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Identifying Challenging Job and Environmental Demands of Older Nurses in the National Health Service

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Abstract:	Abstract Objectives: i) Explore the existing theoretical contexts of the job and environmental demands of the nursing profession in the National Health Service (NHS); and, ii) Investigate how these job and environmental demands impact on the personal constructs of older nurses within the NHS. Background: Nursing is the single most widely practised profession in the healthcare sector in the UK. However, nurses contend with challenging job and environmental demands on a daily basis which deplete them of personal constructs (or resources) required to stay in the profession. Methods: A multi-level exploratory qualitative research design was employed. Ten managers were interviewed for the preliminary study, based on which the three characteristics of an age-friendly workplace were established to be health, retirement and flexibility. Then an in-depth literature review revealed that the most adversely affected job within the NHS was the nursing profession. Finally, a focus group study was undertaken with six older nurses working in the NHS. Results: The most compelling finding of this study is that older nurses would generally not want to stay on the job if they had to work in the ward area. The physical, cognitive and sensory constructs of older nurses are negatively affected by the job and environmental demands of the ward areas. Conclusions: Understanding how these job and environmental demands of the workplace affect an older nurse' personal constructs may help support a better design of nurse work and the wards and help extend the working lives of older

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nurses in the NHS.

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According to the Health and Social Care Information Centre (2015), nurses

make up more than 28% of the 1.3 million workforce of the National Health Services

(NHS) in the UK. It is the single most widely practiced profession in the healthcare

sector in the UK. Beyond this, nurses play a crucial role in the delivery of high-

quality healthcare services. Ensuring their work ability is adequately supported and

sustained is of vital importance for the NHS. With the challenges of an ageing

population looming, policy interventions to recruit more nurses must be supported by

nurse retention strategies that take into account the work ability of the current nursing

workforce. Keeping people in work longer has both long-term socioeconomic and

short-term fiscal budget ramifications for most developed countries. In the UK, since

the abolition of the default retirement age of 65 years in 2011 (www.gov.uk, 2015),

employers are no longer allowed to make their employees redundant after they have

reached a particular age. Most people can now work for as long as they want to.

However, employers in certain professions may still set a compulsory retirement age,

if this can be legally justified. Under the new NHS Pension Schemes, introduced on 1

April 2015, NHS employees are required to have worked until the age of 65 before

they can qualify for a full state pension (NHS Business Services Authority, 2015),

although reaching this age alone does not create a legal justification for retirement.

Further conditions, such as minimum pension age of 55 years, and maximum age of

75 years apply to all professions within the NHS, including nursing. For the purpose

of this study an older nurse is a practicing nurse that is 55 years or over, since this is

the minimum age threshold above which an NHS employee may be considered for

state pension receipt.

The nursing profession is a stressful one (Marshall, Barnett, & Sayer, 1997; Sharma, Sharp, Walker, & Monson, 2008). There is an increasing number of nurses exiting the profession prematurely (Frijters, Shields, & Price, 2007; Shields & Ward, 2001), a trend that is due to many factors, including the challenges posed by the demands of their jobs and their work environment (Unruh & Zhang, 2013; Verhaeghe, Vlerick, De Backer, Van Maele, & Gemmel, 2008). Furthermore, the early exit of nurses from the profession depletes the healthcare sector of much needed experience and knowledge (Duffield et al., 2014). **The job and environmental demands of the nursing profession particularly impact older nurses negatively** (Heiden, Weigl, Angerer, & Müller, 2013). With an ageing workforce, the adaptations, adjustments and redeployments that would be needed to address the challenging job and environmental demands of the NHS workplace would require an immense amount of resources from the NHS (Wray, Aspland, Gibson, Stimpson, & Watson, 2009).

In addition, understanding the personal constructs that are generally affected by these work stressors is equally useful to identify the characteristics of the challenging job and environmental demands for older nurses. The personal constructs of older nurses affected by the work environment are those aspects of personal health and wellbeing that serve as resources for nurses, so that they can be functionally fit to perform their jobs (Wang et al., 2015). Personal constructs may take the form of the physical, cognitive, sensory, emotional and social health attributes required by a nurse to perform their tasks. For example, some studies suggest that deteriorating physical ability and/or declining cognitive acuity together are predictors of nurses' sickness absences (Roelen et al., 2014). From a social personal constructs perspective, extremely acute job demands have been found to have a negative impact on teamwork, which is a key part of the nursing profession (Nelsey & Brownie, 2012).

Furthermore, collegial relationships are also negatively affected if team members' are

depleted of their energy resources (Gevers, Van Erven, De Jonge, Maas, & De Jong,

2010), which could in turn lead to reduced resilience of nurses to job and

environmental demands (Cope, Jones, & Hendricks, 2014). This cause-effect

relationship partly explains why nurses rate the ability to act independently of others

as a positive element of their job (Unruh & Zhang, 2013), thereby disregarding the

inherent collaborative nature of the nursing profession (Quoidbach & Hansenne,

2009).

**Competing job demands may subject nurses to professional compassion

fatigue or burnout** (Morrison & Korol, 2014) **and exhaustion** (Zito, Cortese, &

Colombo, 2015). Compassion fatigue and exhaustion impair on nurses' physical and

cognitive functioning, thus endangering both nurses and patients safety (Han,

Trinkoff, & Geiger-Brown, 2014; Kirwan, Matthews, & Scott, 2013). Nurses

compassion fatigue may manifest itself in various forms of personal constructs

including physical, cognitive, sensory, social, and emotional (Coetzee & Klopper,

2010).

Furthermore, the environmental demands of their job may support or impair

nurses' health, wellbeing and productivity at work (Van Bogaert, Kowalski, Weeks,

Van heusden, & Clarke, 2013). **Questions have been raised about the adequacy of

the physical work environment for the healthcare workers** (Mourshed & Zhao,

2012) **and patient safety** (Kirwan et al., 2013). The physical layout of medical wards

and especially spatial constraints are said to adversely affect the medication

communication processes among medical staff (Liu, Manias, & Gerdtz, 2014). In

addition, nurses' negative perception of their work environment is a predictor of their

intent to stay or leave the profession (Lamontagne, Levesque, Gingras, Maurice, &

Verreault, 2004).

Objectives

This section highlights the objectives of this focus group study and briefly

describes the findings of the preliminary study, based on which this research study

was designed. This focus group study is a follow-up on a preliminary study that

revealed the three main aspects of their jobs about which older workers within the

NHS are most concerned. These are health, flexibility and retirement in their

respective work environment (Figure 1).

Insert Figure 1 here

The key finding of the preliminary study is that these three aspects of their

jobs must be adequately addressed in order for the work environment to be age-

friendly within the NHS. Furthermore, the preliminary study also established that

these aspects of older workers' jobs within the NHS will, invariably, affect certain

personal constructs of older workers, namely: physical, cognitive, sensory, emotional

and social. A further analysis of these NHS age-friendly characteristics, put in the

context of existing literature (Harris, Bennett, Davey, & Ross, 2010), suggests that

this focus group study may be pursued within a research matrix with two dimensions:

an age-friendly characteristics dimension and a personal constructs dimension (Table

1), that explores the job and environmental demands of older nurses within the NHS.

Insert Table 1 here

The age-friendly characteristics dimension encompasses all the issues that are of

concern to older nurses within the NHS (namely, health, retirement and flexibility), as

established by the preliminary study. The personal constructs dimension, on the other

hand, includes the physical, cognitive, sensory, emotional and social aspects of their

health and wellbeing that serve as resources for job performance. The two dimensions

are put in context by investigating the correlations between them. The plotting of

these two dimensions constitutes the research matrix, and thus sets the probable focus

group study research domain to be further investigated (Table 1). The overarching

aim of this focus group study is to identify the challenging job and environmental

demands for older nurses within the NHS, based on the findings of the

aforementioned preliminary study. In particular, this focus group study will:

i)   Explore the existing theoretical contexts of the job and environmental

        demands of the nursing profession in the National Health Service; and

ii)   Investigate how these job and environmental demands impact on the

        personal constructs of older nurses within the NHS.

