# Health Care Workers And Patients Safety In Nursing Homes

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**Abstract**

The aim of the study was to review the literature in the area of health care of nursing homes using meta-analysis and to develop a framework for improvement of patients and caregivers safety. The method used: a literature search conducting databases EBSCOhost, Academic Search Complete, Business Source Complete, Health Source – Consumer Edition, Health Source: Nursing/Academic Edition and Retrieval System Online. The key words in the internet search were "safety climate in health care" and "worker and patient safety". Limitations were English language, full text, human, the years 2006-2015. We eliminated studies that were specific to industry, military, aviation, disease, medical speciality, technologies, or hospital departments/units. As a result, the literature overview was achieved that provides the sources for a good care and enables the patient safety; from the caregivers side we need the workers who are committed to provide a good care and are non-punitive and do can organize the blame-free environment in the nursing homes. The good safety culture in nursing homes is achieved if the workers are able to speak freely about accidents and eager to learn from errors, mistakes and hazards. The authors of the current paper have created a model showing the main components of safety climate which help to provide a good care and ensure patients and workers safety in the nursing homes.

**Keywords:** Health care, safety climate, workers and patients safety

## Introduction

Many researches, policymakers, providers are looking for the answers to the question: „How organizational conditions, structure, management, and other processes relate with patient (Stone et al., 2008) and worker (Flin, 2007) safety?" and the quality of health care providing

(Lövgren et al., 2002). Health care sector is one of the most difficult and dangerous sectors where we can find very high rating of fatal and nonfatal injuries (Trinkoff et al., 2005). Since 2000, when the Institute of Medicine in US published a report on the seriousness of the medical errors, a lot of institutions in US, UK, Canada (Fleming, 2005), in Sweden (Lövgren et al., 2002) etc. have tried to find a new way to build an effective health care system (Kohn et al., 2000). The goal is to minimize the risks (Cooke, 2009) and costs (West et al., 2006). Kohn et al. (2000) declared that patient safety culture is the main element to provide high-quality service and patient safety in health care sector. Other researchers have found that stress-free environment, emotional support from the side of supervisors; the professionalism and involvement in the decision-making processes were identified as factors, which help to provide a positive climate in the workplace as well as the productivity of health professionalism (Dionne-Proulx and Pepin, 1993).

The researches have also concentrated on the patient's safety (Blegen et al., 2005; Stone et al., 2005; Bonner et al., 2008; Singer et al., 2007). But not only patients are injured; the health care workers have a number of nonfatal occupational injuries, illnesses, job transfer and restrictions that cause high price for public health care system and for employees (Flin, 2007). The positive environment (West et al., 2006) and high level of workers wellbeing have a good effect to provide high quality health care service (Flin, 2007). Good working conditions for the employees are very important factors for providing good care connected with the determined country public care policy (Lövgren et al., 2002). In the organizational level, Flin (2007) has found that patient's safety is related with the worker's safety. He showed that the positive level of worker's physical or mental health can be related with the patients' well-being. To improve quality and safety in health care system is necessary (Baker et al., 2004), organizational culture and safety climate have influenced as an important impact factor promoting both, the care workers well-being and the patients safety (Yassi & Hancock, 2005; Piirainen et al., 2003). The organizational safety climate is a part of the organizational climate (Schneider et al., 2013), which has been defined as organizational members have shared perceptions of policy, procedures and practice in connection to safety in the organizations (Zohar, 1980). Stone et al. study (2008) demonstrated positive relation between the occupational and patient safety climate in health care. Eklöf et al. (2014) study showed that the conditions that are of importance for patient safety are important also for workers' safety.

Safety culture is a complex meaning of individual and group values, attitudes, perceptions, competencies, and the model of behaviours that cause the commitment and determine the competency of an organization's health

and safety management (ACSNI, 1993). The aim of the safety culture is to create a normally acting mechanism where workers are continuously informed about the new risks and hazards in their workplace (Ostram et al., 1993). Safety culture in the health care should include true reporting system, intervention actions based on the reports, flexibility, and learning from experience (Blegen et al., 2005). Safety climate is the measurable component of safety culture (Flin et al., 2000) which is related to the employees shared perceptions of safety policies, procedures and practices in their unit and in the organization at large (Zohar et al., 2007). Gershon et al. (2004) have found that organizational climate is related to the perceived working conditions and has effect to the health care workers and patients' safety; he has created an integrative model for health care working conditions influencing the organizational climate and safety (Stone, 2005).

The identification of the importance of safety culture factors has stimulated in a significant amount the research aimed on the developing and validating the safety culture instruments including safety climate as a quantitatively measuring component in the developing of the overall culture considering the current character of an organization (Fleming, 2005).

