Empowerment on healthcare professionals:
A literature review

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Abstract

Objectives: To review studies that focus on the influence of structural empowerment in the adoption of mobilizing behaviours and the occurrence of adverse events associated with care. Method: We performed a literature review using specific keywords and applying inclusion/exclusion criteria. We searched different databases for articles about adverse events, empowerment and mobilization which were published in 1996-2012. We analysed the studies and classified them in terms of empirical/theoretical content, country, sample, measures and results. Results: The literature on this area is extensive, with a majority of empirical studies. Structural empowerment generates positive outcomes at the workplace; these results relate to an increased job satisfaction, an increased organizational commitment, the adoption of innovative behaviours, and a reduction of burnout and turnover. Some articles suggest that empowerment has a positive influence in patient safety, translating into a reduction of adverse events, and in the adoption of mobilizing behaviours by healthcare professionals.

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Conclusion: A culture of empowerment and mobilization has positive effects in health organizations, and may improve the quality of the patients' treatment and safety, decreasing the occurrence of adverse events.

Keywords: empowerment; structural empowerment; patient care; mobilization; adverse events.

Empowerment **em profissionais de saúde: Uma revisão da literatura**

Resumo

Objetivos: Revisão de estudos que permitam compreender a influência do *empowerment* estrutural na adoção de comportamentos de mobilização e a ocorrência de eventos adversos associados aos cuidados da saúde.

Método: Foi realizada uma revisão da literatura usando palavras-chave específicas e aplicando critérios de inclusão/exclusão. Consideraram-se artigos de diferentes bases de dados, publicados entre 1996 e 2012, os quais foram analisados quanto à presença de eventos adversos, *empowerment* e mobilização, e classificados em função dos critérios empírico/teórico, local do estudo, amostra, medidas e resultados.

Resultados: A literatura sobre esta área é extensa, sendo a maioria dos estudos de natureza empírica. O *empowerment* estrutural gera resultados positivos no trabalho; estes resultados referem-se a um aumento da satisfação no trabalho, do comprometimento organizacional, bem como a adoção de comportamentos inovadores e uma redução do *burnout* e do *turnover*. Alguns artigos sugerem que o *empowerment* tem uma influência positiva na segurança do paciente, traduzindo-se numa redução dos eventos adversos, e na adoção de comportamento de mobilização pelos profissionais de saúde.

Conclusão: Uma cultura de *empowerment* e mobilização tem efeitos positivos em organizações de saúde, podendo contribuir para uma melhoria da segurança e da qualidade dos cuidados prestados aos pacientes e uma diminuição da ocorrência de eventos adversos.

Palavras-chave: *empowerment*; *empowerment* estrutural; cuidados com pacientes; mobilização; eventos adversos

INTRODUCTION

Health promotion is a constant concern in organizations, being considered as an answer to social, political and cultural changes in the contemporary world, and

influencing health policies in several countries. The individuals' natural and social environment, their personal lifestyle, genetics and the health care organization (Carvalho, 2004), including the patients' safety and the empowerment of healthcare professionals, are factors that must be taken into account when explaining the health/disease phenomenon. Patients' safety is, currently, one of the major concerns within health settings. Safety in health care provision is defined as the performance of a harm-free practice by professionals who seek to achieve quality and excellence and whose main goal is to avoid mistakes (Bezerra, Queiroz, Weber, & Paranaguá, 2012).

Empowerment enables healthcare professionals to achieve a higher quality while performing their tasks. It can be characterized as a process through which individuals, groups and/or societies take control over certain situations, exercise power and accomplish their goals (Adams, 2008). According to Hornstein (2004), the fundamental characteristic of empowerment was and still is power. Authority and control should be distributed within the organizations, and both collaborators and managers should share similar responsibilities in their organization (Frey, 1993).

Understanding the concept of empowerment requires acknowledging the complexity of power. Power should be seen as a resource that exists in every society with the purpose of developing interactions between the elements of a group. According to Spreitzer (2008), over 70% of organizations have adopted some kind of empowerment initiative for, at least, a part of their workforce. In order to succeed in the current globalized context, organizations need the knowledge, ideas, energy and creativity of every collaborator.