Literature Review and Theoretical Contexts

This section reviews existing literature relevant to nursing and the overall job

and environmental demands of the nursing profession, after which the key task

domains older nurses perform in a typical ward setting are identified. Then nurses

health and wellbeing and their relation to individual circumstances are discussed, with

a focus on work ability. Further, the theoretical contexts underpinning the job and

environmental demands of nurses are explored and how these impact on older nurses'

personal constructs is investigated.

The nursing profession is pivotal to the healing and care activities undertaken in

most areas and departments within the healthcare system. Nurses work in various

functions, which can range from very physically demanding, such as staff nurses in

wards, to more sedentary, like occupational health and other specialist nurses. Nurses

can also be found in fast-paced acute care settings, in the cognitively demanding

intensive care units and the emotionally exhausting oncological or palliative care

units. There is sufficient research evidence to suggest that within the nursing

profession, staff nurses working in ward areas are at risk of experiencing work-related

distress due to the combined effects of extreme job and environmental demands

(Adams & Bond, 2000). The adverse effects of a disabling work environment may be

particularly severe for older nurses working in this area.

The interactions between older nurses and their work environment rest on the

theoretical premise of the person-environment fit (P-E fit) theory proposed by Lewin

(1951). This theory was furthered by the environmental docility hypothesis (Lawton

& Nahemow, 1973), which posits that environmental stimuli have a greater demand

quality as the competence of the individual decreases. In this focus group study,

environmental 'stimuli' or demands are conceptualized in the context of the tasks

nurses perform relative to the appropriate level of competence required to perform

these tasks.

The Nursing Profession and Tasks

Nurses provide round-the-clock care and services for their patients, requiring

them to work in shifts. Like most other professions in the UK, there is a 48-hour per

work week limit for nurses. However, there is also a provision for nurses to opt out of this restriction and work more hours on a weekly basis, if they so wish. Most nurses do 12-hour day or night shifts, but there are shorter shifts of 8-hour work day and longer shifts of 14 hours a day. Planning and managing the nursing task activities over a continuous twenty-four hour period is challenging for both NHS management and the nursing profession (RCN, 2012). Dendaas (2011) purports that **there are four main task domains in which nurses in acute care settings work: surveillance, care execution, patient/family support and care integration. The physical environment exerts some degree of influence on a nurse's ability to perform these tasks.** Dendaas' study postulates that "…environmental congruence is the capacity of the work environment to promote a good fit between workers and the physical environment…" (Dendaas, 2011, p. 25). Given all other conditions (for example, job demands), it is the level of competence afforded an individual to perform these tasks that measures up to the interplay between the environmental demands and the personal constructs. Ideally, these interactions will be in congruence provided the severity of the environmental demands does not surpass the worker's ability, which is manifested in various forms of personal constructs.

The first task domain is surveillance. This is the degree to which patients can be seen or heard by nurses, as afforded or supported by the personal constructs of the nurse and the environmental demands of the ward area. The second task domain is care execution, which is the extent to which nurses may attend to their patients without any physical barriers or impediments. This includes, but is not limited to, the provision of personal care in bathrooms and the existence of clearance areas for the use of wheelchairs and other mobility equipment around patients. Patients and family support is the third task domain, and is the degree to which the physical environment

in the hospital facilitates nurses' ability to support patients and their family in their psychosocial needs. This task domain encompasses the availability of areas where patient's treatment or care plan can be discussed in privacy. The fourth task domain ward nurses perform is care integration, which consists mainly of the administrative tasks that are performed away from patients but, nonetheless, are important for patient care. This includes automated systems and technological support for nurses' tasks in the ward area. How well the physical ward environment facilitates or impedes nurses in the performance of these tasks is termed *functional congruence* by Dendaas (2011).

Health, flexibility and retirement are three key characteristics of an age-friendly workplace within the NHS. The nursing profession appears to be the main job type that is most adversely affected by these characteristics of an age-friendly workplace within the NHS. The ability of an older NHS nurse to perform their tasks will depend to a large extent on how the work environment supports them in these respects. While these three aspects of the workplace are all crucial for older nurses, health has been found to be the major enabler or disabler when it comes to older nurses performing their daily tasks and a pivotal predictor of their intention to continue working (Letvak, 2005).

Health and Wellbeing at Work

There is a school of thought that posits an unequivocal stance that there is a direct relationship between nurses' objective and subjective health and their work environment (McNeely, 2005). To understand the interaction between nurses' health and their work environment, it is first important to define what 'health' is. According to the World Health Organization, "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 1948).

While this definition appreciates the fact that the absence of disease is not sufficient to

imply an individual's wellbeing, it fails to establish a broader platform to discuss

health in other contexts that may be person or environment-specific. A more

comprehensive definition of health as proposed by Bircher (2005, p. 336) states:

"Health is a dynamic state of wellbeing, characterized by a physical, mental and

social potential, which satisfies the demands of a life commensurate with age, culture

and personal responsibility". Bircher's (2005) approach offers a broader foundation

for discussing health and related issues in the sense that, instead of providing a

platform for absolute and general criteria to determining health, it rather suggests non-

uniform, but coherent dimensions relative to the individual context. Moreover, the

explicit reference to the dynamic nature of health offers plausible grounds to infer its

variability across such domains as age, culture and personal responsibility. This

definition also allows for diversity that may be due to individual circumstances such

as job and environmental demands. Hence, health may be viewed as a person's ability

to achieve or exercise a cluster of basic human activities or capabilities in as much as

those capabilities are considered relative to individual contexts such as age, gender or

socio-cultural circumstances (Wang et al., 2015).

This suggests that nurses in the same setting may react to the same

environmental stimuli differently due to their individual state of health. Hence,

subjected to the same level of job and environmental demands, nurses may respond

differently and to differing degrees. Health, therefore, has an unambiguous bearing on

an individual's quality of life and standard of living (Pisarski & Barbour, 2014). Other

studies have shown that older nurses may be subjected to physical health injury due to

ill-designed jobs and adverse environmental demands (Baptiste, 2011). However, very

few studies have been conducted that illuminate the interplay between nurses' job

demands and environmental demands, and what their cumulative effects are on the

personal constructs of older nurses. Those studies that have looked into this topic in

depth do suggest strong dependency between the three variables (Soer, Hollak, Deijs,

van der Woude, & Reneman, 2014). In particular, it is widely held among researchers

that the job and environmental demands on older nurses have profound consequences

on three of their personal constructs which are predictive of health and work ability,

namely physical, cognitive and sensory (Lara et al., 2013).

If a person's state of health and wellbeing must be understood as

multidimensional and as being relative to objective attributes such as age, a worker's

ability to perform certain tasks at work must thus be seen as concomitant with health

and wellbeing. This focus group study explores how the job and environmental

demands of the workplace affects these three personal constructs (i.e. physical,

cognitive and sensory) of older nurses within the NHS. The theoretical contexts

underpinning the interactions between the job and environmental demands of older

nurses and their personal constructs is presented in the following sections.

Job Demands

Job demands are the visible and latent aspects of a job that require a degree of

personal constructs and/or organizational resources to manage (Bakker, Demerouti, &

Verbeke, 2004). The demands of a job may manifest as time pressure, workload, or

conflicting requirements (Demerouti & Bakker, 2011). Nurses face various types of

on-the-job demands, stemming mainly from the relationships or transactions between

their personal constructs and the characteristics of the work environment (job and/or

environmental demands of the workplace). Furthermore, neck and shoulder pains are

the most prevalent forms of musculoskeletal disorders (MSDs) among hospital nurses,

which may be caused by pushing, pulling, reaching and stretching in patient handling

tasks (Smedley et al., 2003). More recently, research has shown that cognitive

workload has a direct influence on the prevalence of MSDs among hospital nursing

staff (Habibi, Taheri, & Hasanzadeh, 2015).