In the current review, the authors consider the previous studies to identify the factors which prove that quality of the service in health care, connected with both, patients' and workers' safety. Many authors propose theoretical frameworks separately for workers and patients safety, but the current literature review has a hypothesis that more effective is to provide the health care system designed to cover the patients and workers safety together.

The goal of the current paper is also to improve the safety climate components as the main factors to make changes in the organizations' policies and procedures. The goal is important, as created the support from the side of the hospital leadership, the good safety culture and climate offer the high quality health care service ensuring the patients' and workers' safety, thereby minimizing the costs and design an effective health care system.

## Method

The study design was an overall literature review using meta-analysis to develop the framework of the patients' and care workers' safety in nursing homes and find the key concepts of providing good care for patient and guarantee the care workers' safety. To increase the reliability and validity of our model, we created a conceptual framework based on patients and workers' safety and based on the context of Flin (2007).

A literature search was conducted using databases EBSCOhost Web, included Academic Search Complete, Business Source Complete, Health

Source – Consumer Edition, Health Source: Nursing/Academic Edition and Retrieval System Online (MEDLINE, 2015). Key search words were "safety climate in health care" and "worker and patient safety". Limitations were English language, full text, human, the years 2006-2015. We found 98 scholarly journals articles that include the initial criteria. As the next step, we narrowed the review; we limited the criteria to include only the academic journals and books. After that limitation, 57 studies remained. We eliminated studies that were specific to industry, military, aviation, disease, medical speciality, technologies or hospital departments/units (nine studies).

**Results and discussion**

In the health care we found next features of safety culture: management/supervisors, safety system, risk perception, job demands, reporting/speaking up, safety attitudes/behaviours, communication/feedback, teamwork, personal resources (e.g. stress) and organisational factors (Flin et al., 2006). Singer et al. (2003) identified seven elements of safety culture, which help to guarantee the patients' safety:

1. leadership commitment to safety;
2. organizational resources for patient safety;
3. priority of safety versus production;
4. effectiveness and openness of communication;
5. openness about problems and errors;
6. organizational learning;
7. frequency of unsafe acts.

We found seven studies where researches have investigated the safety climate influence to both, patient and worker safety in a health care sector (Table 1).

Table 1. Safety climate and patient and workers measures in health care

| Authors | Method | Results |
|---|---|---|
| Hofman & Mark, 2006 | Quantitative study and documental analyses | A safety climate related with medical errors, nurses back injuries, patients and nurses satisfaction and patient perceptions of nurse responsiveness. The safety staff and managers need to design the environment where workers can learn from errors. |
| Flin et al., 2006 | Literature review | Measuring safety climate in health care helps to diagnose the underlying safety culture. Instruments have to be standardized and give to the managers results, which help to design effective safety management system and organize the interventions. |
| Flin et al., 2007 | Literature review | Different cultural or motivating factors that determine the health care employees to behave safely influence on the level of patient's safety. Health care is one of the largest areas where both, the patients and workers injuries have negative affect for the quality of health care |

| | | |
|---|---|---|
| | | services and need to investigate the safety climate theory and it influences on the whole system. |
| Stone et al., 2008 | Literature review | Patients' and employees' outcomes are affected by the organizational climate. Connections between the safety and organizational climate and patient's safety decrease the overall health care costs. Climate has to be assessed periodically. |
| Ballangrud et al., 2012 | Quantitative study | The patient safety strongly depends on the teamwork, workers commitment and motivation. To improve the patient's safety, the safety climate is needed to include the accident reporting, feedback and communication on the errors and the organizational learning has to provide the system improvement. |
| Hamdam, 2013 | Quantitative study | The patient safety strongly correlates with the teamwork; communication, coordination, and collaboration between the employer and employees. Researcher has found that stressful workplace connects with workers' burnout. Main factor to provide the good safety climate for patients is to support the workers from the side of the management. The actions of the leadership's commitment, the accident reporting and the learning from hazards is substantial. |
| Eklöf et al., 2014 | Qualitative interview study | Supportive leadership, encouraging professional development, resolving conflicts, teamwork and trust in workgroups; supportive environment and climate – all this decreases stressful conditions and strengthens the staff and patient's safety. |
| Alameddine et al., 2015 | Quantitative study | To provide good care, the managers need to change their work culture from a punitive and blaming culture to that of justice and shared responsibility rather than working individually, in which errors are attributed to the deficiencies in the care system. |
| Sepp et al., 2015 | Quantitative study | Management safety priority and ability is the main effective dimension of safety climate that correlates with other dimensions. A good communication, managers' commitment to safety climate, providing blame-free environment and effective safety training to enhance the strong safety climate and safe behaviour among health care workers. |

