nurses who can cope with shift work remain in the profession long term and/or that nurses learn to manage and then value shift working patterns. This provides is an opportunity to learn from these experienced nurses

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so that nursing supervisors and teaching institutions involved in nursing training and education can benefit from their insights.

Inexperienced nurses described shift work as not beneficial to them and a preference to not work in shifts. This group of nurses mostly fitted into Generation Y; born after 1980 (Lampe et al., 2011). Evidence suggests this generation prefers organising work schedules around personal needs rather than home lives around work (Lavoie-Tremblay et al., 2010). This generational difference is provided as a possible explanation for most inexperienced nurses stating a preference for not working in shifts. As shift work contributes to high attrition rates in graduate nurses due to reduced / maladaptation to this type of work scheduling (West et al., 2007), it is important for hospitals and nursing executives to develop better ways of managing shift work challenges for recently graduated nurses.

In contrast, while experienced nurses described the benefits of shift work, they also detailed how working in shifts was far worse than they had expected. This finding sits alongside nursing research where nurses described facing difficulties on night shift (Gallew and Mu, 2004) and how this had a negative impact on their lives (Powell, 2013) but still continued to work under shift work scheduling. This adds further to the concept that nurses are surviving rather than thriving in their workplace (Jackson et al., 2007). There is a lack of consensus in the literature whether tolerance to shift work increases with age (Costa, 2003), however this may be manifested in this group who were, on average, older.

Inexperienced nurses described shift work as being as they expected before beginning their professional nursing lives. For this group, there may be a tendency to see their work environment through 'rose coloured glasses' or from an over positively point of view (Lacey et al., 2009). Similarly, these nurses may have during their tertiary nursing studies received

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advice and training which provided them with appropriate information to allow them to have realistic expectations of a nurses' working life (Missen et al., 2014). This suggestion is contrary to a larger quantitative nursing study which recommended better preparation of graduate nurses to counter the many effects of shift work (West et al, 2007). Either way, shift work has been found to be a workplace stressor contributing to high turnover rates in graduate nurses, with the highest rates of intention to leave described within the first two years after graduation (Rudman and Gustavsson, 2011).

A further finding detailed equally by both groups of nurses was being able to cope with the challenges and stresses of shift work by ensuring enough rest and sleep to recover from shifts. Poor sleep, sleep quality and fatigue are ubiquitous in nurses (Edéll-Gustafsson et al.,2002) and therefore sleep is an essential constituent for recovery from stressors associated with nursing (Winwood and Lushington, 2006). This need for time to recover from shift work replicates nursing research which described nurses requiring time to rest and sleep following night work (Persson et al., 2006).

Nurses from both groups described being able to cope with some of the stress of shift work by being able to request shifts or rosters. This allowed nurses to have some control over their work environment. Control is referred to as the perceived degree of choice over decision making processes that affect an individuals' work time patterns (Brooks, 2000). These findings are consistent with nursing research describing flexible employment options leading to increased nurse satisfaction (Schalk et al., 2010). This type of control has been linked to improved health and wellbeing outcomes (Loudoun et al., 2014) with autonomy in working hours and shifts proposed as a possible moderator for some of the adverse effects of shift work (Koning, 2014) and recommended as a strategy to assist shift workers.

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For nurses, whether experienced or inexperienced, the support of their family and friends is valuable in assisting with their shift working lives. Shift work can have many negative impacts on nurses' social and domestic lives (McVicar, 2003), so the support of family and friends becomes more crucial for those employed longer term in shifts. Experienced nurses described the importance of social support from family, friends and co-workers which has been demonstrated to be a preferred coping strategy for stress (Lim et al., 2010). Social support at home has been linked to increased job satisfaction for nurses (Peters et al., 2009) and shift work tolerance (Pisarski et al., 2008). The development of positive relationships at work can lead to supportive and beneficial connections between nurses (Jackson et al., 2007). Similar numbers of both new and experienced nurses detailed socialising with co-workers and other friends who were nurses and healthcare professionals and therefore understood the challenges of maintaining friendships and relationships when shift working.

However, most inexperienced nurses described losing contact with family and friends which replicates research that found nurses new to shift work becoming socially isolated (Vitale et al., 2015). This finding of a relatively short exposure time to shift work, of between three and six months, inducing a feeling of social isolation sits alongside a longitudinal study of graduate nurses. This research described graduate nurses, who after 12 months of shift work, had adapted to many physiological disruptions but not to social changes in their lives (West et al., 2007). These findings add further understanding of the time frames associated with social changes relating to shift work.

Another important finding of this study is experienced nurses pointing to a lack of support from their senior nursing managers and hospital. The role of senior nursing managers is multi-faceted and a crucial component for nursing practice (Dawson et al., 2014). Research demonstrates that effective nursing leadership can lead to increased retention (Gilmartin,

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2013) and supervisory social support contributing to increased job satisfaction and decreased job stress (Joiner et al., 2004). The finding here of a lack of managerial support for shift working nurses mirrors existing nursing research (Huntington, 2011). Conversely, inexperienced nurses, who were mostly employed in graduate nursing programs, spoke of high levels of support from senior nurses and management. This included clinical facilitators who provide 'on the job' training and form part of the graduate nursing program aiding graduate nurses' transition during their first year of practice (Missen et al., 2014). In the early stages of employment this, often described, increase in managerial and social support directed towards new recruits has been found to delay some stress associated with work (Lammers-van der Holst and Kerkhof, 2015). These findings demonstrate that inexperienced nurses, who had been exposed to shift work from between three to six months, believe that they were well supported socially by their nursing supervisors.

LIMITATIONS.

Limitations identified through the enquiry process and research design include the use of non-random sampling strategies of snow ball and purposeful sampling with the possibility of sampling bias. However, these sampling strategies are considered stronger options than convenience or availability sampling (Daniel, 2011) and were appropriate for the aims of this study. The self-reporting nature of the data collected from the interviews, where participants responded to questions about working in shifts, suggests data could potentially be influenced by factors such as personality (Herbert et al.,1995). However, researchers have found similar results using self-report and non-self-report measures linking working hours and health and wellbeing (Sparks et al.,1997). Finally, the nurses' critical variables information noted differences in the contextual aspects of their workplaces. Experienced nurses mostly worked

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in acute care while inexperienced nurses typically worked in general hospital wards. Various studies have discovered increased work-demand loads associated with nursing roles can vary between different areas and levels of seniority/experience (Winwood and Lushington, 2006). Therefore, it is recommended that future research take into account different wards that nurses are employed on when comparing outcomes and exposure to shift work to allow for differences to be elucidated. By drawing a larger sample from a wider range of ward settings, it is proposed to improve the quality of research outcomes.

CONCLUSION.

It is crucial for nurses who work in high stress workplaces to be able to adapt to and cope with workplace trials including shift work to ensure the sustainability of the health care sector. This study reveals some of the challenges that nurses face day to day in working in shifts and highlights factors that health workforce managers may use to support workplace organisation. By comparing the differences and similarities between two groups of nurses based on their shift work exposure, recommendations can be made to individual nurses, their employers and human resource management departments to aid in support, development and training decision making for rostering, work environments and other resources to assist nurses employed in shift work. These findings can also be used to help nurse education programs develop transition to practice courses that enhance coping strategies in inexperienced nurse. Further research may focus on the benefits of integration of this knowledge into nurse training.

Author contributions

All authors meet at least one of the following criteria [recommended by the ICMJE (http://www.icmje.org/ethical_1author.html)] and have agreed on the final version:

- substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data;
- drafting the article or revising it critically for important intellectual content.

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