Job demands are not necessarily negative in nature or in their outcomes. Some

research studies show that certain types of job demands are particularly motivating

with positive outcomes and better employee performance (Van den Broeck, De

Cuyper, De Witte, & Vansteenkiste, 2010). However, persistent exposure to excessive

or increased job demands is known to be detrimental to employee health and job

performance (Meijman, Mulder, Drenth, & Thierry, 1998). Yet earlier research into

the relationship between job demands, job control and job strain have proven that it is

not high job demands in itself that constitute job strains in employees, but rather the

lack of adequate control or resources to manage the job demands that causes job

strains (Van Yperen & Hagedoorn, 2003). This idea is buttressed by Karasek (1979),

who suggests that there are two important elements of the work environment that are

necessary for job strain to come to play, i.e. the job demands placed on the individual

and the discretion permitted to the worker on how to meet these demands. The ability

of the employee to mediate challenging job demands has been linked to loyalty and

intrinsic job motivation (Jourdain & Chênevert, 2010). As a result, a job high in

demands but that is, nevertheless, afforded a proportionate amount of decision latitude

or control could lead to a worker's increased sense of competence and productivity

(Dollard, Winefield, Winefield, & Jonge, 2000). However, this approach has been

criticized due to its simplistic explanations of the many aspects of a job in the

complexity of a work environment (Bakker, van Veldhoven, & Xanthopoulou, 2010).

In the job demand-resource (JD-R) model, Bakker and Demerouti (2007)

postulate that job demands are initiators of a health impairment process, while job

resources are initiators of a motivational process. According to the JD-R model, every

occupation has its own inherent risk factors that are predictors of job-related stress.

The physical, psychological and emotional aspects of the job that require sustained

effort are categorized as the *job demands* (Hall, Dollard, Winefield, Dormann, &

Bakker, 2013), while the *job resources* are the energy reservoirs that an employee

may resort to when faced with overwhelming demands (Hobfoll, 1989, 2002). Job

resources are mediating factors to the negative effects of job demands like stress (De

Jonge & Dormann, 2006). Hence, job resources should be proportionate in their

quantity (Bakker, Demerouti, & Euwema, 2005) and quality (Lavoie-Tremblay,

Trépanier, Fernet, & Bonneville-Roussy, 2014) of physical, psychological, social or

organizational dimensions to fulfill these functions in the workplace. High job

demands, as attributable to the nursing profession, may therefore impact negatively on

health and wellbeing; the activation of functional and corresponding types of job

resources, on the other hand, may mitigate the effects of these job demands (Van Den

Tooren & De Jonge, 2008).

Environmental Demands

Environmental demands consist of all the physical aspects of the work

environment, in particular the design and management of the workspace including

accessibility, thermal comfort, ambient lighting, signage, acoustics, visual effects and

color coordination (Djukic, Kovner, Budin, & Norman, 2010). A number of studies

have documented the positive impacts of the built environment on the healing and

care of patients (Abbas & Ghazali, 2012; Gross, Sasson, Zarhy, & Zohar, 1998).

Other studies have established that there is a significant relationship between nurses'

perceptions of the characteristics of their work environment and quality of care

provided to patients (Hinno, Partanen, & Vehviläinen-Julkunen, 2011). However,

there is quite a dearth of research studies that have explored how the design of the

physical workplace may support older nurses' health and wellbeing. When the

physical aspects of the work environment have been the focus of study, the resultant

impact this has on nurses and other healthcare workers has been inconclusive

(Huisman, Morales, van Hoof, & Kort, 2012).

One of the greatest environmental demands older nurses face in the workplace

within the NHS are insufficient and functionally inadequate spatial workspace for

moving and handling task performance, such as patient-bathing (Hignett & Evans,

2006). A study conducted to understand how nurses' perception of their work

environment influences patient moving and handling revealed that nurses perceive

bathroom transfers as the most difficult type of moving and handling, with three out

of four significant transfers associated with this location (Holman, Ellison,

Maghsoodloo, & Thomas, 2010). An poorly designed workspace may also slow down

patient healing process, to the extent that it takes away valuable time that nurses can

spend with patients for therapeutic care (Page, 2004).

In recent times, a growing body of knowledge has informed the design of

healthcare facilities, with the primary goal of facilitating the treatment of patients

within the NHS (Douglas & Douglas, 2005). Consequently, a number of best practice

designs of the ward environment targeted at facilitating the healing and managing the

health conditions of patients and service users, have been implemented. An example

is the recent refurbishment of a dementia ward in an NHS hospital in Northwest

England (NHS LTHTR, 2015). However, because the intended recipients of the

services offered by these innovative designs were not usually the workers in the

healthcare sector, there is little research evidence to substantiate how beneficial these

designs have been for NHS healthcare workers. Environmental demands of the

workplace within the NHS may thus be inadvertently adversely impinging the

personal constructs of NHS older workers, while hitherto, existing research studies of

their effects on the health and wellbeing of older nurses are rather ambiguous and

inconclusive. What can be ascertained at this stage is that the design features of the

physical environment have a significant impact on the health and wellbeing of older

people (Biggs & Haapala, 2015).

While the characteristics of an age-friendly workplace spans across themes such

as health, retirement and flexibility of work (Table 1), health seems to be of greater

significance for older nurses than the other two. Furthermore, of the five personal

constructs identified in the preliminary study, the three most prevalent are physical,

cognitive and sensory. These three themes seem to be of significant importance and

are thus worthy of further investigation. Also, although one of the most

comprehensive accounts of nursing tasks in a ward setting and how they are affected

by the physical environment is the one given by Dendaas (2011), it does suffer from a

number of flaws. Among others, Dendaas failed to expand on the dynamics among

nursing staff and other healthcare workers. Furthermore, the degree to which the job

design and the workspace design may be integrated has not been adequately

addressed. Hence, there are limitations on how far these task domains may be applied

across various settings.

This study explores the various types of job demands NHS older nurses face and

how these, in conjunction with environmental demands, may affect the health and

wellbeing of older nurses, with a particular focus on the physical, cognitive and

sensory aspects of their personal constructs.

Methodology

This research sought to explore the impacts the job and environmental demands of the

workplace have on older nurses within the NHS, based on the interactions between

older nurses and their work environment. The methodology employed for this

exploratory study is a focus group. The intent of this approach was to allow for

flexibility in how participants identify the issues that affect older nurses within the

NHS, with the possibility to explore newer topics that may be generated during the

focus group discussion. According to Krueger and Casey (2009) focus group

discussions are most suitable in an environment where the participants feel

comfortable, respected and free to express opinions without being judged. Focus

groups promote self-disclosure among participants on a given topic of discussion by

building on the group dynamics (Freeman, 2006). It requires a sensitive moderator

and, if effectively facilitated, a focus group generates richer data and gives more

depth to the understanding of the topic of discussion compared to individual

interviews (Kaplowitz & Hoehn, 2001).

Undertaking a focus group as a means of data collection is not an alternative to

individual interviews or participant observation. If well conducted, a focus group may

delve into a topic in greater depth than an interview. However, it does not fully

replicate the context that can be achieved in the observation of participants

(McLafferty, 2004). For instance, in an interview setting, the researcher queries the

respondent on a given topic and relies on their openness, knowledge and memory

recall of the lived experience. A focus group goes a little further due to the

multilateral interaction among participants by building on the group dynamics

because participants may question their peers' presumptions and thus further expand

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the premise of the discussion. In social science research, focus groups are particularly

useful in the healthcare sector. Focus group discussion has been applied as a means of

data collection from practicing nurses in nursing homes and home-based care settings

(Carlson, Rämgård, Bolmsjö, & Bengtsson, 2014).

This section presents the methodological considerations and approach employed

in the research. The preparation and the research design are explained, then the

sampling, piloting and data collection methods and, finally, the data analysis and

synthesis are elaborated on.

Preparation and Research Design

The scene for the focus group was set by a preliminary study which interviewed

10 participants from NHS. These participants were from various backgrounds,

including occupational health advisors, human resource managers, facilities'

managers and practicing older nurses. The preliminary study was conducted to

establish the characteristics of an age-friendly workplace within the NHS, by

identifying the prevailing factors that compromise or support the health of older

workers within the NHS. The major findings of the preliminary study were the

following:

a) health, flexibility and retirement at work are the three main characteristics of

the workplace of which older workers are apprehensive within the NHS;

b) a review of the literature suggests that these characteristics of the workplace

may potentially affect five major personal constructs of older nurses in the

workplace, namely: physical, cognitive, sensory, emotional and social (Table

1); and

c) the most critical profession within the NHS that is affected by workplace

characteristics are older nurses, due to their number and significance in the

healthcare service delivery (Nolan, Grant, Brown, & Nolan, 1998).