Over the last two decades, two complementary perspectives on empowerment at the workplace emerged from the literature (Spreitzer, 2008): the *psychological empowerment*, which can be defined as a set of psychological states which are necessary for individuals to feel like they have control over their work, focusing on how collaborators experience their job; and the *structural empowerment*, which focuses on social and structural conditions that allow empowerment at the workplace, which is only possible if the collaborators have access to opportunities, information, support and resources. According to Hornstein (2004), these two types of empowerment allow maximizing the contributions from collaborators and leaders in the decision-making process, which, in turn, will contribute to the success of the organization. Empowerment also influences health care provision, work requirements, job satisfaction, and the continuity of professionals in their work context (Stewart, McNulty, Griffin, & Fitzpatrick, 2010).

Through empowerment, organizations allow their collaborators to assume different roles and responsibilities, exercising a greater influence at work, while enjoying an increased autonomy (Eby, Freeman, Rush, & Lance, 1999). The influence exercised by the worker engaged in the task promotes a greater sense of support,

confidence and intrinsic motivation, which allows for the development of positive work attitudes. This increased responsibility also stimulates the workers' initiative and efforts (Appelbaum, Bailey, Berg, & Kalleberg, 2000; Pfeffer & Veiga, 1999).

One of the consequences of empowerment concerns the increase of mobilizing behaviours, which represent much more than just the sum of individual behaviours (Tremblay & Simard, 2005a). Mobilization is considered as a collective process in which each individual gathers all his/her energy to achieve an objective or common goal (Tremblay & Wils, 2005). In healthcare organizations, this phenomenon has positive effects in the patients' safety and satisfaction (Armstrong & Laschinger, 2006). Empowerment also allows the collaborators' greater engagement and adoption of mobilizing behaviours at the workplace. Individuals mobilize themselves when they believe in something (Tremblay, Chênevert, Simard, Lapalme, & Doucet, 2005). In this sense, mobilization can be seen as a critical mass of collaborators that execute actions (which are under their work contract or not, are paid or not) seen as beneficial to the well-being of others, to the organization and to the group performance (Tremblay & Wills, 2005).

In the healthcare setting, mobilization and empowerment may improve job satisfaction, organizational commitment and, consequently, may allow a better quality healthcare service, which ultimately translates into the improvement of patient safety. Although several authors defend the idea that empowerment has a positive effect in healthcare provision and in the evolution of healthcare systems, this effect is not risk-free to healthcare practices. The occurrence of adverse events is one of those risks. Chaboyer, Johnson, Hardy, Gerke, and Panuwatwanich (2010) reported in their study that one in ten patients suffers harm as consequence of the quality of a given healthcare service. Adverse events refer to any undesired, non-intentional and damaging or harmful occurrences, compromising the safety of the patient being cared for a health professional (Braga, Bezerra, Paranaguá, & Silva, 2011). Those situations are caused by factors unrelated to the patient's underlying condition, may give origin to several injuries, prolong hospital stay, and modify the initially proposed treatment. The occurrence of an adverse event can ultimately lead to the patient's death (WHO, 2012a, 2012b; Schatkoski, Wegner, Algeri, & Pedro, 2009). Such events may compromise the patient's treatment. The healthcare professional's main goal must be to avoid any type of error and ensure the quality of care provision, as well as the patients' safety.

In short, empowerment and mobilization can have a positive effect in reducing the occurrence of adverse events in hospital settings. They allow workers to have a greater involvement in their work, a greater organizational commitment and a greater satisfaction with the performed work, affecting the quality of the care provision and the patients' safety in a positive way.

The main objective of this literature review consists in understanding how structural empowerment influences the adoption of mobilizing behaviours and the occurrence of adverse events related to the care provided by healthcare professionals.

METHOD

We conducted a literature review with the purpose of answering a clearly formulated question: how does structural empowerment influence the adoption of mobilizing behaviours and care-related adverse events? We used explicit methods to identify, select and critically evaluate the relevant studies, as well as to collect and analyse the data from studies included in the review (Tranfield, Denyer, & Smart, 2003). The review process consisted in three steps: 1) selection of the articles according to the inclusion criteria; 2) analysis of the title and abstract of the articles, applying the exclusion criteria; and 3) analysis of the selected articles.

