International Emergency Nursing 23 (2015) 59–64

Contents lists available at ScienceDirect

International Emergency Nursing

journal homepage: www.elsevier.com/locate/aaen

Nurses' perceptions of multitasking in the emergency department: Effective, fun and unproblematic (at least for me) – a qualitative study

Helena Hvitfeldt Forsberg PhD (Post Doc) [a,*], Åsa Muntlin Athlin PhD, RN, CNS (Adj Senior Lecturer) [b,c,d,e], Ulrica von Thiele Schwarz PhD (Associate Professor, Reg. Psychologist) [a,f]

[a] Department of Learning, Informatics, Management and Ethics (LIME), Medical Management Center (MMC), Karolinska Institutet, Stockholm, Sweden
[b] Department of Medical Sciences, Uppsala University, Uppsala, Sweden
[c] Department of Public Health and Caring Sciences, Uppsala University, Uppsala, Sweden
[d] Department of Emergency Care, Uppsala University Hospital, Uppsala, Sweden
[e] School of Nursing, University of Adelaide, Adelaide, Australia
[f] Department of Psychology, Stockholm University, Stockholm, Sweden

ARTICLE INFO

Article history:
Received 7 January 2014
Received in revised form 18 May 2014
Accepted 19 May 2014

Keywords:
Multitasking
Polychronicity
Emergency department
Registered nurse
Patient care
Nursing
Patient safety
Interruptions

ABSTRACT

Introduction: The aim was to understand how multitasking is experienced by registered nurses and how it relates to their everyday practice in the emergency department.
Method: Interviews with open-ended questions were conducted with registered nurses ($n = 9$) working in one of two included emergency departments in Sweden. Data were analyzed using Schilling's structured model for qualitative content analysis.
Results: Three core concepts related to multitasking emerged from the interviews: 'multitasking – an attractive prerequisite for ED care'; 'multitasking implies efficiency' and 'multitasking is not stressful'. From these core concepts an additional theme emerged: '. . . and does not cause errors – at least for me', related to patient safety.
Discussion: This study shows how the patient load and the unreflected multitasking that follows relate to nurses' perceived efficiency and job satisfaction. It also shows that the relationship between multitasking and errors is perceived to be mediated by whom the actor is, and his or her level of experience. Findings from this study add value to the discourse on multitasking and the emergency department context, as few studies go beyond examining the quantitative aspect of interruptions and multitasking and how it is experienced by the staff in their everyday practice.

1. Introduction

The emergency department (ED) is a setting of unpredictable, uncontrolled workload and high information intensity. Adding complex and time critical tasks, work in the ED is prone to interruptions and requires the simultaneous management of multiple tasks, i.e. multitasking (Chisholm et al., 2000, 2001; Laxmisan et al., 2006). Interruptions can be defined as an event that diverts a person's attention from the task at hand (Chisholm et al., 2001). Thus, although interruptions are not the same as multitasking they are important antecedents for it; so much so that interruptions and multitasking are often discussed in an intertwined manner as something inherent to the ED environment (Chisholm et al., 2001). However, despite its frequency in the ED it can be argued that, in fact, the simultaneous management of multiple tasks is impossible (Clyne, 2012; Stephens and Fairbanks, 2012). Studies from the neuropsychological field suggest that rather than attending to several tasks simultaneously, at best humans are able to switch swiftly between the tasks at hand. At worse, their working memory and activity performance are negatively affected (Berg et al., 2012), causing cognitive overload (Coiera et al., 2002) resulting in potential energy loss and stress. Even in the best cases, though, multitasking means that in every instance, tasks are not fully attended to and subsequently risk being forgotten and/or performed mindlessly (Coiera et al., 2002; Kalisch and Aebersold, 2010; Laxmisan et al., 2006). The negative effects of the combination of interruptions and multitasking are known to increase the risk of errors, and are a great threat to patient safety (Chisholm et al., 2000; Coiera et al., 2002; Laxmisan et al., 2006). Thus, it is not surprising that the ED has a high frequency of preventable errors (Institute of Medicine, 2000).

Most studies of multitasking in healthcare focus on physicians. An Australian observational study (Kee et al., 2012) identified that ED consultants perform an average of 100 tasks an hour, whereby each observed hour consisted of 17 min of multitasking activity. According to Chisholm's observational study, the emergency

* Corresponding author. Fax: +46 8 524 836 00.
E-mail address: helena.hvitfeldt.forsberg@ki.se (H.H. Forsberg).

http://dx.doi.org/10.1016/j.ienj.2014.05.002
1755-599X/

physician is interrupted an average of 9.7 times per hour, compared to 3.9 times for the primary care physician (Chisholm et al., 2001). Fewer studies have focused on the registered nurse's (RN) work and interruptions (Kalisch and Aebersold, 2010; Schmitz, 2012), despite suggestions that nurses' work tasks are even more predisposed to being multitasked than those of physicians (Berg et al., 2012). In an observational study performed by Kalisch and Aebersold, nurses working in medical surgical units and in intensive care units all experienced interruptions (ranging from 4.4 to 18 times per hour) and multitasking (ranging from 23% to 42% of observed time) (Kalisch and Aebersold, 2010). A Swedish study (Berg et al., 2012) showed that the two most common activities in everyday ED practice, information exchange (40%) and information seeking (20%), are frequently performed simultaneously with other tasks, i.e. multitasking. The authors also conclude that RNs were the professional group who performed the majority of the multitasking activities (Berg et al., 2012). Thus, the phenomenon of multitasking is known in EDs. However, few studies go beyond examining the quantitative aspect of interruptions and multitasking and, thus, little is known about how working in an environment prone to interruptions and multitasking is perceived by staff (Berg et al., 2012; Chisholm et al., 2001; Kalisch and Aebersold, 2010).