The research matrix in Table 1 was plotted to gain an overview of the major

characteristics of the workplace according to the preliminary study and understand

how these correlate with existing literature in terms of the personal constructs that are

consequently affected. Also, the literature review revealed that the personal constructs

that are most affected are physical, cognitive and sensory and the group of employees

mostly affected are older nurses (Fitzgerald, 2007). However, a further review of the

literature suggests that health is the most crucial workplace characteristic that impacts

on older nurses, based on which they may continue to work or exit the profession

(Wright, 2014). These key findings, from both empirical data and literature gave

enough premise to further the study by exploring health as a theme along with the

three personal constructs (i.e. physical, cognitive and sensory) in the current focus

group study (Figure 2). The topics of discussion for the focus group were designed

based on the results of the preliminary study. The focus group questions were piloted

through an interview that was aimed at testing its relevance and effectiveness. The

participant that volunteered for the pilot is a practicing specialist nurse with more than

20 years work experience as a nurse. The participant for the pilot interview suggested

minor modifications to the questions, which were implemented before the study was

conducted.

Insert Figure 2 here

Table 2 provides a sample of the focus group questions:

Insert Table 2 here

Sampling

The sampling of participants in this focus group study was a follow-up from the preliminary study. Ten participants in managerial positions were interviewed in the preliminary study. However, the participants in this focus group study were entirely different from those that took part in the preliminary study. Participants were recruited from the NHS. Potential candidates were identified through a contact person within the research and innovation department of the NHS, who posted a call in the internal communications network, and solicited for volunteers. This approach ensured that employees' privacy was not intruded and that only volunteers that showed initial interest were subsequently contacted. Those volunteers that showed interests in participating in the study were sent the participant information sheet which detailed the aims and objectives of the study and why their contribution was needed. A total of six nurses were recruited for this focus group study.

The findings of the preliminary research suggest that older nurses are the largest population of employees that are most adversely affected by the identified characteristics of the workplace within the NHS. While one of the key areas of exploration in this focus group study is the impact the work environment has on older nurses, participation in the focus group was not restricted by age. The reason for this is twofold. First, participants were asked about both their personal experience and what they had observed happening in their practice. So even if a participant had not had personal experience of the question, they were encouraged to share personally observed situations in their work environment. Secondly, it was important to be aware, and reduce the risk, of exclusion of valuable opinions if there was an age restriction to participation. All the participants for the focus group session were either

staff nurses or senior healthcare assistants. All the participants gave their written

informed consent to take part in the study and agreed that anonymised quotes may be

used from the focus group discussion to ensure confidentiality in accordance with the

UK Data Protection Act (legislation.gov.uk, 2013).

Data Collection

To have a relaxed and conducive environment, the focus group was conducted

on site, at the participants' workplace. A dedicated room was provided for the focus

group session, so as to avoid distraction from other members of staff or patients. At

the beginning of the session, the researcher ensured that all the participants were

aware of why the focus group was being undertaken and what the objectives of this

particular session were. Before the data collection exercise could commence, the

researcher invited all participants to read the participant information sheet.

Participants were asked if they had any questions regarding the study. The researcher

responded to all questions and ensured that all the participants were at ease with their

participation in the study. After all issues were resolved, each participant was invited

to read and sign a consent form to evidence their voluntary participation in the study.

To stimulate ideas and encourage participants to start talking, a short video was

shown about the topic. The video lasted approximately three minutes and was

intended to give participants an idea of the demographic situation in the UK,

including current discourses on policies and practices with respect to the National

Health Service. A PowerPoint presentation was also used to aid and facilitate the

discussion. At the beginning of each question, the question came up on a slide so

participants could refer back to it during the discussion. This helped to keep the

discussion focused and on track.

The researcher's work was supported by an assistant, who helped with the

setting up of the audio and video recording facilities. The assistant also helped to take

notes, by writing participants' responses on a flip chart as the discussion progressed.

However, the assistant did not interfere with the focus group in any other way. The

audio and video were recorded and safely stored in accordance with the university

regulations and the ethical approval for the study. The audio and video recording were

transcribed for analysis.

Data Analysis and Synthesis

The analysis was conducted both manually and with the aid of NVIVO software.

Manual thematic analysis was used to identify themes, trails and interconnections. To

reduce the effects of bias and support the robustness of the data analysis, a colleague

from the same department as the researcher was asked to independently code and

review the transcripts. This member did not take part in the preparation of the focus

group questions and was not present at the focus group session.

As was suggested earlier, the questions for the focus group were designed to

capture participants' opinions and experience about the impact their jobs as nurses

have on their health. While the intention of the focus group was to explore 'health' (as

was previously established in the preliminary study), the questions were actually

related to other aspects of older nurses' jobs that may impact on their health. This

approach was employed to avoid providing a cue to participants as to what the focus

group intended to glean from them.

Results

The second objective of this exploratory focus group was to investigate how job

and environmental demands impact on the three main personal constructs of older

nurses (namely: physical, cognitive and sensory) within the NHS. It must be

appreciated that health was a recurring theme in the data analysis. At the initial stage

of the coding, the four main themes that were explored in the data analysis were the

personal constructs, environmental demands, job demands and health. Some of these

were subdivided into sub-themes as shown in Figure 3. Further into the analysis,

'ward' emerged as an important and a major theme that needed to be explored in

greater detail. Ward was then analysed in the context of the other personal constructs,

health, job and environmental demands.

Insert Figure 3 here

A summary of the thematic analysis of the focus group transcription suggests

that the most challenging work area within the NHS for older nurses are the wards.

The prevalence of four personal constructs was reinforced in the study, namely

cognitive, emotional, physical and sensory. However, the severity of the ward work

on these constructs varies. While the physical construct predominates over the other

three, the cognitive constructs also seem to have a significant impact on the work

ability of older nurses. These relationships are depicted in Figure 4, where the

cumulative effects of ward work are presented (as personal constructs) alongside the

severity level of each personal construct identified in the study (Figure 4).

This section presents the findings of the study by discussing the nature of older

nurses' work in the wards and the impacts job and environmental demands have on

the personal constructs of older nurses.

Insert Figure 4 here

Older Nurses and Ward Work

The most compelling finding of this study is that nurses will not stay in the job as they get older if they have to work on the wards. There is a general impression and expectation from colleagues that as they get older on a ward an older nurse should move on to more sedentary roles. Hence, older nurses may be stressed striving to 'live up to such expectations', as those that stayed longer are treated as performing poorly at their job. This is what a participant had to say regarding this:

> *'...The other thing is that people naturally assume… if there's an older nurse on the ward who is a staff nurse, she's still a staff nurse at that age because she's perhaps not very good at what she's doing. Most people by that age would have moved on...'*

This trend seems to be creating a vicious cycle as nurses soon begin to realize that most of their contemporary colleagues have left or are leaving the wards. It is interesting to note that while most of the participants were not themselves working on wards, their opinions about ward work regarding older nurses were unequivocal. The following are the five most frequently cited reasons by participants on why older nurses may leave the ward or the profession earlier.

Moving and handling. The dynamic nature of the ward environment is compounded by the physicality of the tasks nurses perform on wards. There is a frequent need to move patients around and, even with the right equipment, a substantial amount of physical effort may still be necessary to transfer patients from one functional location to another, e.g. from a wheelchair into a bathtub:

'In my particular role there's not as much moving and handling, and

heavy work as there would be on the wards... '

The physicality of the ward work is further exacerbated by the fact that with an

ageing population, nurses are having to deal with patients that are in worse health

conditions on average than was the case some years ago. Patients are now almost

invariably very poorly, which means they require high level nursing. This has resulted

in increased demands on the healthcare services and the physical effort required

providing adequate levels of nursing. As suggested by a participant:

'...It is hard now because of the nature of the patients coming, they're

all really poorly… It's more demanding mentally, physically,

definitely...'

