Organizational and social-psychological conditions in healthcare and their importance for patient and staff safety. A critical incident study among doctors and nurses

Mats Eklöf [a,*], Marianne Törner [b], Anders Pousette [a,b]

[a] Department of Psychology, University of Gothenburg, Sweden
[b] Occupational and Environmental Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden

ABSTRACT

Research on patient safety has indicated that focusing on technologies, routines, control systems, and individual caregiver attributes is not sufficient. The aim of this critical-incident interview study was to identify organizational and social-psychological conditions and processes that Swedish physicians and nurses ($n = 36$) perceived as important for patient and/or staff safety, and participative safety behavior. Injury due to psychological overload was the most salient type of healthcare worker hazard. Patient and healthcare worker safety went hand in hand. Good patient safety was present when caregivers had good access to their psychological and social capacities. These functions were jeopardized by stress. Our results indicated that quantitative overload, excessive cognitive and emotional complexity, lack of social support and good teamwork, organizational instability, and distrust for and frustration with the way healthcare organizations were managed, caused stress related function impairment in staff, which lead to mistakes and near misses. These aspects also in themselves contributed to risks. Good safety was associated with adequate resources and routines, workplace learning, and supportive unit level managers and colleagues. Features of professional cultures related to ethical norms to offer best possible care for the patient, in spite of insufficient resources, contributed to acceptance of working conditions that could lead to stress and overload.

© 2014 Elsevier Ltd. All rights reserved.

1. Introduction

Insufficient patient safety and occupational health and safety for doctors and nurses are substantial problems, causing suffering for individuals and costs for the healthcare industry, which is economically pressed already by the large and increasing demands for health care.

Interventions to improve patient and occupational safety in health care have, to date, largely focused on improving and enforcing routines and introducing new equipment. However, in order to be successful, such interventions need to better consider social and organizational contextual factors (Ovretveit, 2009). Systems for formal responsibility enforced by authorities and pointing towards the individual is another common approach. Such systems may lead to underreporting of incidents and may thus actually make safety worse, because incidents are not used for learning and

improvement (Aase et al., 2008; Catino, 2008). Vincent (2009) stated the need in patient safety research to take social and cultural phenomena into account, and to increase the use of qualitative research methodology. Obviously, good routines and procedures are important for patient safety, but the degree of detail in such regulations must be adequate, and even here good results are dependent on social-psychological factors (Katz-Navon et al., 2005). Organizational climate theory (Schneider, 1975) attempts to explain such social-psychological factors. Safety climate is a specific domain of organizational climate. It regards aspects of the organizational climate that are of relevance for safety, and has been defined as workgroup members shared perceptions of policy, procedures and practice in relation to safety in the organization (Neal and Griffin, 2002; Zohar, 1980). Through communication and social interaction within the group, shared meaning and order develops regarding how safety should be valued and handled. The shared climate thus contributes to the development of social norms related to safety at the workplace, influencing individual behavior (Cheyne et al., 1998). In a workgroup where the shared safety climate is high (positive) one may thus expect a higher

* Corresponding author. Address: Department of Psychology, University of Gothenburg, PO Box 500, SE-405 30 Gothenburg, Sweden. Tel.: +46 31 786 4695.
E-mail address: mats.eklof@psy.gu.se (M. Eklöf).

degree of safety behavior, and a lower accident rate, than in a group where the safety climate is low (negative). There is strong empirical support for such relations regarding occupational safety from studies in a variety of occupational branches (Christian et al., 2009; Glendon, 2008; Kuenzi and Schminke, 2009; Larsson-Tholén et al., 2013) as well as in health care (Neal and Griffin, 2006).

Less research has, to date, been performed regarding patient safety climate, but empirical studies support a positive relation between patient safety climate and patient safety (Kuenzi and Schminke, 2009; Scott et al., 2003; Hofmann and Mark, 2006). Another climate domain that has been studied in healthcare contexts is team climate (Poulton and West, 1999; Ylipaavalniemi et al., 2005), defined in terms of team member active participation, team openness to diversity, interaction frequency, and dedication towards shared goals and high performance standards. So, if safety is among team goals, a strong team climate should be expected to predict safety.