Based on the analysis of the reviewed literature, we found that connections between the positive organizational climate and both, worker and patient outcomes exist (Stone et al., 2008; Eklöf et al., 2014; Flin, 2007). Eklöf et al. (2014) study described a workgroup who had a high score of safety climate and it was followed by the higher degree of safety behaviour and lower accident rates. Flin (2007) showed that low safety climate in health care caused hazards and it had consequences of low safety climate

where workers low motivation caused unsafe behaviour. The same results were found in the research of Nieva & Sorra (2003), who found that if the workers can choose the patients' safety attitude, then it reduces hazards and provides a good safety culture in health care sector.

We found that a very important issue to provide a good care and safety climate, is measuring it qualitatively and quantitatively (Flin et al., 2006). Organization leaders need to understand that assessing and periodically reassessing level of safety climate is very important in providing the good care (Stone et al., 2008; Eklöf et al., 2014; Flin, 2007). In addition to the measurements of a safety climate (culture), there is a big number of hospitals that have been used the Safety Attitude Questionnaire (SAQ). It assesses the substantial variability in teamwork, the safety climate, job satisfaction, stress recognition and working conditions (Sexton et al., 2006). Modak et al. (2007) pointed out that SAQ needs more evaluation, because authors found the links between the inpatient safety attitudes and lengths of stay and nurse turnover rates, but did not find correlations with other safety aspects including evidence to ensure a workers safety behaviour. Kines with colleagues (2011) regrouped health care features to seven safety climate dimensions and developed a Nordic Safety Climate Questionnaire (NOSACQ-50) for using it in the assessment of occupational safety climate in organizations. Kines et al. (2011) postulated seven dimensions to cover previously identified seven elements of safety culture (by Singer et al., 2003) which help to provide a good patient safety (Table 2). NOSACQ-50 was theoretically developed and tested for validity and reliability by Kines et al. (2011). Some researchers (Kines et al., 2011; Lipscomb et al., 2015) have found the NOSACQ-50 to be a reliable tool for assessing safety climate as valid in various sectors and countries for predicting safety motivation, perceived health and safety level and self-rated safety behaviour at work.

Table 2. NOSACQ-50 safety climate dimensions

| Seven dimensions (Kines et al., 2011) | Seven elements of safety culture (Singer et al., 2003) |
|---|---|
| 1. Management safety priority, commitment and competence<br>2. Management safety empowerment<br>3. Management safety justice | 1. Leadership commitment to safety |
| 4. Workers' safety commitment | 2.Organizational resources for patient safety |
| | 3. Priority of safety versus production |
| 5. Workers' safety priority and risk non-acceptance | |
| 6. Safety communication, learning, and trust in co-workers' safety competence | 4.Effectiveness and openness of communication |
| | 5. Openness about problems and errors |
| | 6. Organizational learning |
| 7. Workers' trust in the efficacy of safety systems | 7. Frequency of unsafe acts |

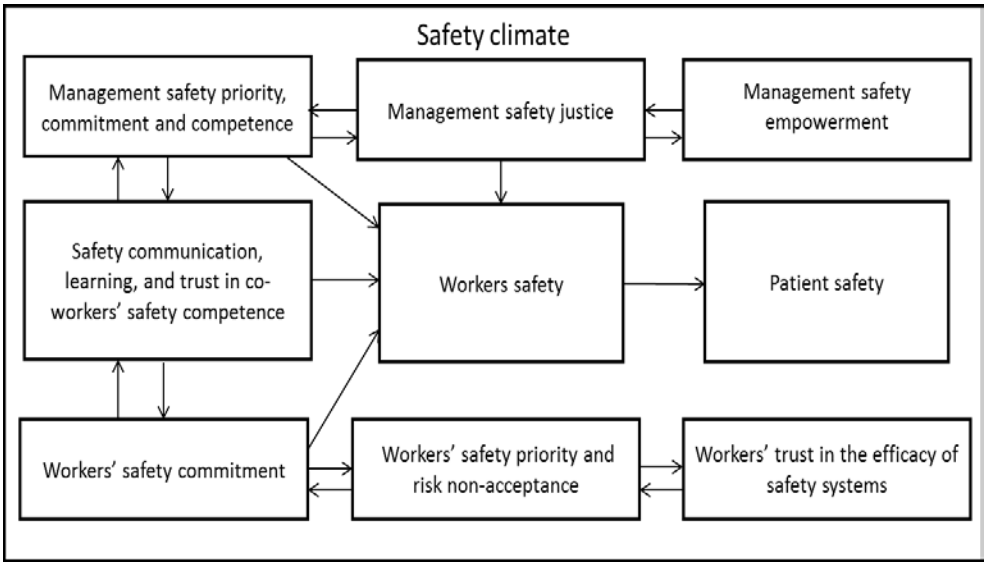


Fig. 1. Safety climate dimensions (Kines et al, 2011) affecting the assurance of patients' and workers' safety