Nurses who provide personal care, like bathing, may have to contend with

unhealthy posture, including stretching and reaching. This may increase the risk of

sustaining musculoskeletal injuries and may result in sickness absences and,

eventually, in premature exit from the profession. While unaided lifting of patients is

not permitted within the NHS (HSE, 1992), lower back injuries due to patient moving

and handling has long been of major concern to the nursing profession in the UK

(Hollingdale, 1997), although there is evidence that affected nurses may not have

taken time out and the incidents might have remained unreported (Barnes, 2007).

Wilson (2001) suggested a four-component approach to safer handling practice:

- Encouraging clients to assist in moving themselves;

- An ergonomic assessment to the load, including: the ability of the person needing to be moved, the task, the individual doing the moving, and the environment;

- The use of equipment to lift and move highly dependent clients; and

- A multifaceted training programme with ongoing support for staff.

Adhering to these procedures is expected to reduce the risk of sustaining MSD injuries.

Pace of work. As nurses get older they may realize that they cannot keep up with the pace on the wards anymore, and if they will have to do the same job until their late 60s, then they would rather move on to other less demanding jobs while they still can. The ward area is a fast-paced work environment. Even without any form of physical disability older nurses may experience reduced mobility over time as a natural process of ageing. Reduced mobility in a constantly fast-paced environment may result in lower productivity:

> *'…I think nurses are so used to being independent and healthy and working at such a fast pace. When you know you're not doing that anymore, you start to feel a bit cumbersome in your team and so I think people move on…'*

It has been reported that medical staff working in emergency assessment units have a strong preference for fast-paced and unpredictable work environment (Annandale, 1999); however, these employees also emphasise the need for decision latitude in their roles (Karasek, 1979). The lack of control over their tasks and workflow is said to subject nurses to undue mental stress (Bourbonnais et al., 1998). Exposed to an intense pace of work, older nurses may have to make the hard choice

between maintaining their independence, and thereby running the risk of reduced

productivity and work-related injury; or moving on to less demanding roles within the

organization to keep their jobs. However, participants also pointed out that older

nurses may be desperate to keep their jobs, even if by so doing they become a burden

to their colleagues. As suggested by a participant:

> *'...I've had a couple of elderly staff as well going back and it was two*
> *work ladies that couldn't afford to give up work. So, I had one when I*
> *was healthcare assistant and I was on nights. She only worked nights.*
> *However, having her on nights, with it just being the two of us, it was*
> *all down to the other person, because..., you know? I am talking (when*
> *I was) seventeen years of age on a very heavy ward...'*

In a fast-paced ward environment, the need to attend to immediate patient needs

may override considerations for personal safety, which may make nurses more prone

to work-related injuries (Mark et al., 2007). As a result of this situation, older nurses,

at the very least, may soon begin to feel so stressed in their roles that they tend to opt

out after a while.

Risk of clinical error. There is also the tendency that with real or perceived

reduced work ability older nurses may constitute a risk factor to patients' health and

safety. Older nurses working in wards are therefore also apprehensive of the

consequences the demands of the ward work would have on their practice. In

particular, they are concerned that if they stayed longer on the ward they may face a

higher risk of committing a clinical error and consequently losing their license, due to

the job and environmental demands in the wards. A participant noted:

'...I would be worried about my nursing registration. I'd be worried

about making a mistake. I think that is probably one of the reasons

why a lot of them come off the wards - they're aware that their

functioning is slower, so they don't want to be in that situation when

something goes wrong...'

Medication errors in England and Wales account for 9.68% of all patient safety

incidents reported between 1 January 2005 and 31 December 2010 (Cousins et al.,

2012). A literature review of the circumstances around medication errors shows that

some authors have attributed the risk of medication error in ward environment to

being the result of poor adherence to protocol and poor calculation competency

(Jones, 2009, O'Shea, 1999) among nursing staff; whereas other authors are of the

opinion that medication errors are mainly due to systemic deficiencies, which only

manifest at an individual level (Anderson & Webster, 2001). Further research is

necessary to help understand the interplay between individual and systemic failures.

While a significant amount of attention has been given to the risk of physical

manhandling of patients, it seems likely that the risk of error in the application of

medication is also of great concern to practicing nurses. Hence, rather than wait for

the worst to happen, older nurses might make a voluntary switch to another role.

Collegiality and teamwork. Ward work requires a great amount of collegiality

and team collaboration. However, nurses that work in shifts tend to work with

different colleagues from time to time, which reduces collegiality and team

collaboration. The lack of a cohesive atmosphere could mean that workers on the

ward may not support each other as readily as people working in teams would be

expected to do. A participant not working on a ward expressed their views about team

collaboration on wards as follows:

> *'...I don't think you get that support on the ward. It's not the same set*
>
> *of people working together every day. It's literally depending on shift*
>
> *work, isn't it? So, I don't think you get that kind of support...'*

Team collaboration, on the other hand, is crucial to the functional management

and operation of ward activities. In their primary role as providers of patient care,

nurses are mutually dependent on support from their colleagues and should be

cognizant with the ward work environment, to be able to attend to prompt patient

needs. In a study conducted to explore the activities of nurses in a mental ward

setting, teamwork has been found to have an overarching impact on the performance

of the ward (Deacon & Cleary, 2013). In the absence of a cohesive team,

collaboration may not be readily forthcoming, which may lead to increased workload

for older nurses, thus exposing them to excessive and undue stress (Pisarski &

Barbour, 2014). This could easily result in them moving on to another role or translate

into their premature exit from the profession.

> *Continuous professional development.* To ensure that patients are treated

safely, nurses must be up-to-date with their professional trainings. However, in a fast-

paced ward environment with competing priorities, mandatory trainings are more

likely to be cancelled:

> *'…I think in this Trust, there is a real problem with nurses having*
>
> *their mandatory training. Just because the pressures on the ward are*
>
> *so high that they are not able to release them. Things like manual*

handling and every nurse should be able to do those sorts of

(training)...'

Lifelong learning is important for the nursing profession, especially in the face of an ageing workforce (Jarvis, 2005). Research has shown that nurses invariably appreciate the importance of undertaking CPDs for their career and practice (Drey et al., 2009). However, organisational atmosphere, including excessive workload and lack of managerial support; and personal circumstances, such as balancing doing CPD with work and life outside work, may distract practising nurses from their studies (Gould et al., 2007). Even when nurses do make it to the trainings, some of the trainings may not be adequately designed, and as such may not be fit for purpose. Participants in this focus group study appreciate the need for training, but noted that some of the trainings are detached from real life situations:

'I don't think the training always reflects working with a real patient. You're working the training on an able-bodied person, and there is a big difference between that and a patient...'

Older nurses may therefore still be exposed to the risk of work-related injury, even if they have complied with the requirement to undertake their mandatory training. A nuanced approach to training may be more appropriate for older nurses compared to their younger counterparts; this does not detract from the need to train nurses regardless of age (Pool, Poell, & ten Cate, 2013).

There is an overwhelming consensus among the participants that the ward, as a work environment, is not very accommodating to older nurses. Participants seem to invariably have a negative opinion about ward work, even if they themselves are not working on wards. It was generally acknowledged that the job and environmental

demands for nurses working on wards are the most challenging. Participants do not

seem to think that there will be too many older nurses left working in the wards,

because as nurses age, they tend to move on to less demanding roles within the NHS.

Job Demands and the Personal Constructs

The demands the ward tasks place on the various aspects of an older nurse's

personal constructs were explored. The three personal constructs investigated were

physical, cognitive and sensory. Participants were invited to express their views on

any pre-existing physical, cognitive and sensory limitations, and how these may be

affecting their daily routines as a nurse.

The negative effects of job demands on wards are most pervasive on the

physical constructs. Therefore, it must be appreciated that even with the most

appropriate equipment and training, there is an inherent physicality to the nursing

tasks that cannot be completely eliminated. This also suggests that there may be the

need for nurses to apply undue force in the performance of their daily duties due to

inappropriately designed tasks, or as a result of inadequate equipment. This may mean

that older nurses will have to contend with lifting, pulling, pushing and stretching,

which may have physical health implications. Nurses may tend to live with physical

injury, sustained by working on the ward, over their career time without any chance of

permanent recovery:

> *'...obviously I am thirty-five and I've been in the job for sixteen years.*
> *The damage it's done to me now, I had a bad back when I was*
> *eighteen, from working on an orthopedic ward...'*

If physical limitations do exist, older nurses may either be restricted in the type

of tasks they can perform or they may be more dependent on the support of their

teammates. However, in a ward environment such support may not be readily

available. Hence, the extent to which the job demands cause physical limitations may

determine whether or not an older nurse decide to remain on the ward.