Schneider (in Kuenzi and Schminke, 2009) emphasized the importance in future organizational climate research of elucidating the conditions that determine the quality of organizational climates that develop in an organization. Schneider stated that better understanding of the impact on climate of leader practices, reward systems and resources is important for effective improvement work. The effect of organization of care on safety and safety culture and climate deserves more research attention (Weingart and Page, 2004). Organization determines the workloads and the complexities that healthcare workers must manage, as well as the organizational resources that they dispose to do this. It is well established that high job demands in terms of quantity and complexity, and lack of resources in terms of e.g. social support (practical help, sharing of information, emotional support), a good team climate, and adequate technology are threats to workers ability to perform on a sustained high level and stay healthy (Bakker and Demerouti, 2007; Bonde, 2008; Semmer et al., 2007; Siegrist, 2005). Research has also identified positive links between healthcare worker safety and health, and patient safety (Yassi and Hancock, 2005).

Safety outcomes are largely dependent on safety behavior. Marchand et al. (1998) identified two different types of safety behavior, safety compliance and safety initiative. While safety compliance regards complying to safety rules and regulations at the work place, safety initiative regards taking own initiatives to improve safety, such as speaking out about hazardous conditions to managers, bringing up safety issues at staff meetings, and suggesting safety improvements. The latter type of behavior has also been called safety participation (Griffin and Neal, 2000), and safety citizenship behavior (Hofmann et al., 2003) and while safety compliance may be considered important to uphold a certain level of safety at the workplace, by following procedures installed to mitigate risks that have already been identified, safety participation is important for identifying new hazards and stopping potentially hazardous conditions from developing into risky situations.

It thus appears as imperative to study organizational and social-psychological conditions and processes that support and hinder the development of good safety-related climates as well as participative safety behaviors in health care. Since safety climate is formed through shared interpretations of how safety should be valued and enacted, based on perceptions of events, behaviors and processes within the organization, detailed descriptions of such situations is a suitable source of information in this type of research. Likewise, participative safety behavior has been shown to be dependent on contextual factors within the organization (Hofmann et al., 2003; Martínez-Córcoles et al., 2012), and different aspects of leadership have been found to motivate compliant and participative safety behavior (Griffin and Hu, 2013). More in-depth knowledge on the type of conditions supporting participative behavior is therefore warranted.

Aim

The aim of this critical-incident interview study was to identify organizational and social-psychological conditions and processes that Swedish physicians and nurses perceived as important for patient and/or staff safety, and participative safety behavior, in hospital care and homes for the elderly.

2. Method

The study was a qualitative interview study among a strategically selected group of Swedish physicians and nurses ($n = 36$). This study was complemented by four focus group interviews. In both types of interview a critical-incident technique was used.

2.1. Strategic selection of participants in individual interviews

The participants in the individual interviews were strategically selected based on results from a questionnaire study among physicians, nurses and auxiliary nurses working in the Western Götaland Region of Sweden (Pousette et al., 2014). A convenience sample of 150 units from two hospital organizations and three municipal homes for the elderly provided questionnaire data on safety climate and participatory safety behavior. The hospital organizations were one university hospital organization comprising 3 hospitals, and one regional hospital organization comprising 2 hospitals. 124 of the units were care units comprising nurses and auxiliary nurses in hospital care and elderly care, while 26 units were clinics in hospital care, i.e., organizational subunits where physicians had their organizational base, containing care units with similar types of care. The clinics that participated were within the following specialities: emergency room; orthopedics; infectious diseases; general medicine; geriatrics; dermatology; anesthetics; ophthalmology; gynecology; pediatric medicine; pediatric surgery; and thorax. Below, the term unit will be used to denote both nurses' and auxiliary nurses' care units, and physicians' clinics.

In the individual interview study we aimed at getting participation from health care units that had rated the safety climate as high (positive), as well as from units with low ratings of safety climate. We also wanted participation from units where participative safety behavior was generally rated as high, as well as from units with low such ratings. All participating caregiver organizations should also be represented, and we wanted a mixture of physicians, nurses, and auxiliary nurses.

Procedure for selection of nurses: based on the questionnaire results the units belonging to the upper and the lower tertiles for safety climate were identified. Within each such tertile the 6 units with the highest and the 6 units with the lowest mean values for participatory safety behavior, respectively, were identified. This resulted in 4 categories of units regarding safety climate-safety participation scores: high–high; high–low; low–high; and low–low, in all 24 units. From each unit a nurse or an auxiliary nurse was invited to be interviewed, in all 12 from each professional category. The final selection of individual participants from the selected units was made according to criteria and a convenience principle. Criteria were: having worked at the unit a minimum of 75% of full-time during at least 1 year directly prior to the interview and not in a managerial or supervisory position. If more than one nurse or auxiliary nurse fulfilled these criteria, volunteered to participate, and was available taking work schedules into account, selection among these was random. Practical problems made one auxiliary nurse interview impossible to perform. Interviews were thus performed with 12 nurses and 11 auxiliary nurses.