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Hospital organizational factors influence work–family conflict in registered nurses: Multilevel modeling of a nation-wide cross-sectional survey in Sweden☆

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ABSTRACT

Background: The present shortage of registered nurses (RNs) in many European countries is expected to continue and worsen, which poses a substantial threat to the maintenance of healthcare in this region. Work–family conflict is a known risk factor for turnover and sickness absence.
Objective: This paper empirically examines whether the nurse practice environment is associated with experienced work–family conflict.
Design: A multilevel model was fit with the individual RN at the 1st, and the hospital department at the 2nd level using cross-sectional RN survey data from the Swedish part of RN4CAST, an EU 7th framework project. The data analyzed here is based on a national sample of 8356 female and 592 male RNs from 369 hospital departments.
Results: We found that 6% of the variability in work–family conflict experienced by RNs was at the department level. Organizational level factors significantly accounted for most of the variability at this level with two of the work practice environment factors examined, staffing adequacy and nurse involvement in hospital affairs, significantly related to work–family conflict. Due to the design of the study, factors on ward and work group levels could not be analyzed, but are likely to account for additional variance which in the present analysis appears to be on the individual level, with private life factors likely explaining another major part.
Conclusion: These results suggest that higher level organizational factors in health care have a significant impact on the risk of work–family conflict among RNs through their impact on the nurse practice environment. Lower level organizational factors should be investigated in future studies using hierarchical multilevel sampling.

What is already known about the topic?

- A number of studies have shown that RNs' work is associated with perceived imbalance between work and family life.
- High perceived conflict between work and private life has been identified as cause of RN turnover.

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What this paper adds

- Our study suggests that higher level organizational factors are of importance in explaining work–family conflict among RNs.
- Management on all levels should consider increasing the possibilities for RNs to impact on hospital affairs and providing adequate staffing to achieve improved work environment and facilitate a good balance between work and private life among employees.

1. Introduction

The present shortage of registered nurses (RNs) reported in EU countries is expected to worsen in the coming years. This is in part due to the aging of the nursing workforce in conjunction with increased health care demands as the population ages, but also loss of practicing RNs from ill-health and job dissatisfaction (Simeons et al., 2005). One important measure to maintain the current level of RNs and counteract further shortages is to keep RNs healthy and willing to continue to work. A crucial factor for a healthy and stable RN work force is the work practice environment, with numerous studies elucidating important factors affecting health and intention to leave, e.g. poor nurse–physician relations, insufficient resources (i.e. poor staffing), poor collegial relationships and poor leadership (Aiken et al., 2012; Estryn-Mehar et al., 2007; Vahey et al., 2004). Several studies describe associations between RNs' perception of their practice environment and nurse outcomes such as burnout, job satisfaction, RN reports of quality of care, turnover intention, as well as patient outcomes such as mortality and failure to rescue (van Bogaert et al., 2010).

These are known factors which can contribute to RN shortages, but the influence of work–family conflict has been less studied in relation to this issue. This is notable as many characteristics of work situations common among RNs have been identified as increasing the risk for a conflict between work and family demands. For example, long working hours and shift work have been found to be related to work–family conflict (Carlson, 1999; Carlson and Perrewe, 1999; Peeters and de Jonge, 2004; van der Heijden et al., 2008), but also jobs with interdependence and responsibility for others (Dierdorff and Kemp Ellington, 2008). Low job satisfaction and high perceived work–family conflict have previously been identified as causes of nursing staff turnover (Schacklock and Brunetto, 2012), whereas incompatibility of family and work obligations has been found to be a major barrier for the return of physicians from non-clinical positions into hospital work (Fuss et al., 2008). Most studies of work–family conflict focus on an individual perspective and multi-level analyses are rare, as are data examining work–family conflict within health professions (Fuss et al., 2008). Furthermore, while some work practice environment research has considered the shared experiences of nurses in particular units or hospitals, many studies have been restricted to consideration of correlations between individual nurses' ratings of their workplace (van Bogaert et al., 2010). Finally, since many decisions regarding the work practice environment for nursing care are made at different organizational levels (e.g. ward, department or hospital), it may be important to understand how various factors at different levels influence the variability in work–family conflict, but to the best of our knowledge, no studies have examined this to date.

The purpose of this article is to complement the extant literature by applying a multilevel modeling framework to simultaneously explore how factors both at the hospital department and individual level impact on the balance between work and family life among RNs in Sweden. We assumed that factors at higher organizational levels have a significant impact on work–family conflict that is independent of factors closer to the individual. This can best be tested in a multilevel framework by separating the total variability into RN level and department level variability.

2. Methods

2.1. Study population

The present data comes from the Swedish portion of a 15-nation EU 7th Framework project, RN4CAST, focusing on RNs working in surgical and medical inpatient care and with a multilevel structure with nurses nested within departments and departments nested within hospitals. In Sweden, nurses were approached through hospitals but via the Swedish Association of Health Professionals (covering approximately 80% of all clinically-active nurses). From the member register all nurses working in medical and surgical departments were selected ($N = 33{,}083$). The survey questionnaire was distributed by post in February 2010 through Statistics Sweden administration. At the end of the data collecting period 23,087 surveys were returned. Those RNs who responded, but did not meet the inclusion criteria (not working in in-patient care or change of work place) have been excluded from the final database. The available Swedish database consists of self-reported survey data from 11,015 RNs working with direct in-patient medical/surgical care in 72 acute care hospitals in Sweden (response rate about 70%, internal attrition 2–3% per item), complemented with organizational data. The details of the survey design can be found elsewhere (Sermeus et al., 2011). All departments with fewer than 10 respondents and all hospitals with fewer than 3 departments were omitted in order to get correct group-level variance estimates from the multilevel model (Maas and Hox, 2005), giving a final analytic sample of 8948 RNs from 369 departments in 53 hospitals. The study was approved by the relevant Research Ethics committee (Regionala etikprövningsnämnden i Stockholm: Dnr 2009/1587-31/5). Informed consent was obtained by all respondents.

2.2. Individual RN and department-level measures

The individual-level variables included were: age, sex, job satisfaction, baccalaureate degree in nursing, and years of work experience as RN. Job satisfaction was measured by a single question with four response options ranging from 'very dissatisfied' to 'very satisfied'. Due to a skewed distribution with only 0.86% of the nurses very dissatisfied with their job, for analyses responses were dichotomized