Wards, as a work environment, are busy. Parallel activities may distract older

nurses from key tasks requiring intense cognitive resources. The interactions among

the medical staff and between the other healthcare workers and patients in an open

bay has an intruding impact on the surrounding environment. However, whereas the

existence of physical limitations may be more evident, the prevalence of cognitive

limitations may not be readily recognized, even by the affected person. There is an

acknowledgement by participants that cognitive acuity of older nurses may diminish

with age:

> *'...I don't concentrate as well as I did when I was younger...'*

Older nurses may find it harder to stay focused and concentrate even on tasks

requiring minimum levels of cognition. For example, research has shown that time

management skills, which are crucial in staff management, are adversely affected by

diminishing cognitive resources (Haight & Belwal, 2006). This supposition is

supported by a participant's response:

> *'...Certainly it affects time management. So even some simple things like*
> *making sure your staff go on break, you know…'*

Diminished concentration capability is further exacerbated by shift work, which

has proven to be an important factor that impairs older nurses' cognitive work ability

(Berger & Hobbs, 2006). Shift work also has a negative impact on sleep pattern. So as

people get older, and they tend to sleep less well anyway, any disturbance to their

sleep pattern will adversely affect their cognition (Yaffe, Falvey, & Hoang, 2014).

Shift work poses a huge job demand on all healthcare workers by impeding

concentration levels. However, for older nurses working in wards this problem is

exacerbated by other job demands like the fast-paced workflow.

> *'...I think generally even if they are not over 50, they'll certainly be*
>
> *working shifts. And we are working long days and working nights. You*
>
> *do have certain cognitive limitations, anyway...'*

Decline in concentration level will in turn affect certain activities that require a

high level of cognitive resources. For instance, it may reduce the ability to make the

right judgment on some crucial issues and thus may impede patient safety:

> *'…Maybe allocation of patients, maybe it can affect that, you may be*
>
> *putting a non-supported junior staff member looking after a very sick*
>
> *patient. It is kind of related to that...'*

Age, shift work and sleep deprivation do affect ability to concentrate

effectively, which has a huge adverse effect on older nurses' cognition. While the

impacts of ward job demands on the physical and cognitive constructs were widely

acknowledged among participants, a similar relationship was less evident with the

sensory constructs. For example, participants were resolute that minor visual

impairment could be corrected with prescription spectacles; hence this will normally

not affect older nurses' health or work ability in any adverse way. However, an

important intersection between the ward job demands and sensory constructs that was

emphasized by the participants is the effect of ward noise levels on hearing. This is a

crucial problem in a ward, which is de facto a noisy workplace. Even nurses with mild

hearing impairment may struggle to cope cognitively in a noisy ward. So an older

nurse with poor hearing might struggle to perform their daily duties on a ward:

> *'... I think that people with hearing problems, they can't manage when,*
>
> *as you say, there's lots of people talking at the same time, which would*
>
> *happen on the ward...'*

Environmental Demands and the Personal Constructs

It is appreciated that some of the more modern and purpose-built wards will, to

a large extent, support older nurses; however, there seem to be situations whereby the

work environment may negatively impact on older nurses' health and wellbeing.

Whichever way, in the interaction between older nurses and the work environment an

adequate level of harmony is necessary, the absence of which poses a huge

environmental demand on older nurses. Spatial design is one aspect of the

environmental demands that participants claim has an impact on their health. Its most

noticeable impact is on the physical constructs, as suggested by a participant:

> *'... I think that on the wards, they're also-- they're not particularly well*
>
> *designed, are they? You've got small rooms. So you've got a commode*
>
> *and you've got to get out of this room and through this door, and that's*
>
> *all right when you've got a bit of brute force but I'd say as you get*
>
> *older...'*

Some of the rooms in the wards are too small and it is usually too cumbersome

to maneuver in and out of the rooms with patients. Ill-designed workspace may,

among other things, lead to MSDs, including lower back pains, and strains in the

shoulders and neck (Bernal et al., 2015; Heiden et al., 2013). This opinion was

buttressed by another participant as follows:

> *'...On our ward, I try to get a patient out of the bed, there is not enough*
>
> *room sometimes to get over the hoisting… Even the bathrooms, you*
>
> *can't get in with a patient, and shut the door and come out. They are*
>
> *just not designed right...'*

Environmental demands may also impact on the cognitive constructs, for

example in the form of way-finding. This may in turn reduce productivity at work. In

a large healthcare estate with widespread and complex layouts, way-finding may

prove to be a very frustrating exercise for older nurses. Familiarity with the work

environment may partially lessen some of the effects of an ill-designed workspace

layout (Wiles, Leibing, Guberman, Reeve, & Allen, 2012), however, older nurses

with an onset of diminishing cognition may struggle on a daily basis maneuvering

through complex healthcare facilities:

> *'There're long corridors that look the same so, sometimes you get a bit*
>
> *disorientated about whether you're on your way to X-ray or Pharmacy.'*

Even within a relatively small area, nurses cover long distances moving in and

around wards. This may be further exacerbated when the activities and workflow are

disjointed, resulting in physical monotony and/or fatigue.

> *'So if somebody in Bay One…wanted a commode and as a younger*
>
> *person you leg it off to get that but as an old person, you cannot move so*
>
> *quickly and then that patient's going to be wondering where the toilet is.'*

Moving around the ward area is an inescapable part of a nursing job. On the

other hand, the performance of tasks in static postures may equally exert latent force

on parts of the body causing injury (Baptiste, 2011). Therefore it is vital that, to the

maximum extent possible, nurses' tasks and wards are designed such that the

interactions between an older nurse and the work environment do not impair their

physical health.

Participants are of the opinion that from a physical constructs

perspective, the overall design of the wards is not particularly age-friendly, for

either older or younger nurses. Participants seem to have an unwavering

recognition that younger nurses may be similarly affected by the impacts of

these environmental demands:

> *'...There are young nurses complaining. In a nutshell, I wouldn't be*
>
> *able to run the full length of the ward at 68 years old. That could lead*
>
> *to a cardiac arrest really...'*

Aside from the physical constructs that are being impacted upon by the size and

layout of wards, there are other design features that are of concern to participants.

There are instances where the design of the ward environment may impact adversely

on the sensory constructs. One such feature is the effect of lighting and the balance

between natural and artificial sources of light. Participants are apprehensive of the

fact that there is no flexibility in allowing natural lights into certain work areas with

respect to the needs of patients and employees, so some wards may be blackened out

indefinitely:

> *'…The whole unit, the critical care unit has some windows, but they are*
>
> *blackened out…, so there is no natural light...'*

It is appreciated that ensuring patient's privacy and dignity in the healing

process should be a key priority; however, this must be achieved without

compromising the health and wellbeing of healthcare workers. Older nurses may be at

a higher risk of eyestrain due to inadequate ambient lighting, as they are more likely

to have sustained some form of visual impairment, however mild this might be.

Other work environment-related demands like the provision of adequate

equipment and tools also have an adverse impact on nurses' health. In particular, the

cognitive health of an older nurse may be impaired as they may be frustrated by

broken or malfunctioning equipment:

> *'…If some of the equipment isn't working, (which) is essential to patient*
>
> *care…, again with all the bureaucracy, you go through the whole system*
>
> *to get it reported, to get it repaired. It is quite frustrating trying to report*
>
> *fault or anything...'*

Older nurses frustrated at their job may be at a higher risk of incurring

musculoskeletal discomfort (Habibi et al., 2015).

Concluding Discussion

The first objective of this study was to explore the existing theoretical contexts

of the job and environmental demands of the nursing profession. The second objective

was to investigate how these jobs and environmental demands impact on the personal

constructs of older nurses. Evidence from the literature does suggest that health is a

key determinant of older nurses' ability and intention to keep on working. Concomitant to this finding is that the impacts of job and environmental demands on the physical and cognitive constructs have the most severe outcomes for older nurses working in the ward setting.