Dimension of the management commitment is the most frequently measured safety climate dimension in health care and in the industry (Flin, 2007). This dimension shows that if managers prioritize safety and are committed to safety; workers' behave safely and they perceive that as a reward (Kines et al., 2011; Ballangrud et al., 2012). Other authors have found that the workers commitment to safety and if safety is among the team goals, a strong team climate should be expected to predict safety (Eklöf et al., 2014).

Management safety justice means that employer procedures and management are fair and promote employee's safety behaviour (Kines et al., 2011). West et al. (2006) point out that if workers feel organizational commitment, then the employees perceived that the managers have treated them fairly. Alameddine et al. (2015) found that a major barrier for improving safety and quality care is a culture of fear in which errors are hidden or under-reported. Ballangrud et al. (2012) found that management safety justice helps to provide a blame free environment and cause a workers trust which help to find the errors and correct them (Lövgren et al., 2002). The management and leadership's commitment (Ballangrud et al., 2012) could be seen as a key element in the promoting the workers safety behaviour and warranting the patient's safety. The teamwork, communication and capacity of organisational learning represent the important place in this system. Manser (2009) found that the teamwork has also significant in the accident prevention, as in teams the workers share

safety-relevant attitudes and the team members behave safely and provide a high- quality care.

Communication and social interaction are the main parts of the organizational existence and organizational climate (Kines et al., 2011). Open and frequent communication between workers and employers is one of the most substantial issue in the organizational safety (Zohar, 1980). To create a fair and non-punitive culture we have to have a strong teamwork (West et al., 2006), foster shared accountability, bolster understanding and management abilities of behavioural choices. In addition, to enhance the system thinking and create a safely working management system, a proactive learning culture with the aim to detect the latent errors has to be developed (Alameddine et al., 2015). Hofmann & Mark (2006) have found that learning from errors is effective if the broadening of the creative space is enabled after the first error. A constructive approach to prevent errors might lead to the changes in the system design and in the creation of the new organizational policies and procedures. Studies show that in the organizations where workers become more educated, they also expect safer working conditions, behave more safety and are more informed about the safe environment (Turner, 1991). West et al. (2006) found that there is a strong correlation between the workers training, learning and commitment.

Results of Eklöf et al. (2014) research indicated that the organizational and psychosocial conditions and processes in the nursing homes are closely related to the psychological working environment. It influenced strongly on the safety in healthcare. They also indicated that professionalism, cooperation and support on the working conditions' level are critically important for creating a good safety. These kind of conditions and processes are well known to be important also for staff health, motivation, learning and innovation (Karasek and Theorell, 1990; Siergist, 2005; Kivimäki et al., 2010). Earlier studies have also shown that the value of good leadership, teamwork and professional autonomy impacts positively on the staff's motivation and employees' commitment to work safely (West et al., 2006). Several authors have shown that to provide a good health care system, good equipment and qualified and motivated staff are needed. Teamwork, management, organizational climate and culture are not enough for staff successful management. It is very important them to know, that for providing a good care we need adequate staff resources and effective human resource management. The quality of workers and managers relationship is strongly related with the staff commitment.

To improve the quality of health care in the nursing homes, the workers who are committed to provide a good care and to create a non-punitive and blame free environment (West et al., 2006; Ballangrud et al., 2012; Alameddine et al., 2015) are needed. The workers are called to speak

freely about accidents (Ballangrud et al., 2012; Hamdam, 2013; Eklöf et al., 2014; Manser, 2009) and to learn from errors (Hofmann & Mark; 2006), mistakes and hazards (Hamdam, 2013). Fig 2. shows the model consisting of the safety climate components which help to provide a good care and ensure the patients' and workers' safety.


Fig 2. Model of the components providing the good health care and ensure the patients' and workers' safety

## Conclusion

Health care workers job is very hard and stressful (Sepp et al., 2015). The workers need the continuous support from the leaders and supervisors (Hamdam, 2013; Eklöf et al., 2014). Safety climate includes all components that encourage workers to behave safety and guarantee the patient's safety that helps to provide a good and quality care. The main role there constitutes the measurement of safety climate, it has to be periodical and validated and reliable instruments have to be used. For the health care organizations, the NOSACQ-50 is useful questionnaire. It finds main indicators, which need changes and help managers make decisions basing on the objective results.

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