The aim of this paper was to understand how multitasking is experienced by registered nurses and how it relates to their everyday practice in the emergency department.

2. Methods

2.1. Study design

This study is part of a mixed-method study investigating the effects of Teamwork on Efficiency, Patient safety, Patient satisfaction and Personnel work environment (the TEPPP study). The present study used an exploratory, qualitative approach.

2.2. Setting

The study was set in two different EDs in Sweden: one at a university hospital, with approximately 50,000 adult visits to the ED a year; and the other at a medium-sized county hospital with approximately 56,000 mixed children–adult visits to the ED a year. In Swedish EDs, RNs have important and varied roles, as for example, leading the care procedures, performing triage and carrying out medical directives from the physicians. They work closely with physicians and assistant nurses (carrying out practical basic nursing).

2.3. Data collection and procedure

The respondents were recruited through ED managers and were sent information about the study before the interviews took place. Only RNs were included in this call. A total of about 100 RNs are employed at the two settings, however at each ED there is a number of part-time employers. RNs who wanted to participate informed the manager, who contacted the researchers. Altogether nine ($n = 9$) RNs participated and their ages varied between 30 and 57 years. The respondents' had a minimum of 5–27 years' experience of working in an ED and 5–38 years' experience of working in healthcare. The number of respondents was spread among the two EDs.

Before each interview the respondents were given information about the study, and gave informed consent. The interview used an exploratory approach with open-ended questions. Questions regarding work situation, what helps/hinders personal efficiency, and expectations regarding the professional role and multitasking were included in the interview guide. Two pilot interviews were conducted to test the interview guide, which was slightly altered after the first pilot interview to ease the transitions between the different interview questions. All interviews were carried out by a master's student and the interview guide was developed in collaboration with the authors (two researchers and one researcher with clinical experience) and formed by the aim of the present study and the research questions for the TEPPP-study. Interviews lasted 44–68 min, and were conducted at the respondents' workplace. All interviews were audio taped. The pilot interviews were included in the total number of interviews. The number of interviews was carried out until data saturation was reached. The project was approved by the regional ethics committee (DNR 2010-170).

2.4. Data analysis

The data analysis was guided by Schilling's structured model for qualitative content analysis. The model consists of five levels: from recordings to raw data, to condensed protocols, to preliminary category systems and finally to coded protocols. The last level includes concluding analysis and interpretations (Schilling, 2006). During the process of going through the five levels, the 159 pages of transcribed text were transformed into nine preliminary categories: multitasking, stress, structure, efficiency, prioritization, expectations, characteristics, polychronicity and monochronicity. This process was undertaken by the last author and the data collector. For inter-reliability purposes, the analysis and interpretation were reviewed by the second author. Concept maps were later created, according to Schilling's model, to summarize the general terms and concepts found in the interviews. From these concept maps, three core concepts were extracted: multitasking, efficiency and stress. All three concepts connect to the aim of understanding how multitasking is experienced by RNs, and relate to everyday practice in the ED.

3. Results

Findings are presented in relation to the three core concepts: 'multitasking – an attractive prerequisite for ED care'; 'multitasking implies efficiency'; and 'multitasking is not stressful'. From these core concepts an overarching additional theme emerged: '. . . and does not cause errors – at least for me', related to patient safety.

3.1. Multitasking – an attractive prerequisite for ED care

All nine respondents experienced several situations during each work shift in which they had to multitask, i.e. simultaneously manage multiple tasks. Often, the multitasking was triggered by a high influx of patients and tasks, and by interruptions by others. It was very common to start a new task without finishing the last one and working on several tasks in parallel. One respondent explains that there is a lack of cultural awareness of the importance of being fully focused on the task at hand:

> "*That culture [being fully focused on the task at hand] does not exist, and that results in a bunch of parallel tracks. People are interrupting each other all the time*"

The respondents viewed multitasking as something so natural at an ED that they did not think much about it and struggled giving very detailed descriptions of situations when they multitasked. They rather discussed having a lot to do and working with several tasks in parallel than multitasking. They regarded multitasking as an inherent part of work in an ED, something that cannot be separated from it. Interruptions and multitasking were not viewed as problematic; on the contrary, this was described as part of the attraction of working in the ED in relation to working at a ward:

> "*Spontaneously I don't think I could manage working at a ward, there's too little action and the tasks are monotonous.*"