While the consequences of a highly demanding job on the physical construct may be apparent and, as a result, more likely to be addressed, evidence of diminished cognitive construct may not be easily noticed. The need for the drafting and implementation of measures aimed at redesigning the job and/or the work area to buffer the decline in cognitive acuity may not be readily recognized, hence such help may not be available. Moreover, it is more likely that affected nurses will be able to compensate for pronounced cognitive strain through their experience and familiarity with the work environment. However, this does not fully mitigate the risk of mistakes in patient care.

There is an implicit expectation that older nurses should move on from the ward areas to less demanding roles over time. When such an expectation become more vivid, it may easily spill over into non-institutional work-related negative discrimination. This tacit expectation towards older nurses to exit the ward area earlier may thus pose a potential risk of age discrimination lawsuit against the NHS. This sort of latent ageism may cause mental distress among victimized older nurses and may result in them exiting the job a lot earlier than they may otherwise have done. Even if they do not exit the profession or retire outright, older nurses tend to prepare to leave the ward work area to avoid this psychological pressure. This cause-effect relationship is supported by literature. For instance, many studies have explored the vulnerability of nurses to burnout as a result of challenging job and environmental demands (Adriaenssens, De Gucht, & Maes, 2015; Duffield et al., 2014; Van Bogaert

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et al., 2013). Burnout is an important negative predictor of nurses' premature exit

from the healthcare sector (Duffield et al., 2014).

The situation on the wards may thus prompt older nurses to want to retire

earlier. Those that do stay on the ward may find that promotions are awarded to the

younger nurses. So, even if an older nurse stays on the ward they will most likely be

working under the supervision of a younger nurse manager or sister. In the past when

nurses thought they could retire at 55, then they would stay on the ward, but now as

they may have to work until their late 60s, they will move to other positions even

before they get to be 55, to gain the expertise needed in their new role as early as

possible. Some of the demands of the job may be alleviated through team

collaboration. However, due to the nature of ward work, whereby different sets of

staff members work in different shifts, the sense of collegiality may be lacking and

the chances of getting the support needed for older nurses are reduced.

There is an overwhelming consensus that the participating nurses were satisfied

with their jobs. Some participants have been in the practice for more than ten years.

Their commitment to the profession also instigated their desire to ensure the NHS is

an age-friendly work environment, as the need for them to work well into their late

60s seems to be quite compelling. This reality was a motivating factor in participants'

responses. Participants also seem to draw a parallel between the need to support an

older nurse and a worker with disability.

Limitations to Findings

The limited number of participants and the restricted geographical location of

the data collection calls for caution in the generalisability of the findings of this study.

This research has focused on users of healthcare facilities in the NHS setting (i.e. older nurses); nevertheless, the objective characteristics of the workplace have not been assessed. For example, a comprehensive post-occupancy evaluation of the affected NHS premises may help to gain a more precise knowledge of the nature and the dynamics of the interactions between nurses and their work environment. Furthermore, the tasks older nurses perform on wards were highlighted as described by Dendaas (2011). However, it is necessary to gather further empirical evidence on the nuances of the tasks performed by older nurses in a typical ward setting, to fully appreciate the fit or mismatch between older nurses and their work environment. The main focus of this study is on older nurses, i.e. nurses aged 55 years and over; however, the adjustments that may be implemented to the workplace as a result of its findings will equally suit younger nurses, although further research may be necessary in this respect. Findings may also be biased since the participants were volunteers and may have had an interest in the subject matter of the study. A random sample of participants may have yielded different results.

Implications for Practice and Further Research

The findings of this study may be used as an evidence-based decision-making premise for practice and further research. Identifying challenging job and environmental demands for nurses may serve as a preamble to further research that may seek to create a better fit between nurses' work ability and work environment. There may be a need to introduce job- or task-specific functional capacity for nurses in certain job roles. While it may be necessary to adjust tasks to fit around an older

nurse functional capacity from time to time, this may not always be feasible.

Consequently, there may be a need to apply differential treatment in determining the

functional capacity of nurses in the context of age. The establishment of a nurse's

functional capacity should be monitored to ensure that this is matched with the job

and environmental demands, and a well-timed intervention may be facilitated, if

necessary. Indices of a scale of a nurse's functional capacity, plotted against measured

job demands and environmental demands will enhance this process.

These findings may also inform design decisions for NHS facilities, and

therefore preempt the committing of certain design errors that may adversely affect

patients' safety and healthcare employees' health, which may be very costly to rectify.

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23-Sep-2015

Dear Dr. Jaynelle Stichler,

Thank you for your painstaking effort and support to publish my article. Please find below my responses to your comments as requested:

1. I have reviewed the APA 6th edition and I have formatted my document accordingly. The paragraphs are now indented only and "not indented and spaced" at the same time.
2. I have reviewed and agreed with the bolded sentences for "call outs" in the article. Thank you for your suggestion.
3. I have removed the focus group question schedule, placed it in a separate file and referenced it in the document. It is denoted Table 2 and it is uploaded along with other relevant separate files.
4. I have reviewed and deleted all "in order to's" in the text, replacing them with just "to". I did not realise I used this phrase that often. Thank you for drawing my attention to this.
5. I have reviewed the note added to limitations. I agree with this additions. It does complement the limitation section. Thank you.

Once again thank you for agreeing to publish this manuscript, subject to the proposed modifications. The process has been a rewarding learning experience for me.

Best regards,

Isaiah O. Durosaiye

Abstract

Objectives:

i)   Explore the existing theoretical contexts of the job and environmental demands of the nursing profession in the National Health Service (NHS); and,

ii)   Investigate how these job and environmental demands impact on the personal constructs of older nurses within the NHS.

Background:

Nursing is the single most widely practised profession in the healthcare sector in the UK. However, nurses contend with challenging job and environmental demands on a daily basis, which deplete them of personal constructs (or resources) required to stay in the profession.

Methods:

A multi-level exploratory qualitative research design was employed. Ten managers were interviewed for the preliminary study, based on which the three characteristics of an age-friendly NHS workplace were established to be health, retirement and flexibility. Then an in-depth literature review revealed that the most adversely affected job within the NHS was the nursing profession. Finally, a focus group study was undertaken with six older nurses working in the NHS.

Results:

The most compelling finding of this study is that older nurses would generally not want to stay on the job if they had to work in the ward area. The physical, cognitive and sensory constructs of older nurses are negatively affected by the job and environmental demands of the ward areas.

Conclusions:

Understanding how these job and environmental demands of the workplace affect an older nurse' personal constructs may help support a better design of nurse work and the wards and help extend the working lives of older nurses in the NHS.

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Executive Summary

Nurses play a crucial role in the delivery of healthcare services in the National Health Services (NHS) in the UK. However, a growing number of older nurses are leaving the profession prematurely, taking with them valuable skills and experience. Studies abound that suggest the nursing profession is a stressful one. Nurses contend with challenging job and environmental demands on a daily basis, which deplete them of personal constructs (or resources) required to stay in the profession. However, there is dearth of research that has investigated how the job and environmental demands of ward work affect the health and wellbeing of older nurses working in the ward area. This research study explores how the job and environmental demands of affect the personal constructs of older nurses within the NHS.

The most compelling finding of this study is that nurses would generally not want to stay on the job if they had to work in the ward area. This study concludes that the physical, cognitive and sensory health of nurses require proper attention in order to extend the work ability of older nurses.

Implication for Practice

The most compelling finding of this study is that nurses would generally not want to stay on the job if they had to work in the ward area. The five most important job and environmental demands which may lead to the early exit of nurses working in the ward areas are:

i)   moving and handling of patients;

ii)   fast pace of work;

iii)   risk of committing clinical error;

iv)   lack of collegiality and teamwork; and

v)   inadequate opportunities for continuous professional development.

Understanding the reasons why older nurses may exit the nursing profession prematurely, especially if they had to work in wards, may help management and policymakers design the ward tasks in order to accommodate the potential health conditions that older nurses may have developed over time.

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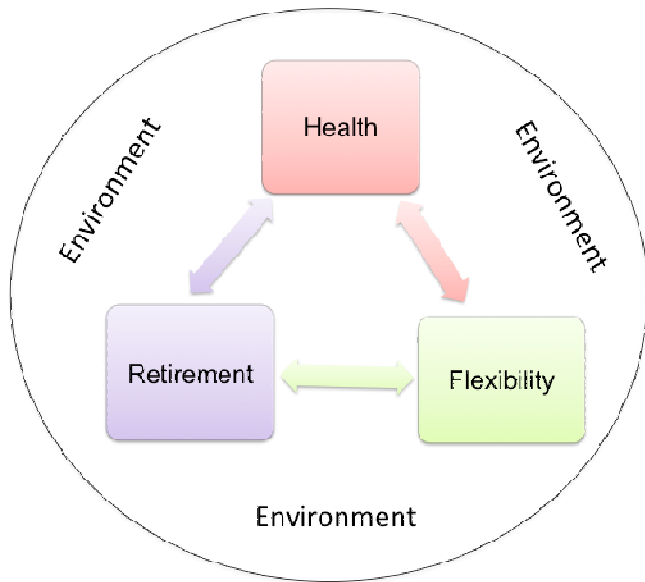47
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FIGURE 1: Age-friendly Characteristics of NHS Workplace

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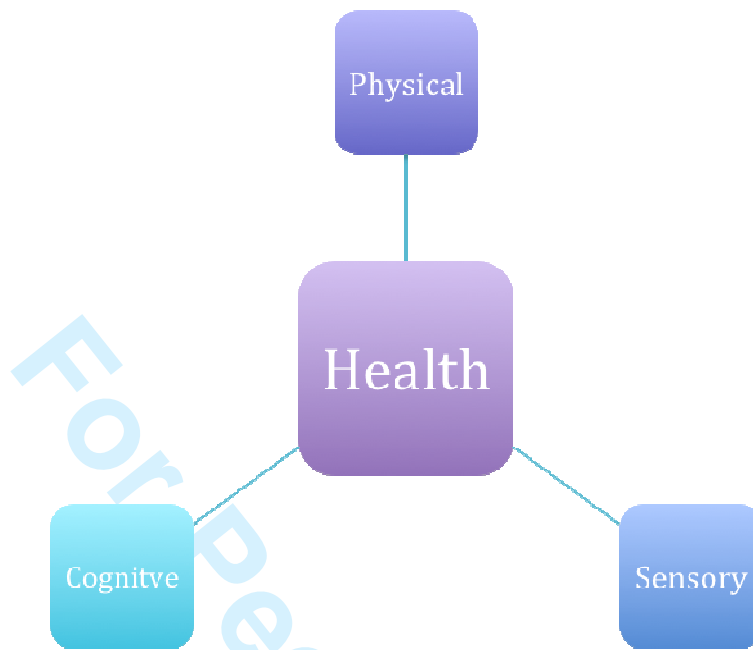41
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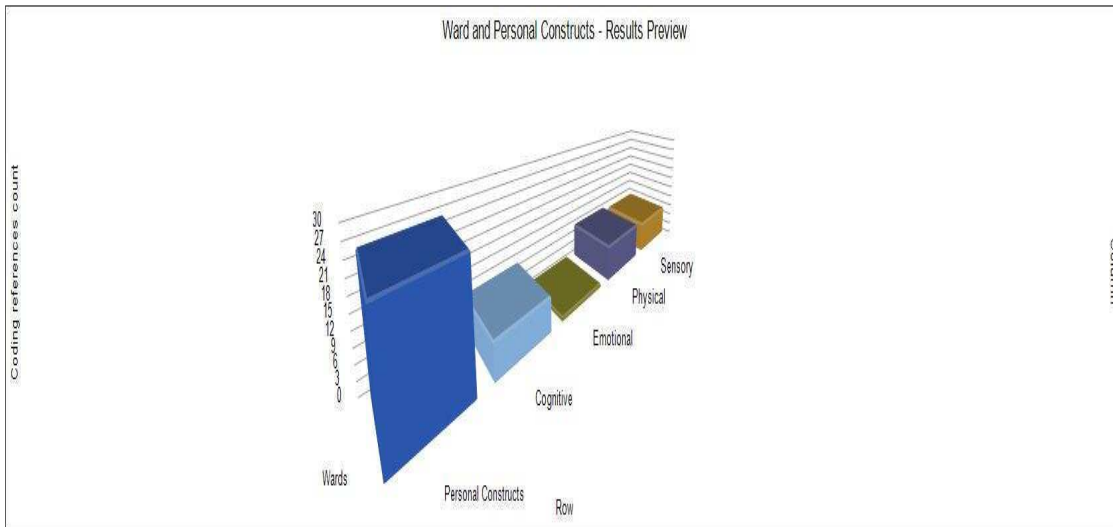60

FIGURE 2: Health and the Personal Constructs

FIGURE 3: An Overview of the Thematic Analysis

FIGURE 4: Impacts of Ward Work on the Personal Constructs of Older Nurses

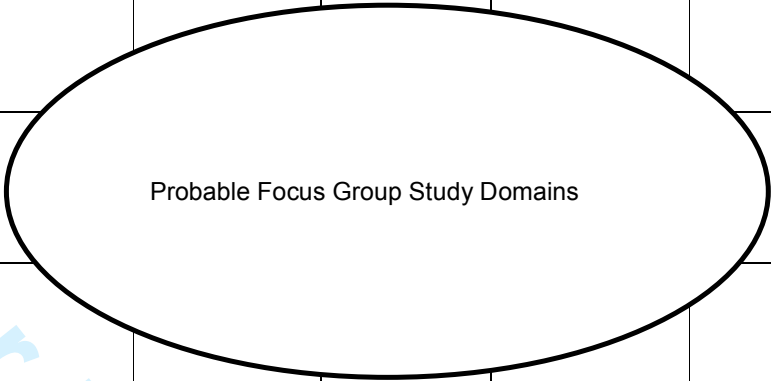| Personal Constructs					
	PHYSICAL	COGNITIVE	SENSORY	EMOTIONAL	SOCIAL
HEALTH					
FLEXIBILITY		Probable Focus Group Study Domains			
RETIREMENT					

Age-friendly Characteristics

TABLE 1: Research Matrix – based on preliminary study

1	Please tell us your **current position/job title,** and your main **tasks and responsibilities?**
2	**How long** have you worked for the NHS and how long have you been in **your current position?**
3	What do you understand by the term an **age-friendly workplace?**
4	JOB – Positive Elements: What are the **five major tasks of your job** that have the greatest **positive impacts on your health** and how?
5	JOB – **Negative Elements:** What are the **five major tasks of your job** that have the greatest **negative impacts on your health** and how?
6	**ERGONOMICS**: Please name the five ergonomic features of your job that have the greatest impact on your health, and in what ways (e.g. application of undue force, monotonous or frequently changing tasks)?
7	**DESIGN OF THE PHYSICAL ENVIRONMENT:** Please name the five design features of your workplace that have the greatest impact on your health, and in what ways (e.g. estates and wards layout, accessibility of work areas, ambient lighting, signage, color coordination, thermal comfort)?
8	**A) PHYSICAL:** Do you or any practicing nurse above the age of 50 that you know of have any **physical limitations** (e.g. mobility, posture, dexterity, grip strength)? **B) PHYSICAL:** How do these **physical limitations** affect your (or your colleague's) daily routine? Examples?
9	**A) SENSORY:** Do you or any practicing nurse above the age of 50 that you know of have any **sensory limitations** (e.g. visual, auditory)? **B) SENSORY:** How do these **sensory limitations** affect your (or your colleague's) daily routine? Examples?
10	**A) COGNITIVE:** Do you or any practicing nurse above the age of 50 that you know of have any **cognitive limitations** (e.g. way-finding, memory, concentration)? **B) COGNITIVE:** How do these **cognitive limitations** affect your (or your colleague's) daily routine? Examples?
11	**A) RETIREMENT:** Do you see yourself retiring as a nurse? If yes, why? If no, why not? **B) RETIREMENT:** What age do you think is the most ideal for you to retire?
12	What is your vision for the future of nursing?
13	What are the major points of this discussion that you wish could be put into action?

TABLE 2: Exploratory Focus Group – Question Schedule