Firstly, we selected articles indexed on the following online databases: Scirus, B-on, PubMed and ProQuest. We also included the websites of two researchers: Gretchen Spreitzer (http://webuser.bus.umich.edu/spreitze), and Heather Laschinger (http://publish.uwo.ca/~hkl). Using the Boolean operator "OR", we searched the databases for the three core constructs under study, based on the following terms: *adverse events*; *empowerment* (structural empowerment, psychological empowerment, empowerment at the workplace); and *mobilization of healthcare professionals*.

We searched for articles published between 1996 and 2012 that contained the previously defined keywords and met the following inclusion criteria: 1) qualitative and quantitative (empirical) studies; 2) studies with samples consisting in healthcare professionals; 3) articles that analysed the association between the healthcare professionals' work conditions and the occurrence of adverse events; 4) articles that investigated the effects of structural empowerment on healthcare professionals; and 5) articles that analysed the association between mobilization and structural empowerment.

In the second step of the study, after removing the duplicated articles, we analysed the titles and abstracts of all articles, using the following exclusion criteria: 1) articles that only addressed psychological empowerment; 2) articles that focused on just one type of adverse event; and 3) articles on organizational citizenship behaviours.

RESULTS

Figure 1 describes the process of article identification and selection. Taking into account the above described search keywords, and after analysing the articles based on the inclusion criteria, our search resulted in a total of 54 articles: 22 on adverse events; 15 on empowerment; and 17 on mobilization. We then applied the exclusion criteria, which resulted in the exclusion of 11 articles on adverse events (11 were included), 3 articles on empowerment (12 were included), and 10 articles on mobilization (7 were included).

After applying the inclusion and exclusion criteria, our search resulted in the selection of a total of 30 articles: 18 based on empirical data, 11 theoretical articles, and 1 literature review (see Figure 1). Out of the 11 articles on adverse events, 9 were empirical articles, and 2 were theoretical; out of the 12 articles on structural empowerment, 7 were empirical articles, 4 were theoretical and 1 was a literature review; finally, out of the 7 articles on mobilization, 2 were empirical articles and 5 were theoretical.
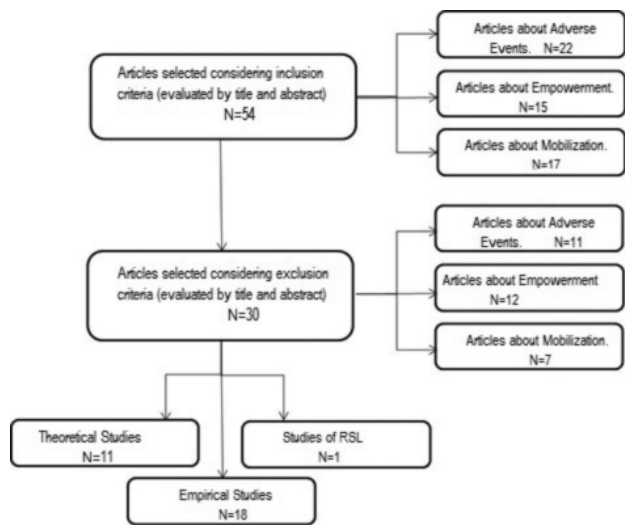

Figure 1. Process of identification and selection of the reviewed articles

As shown in Figure 2, the majority of the theoretical studies was published in 2005, while most empirical studies were published in 2010. The empirical studies were mostly conducted in Canada (28%), USA (22%) and Brazil (17%), whereas this type of study is still scarce in Europe, with a few studies having been conducted in The Netherlands, Portugal and Switzerland (above 5%), as illustrated in Figure 3.
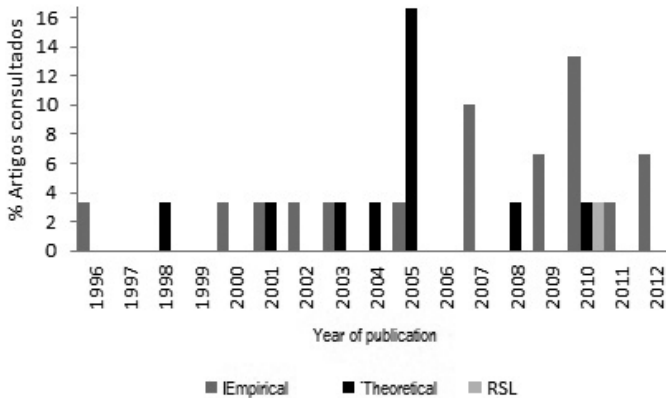
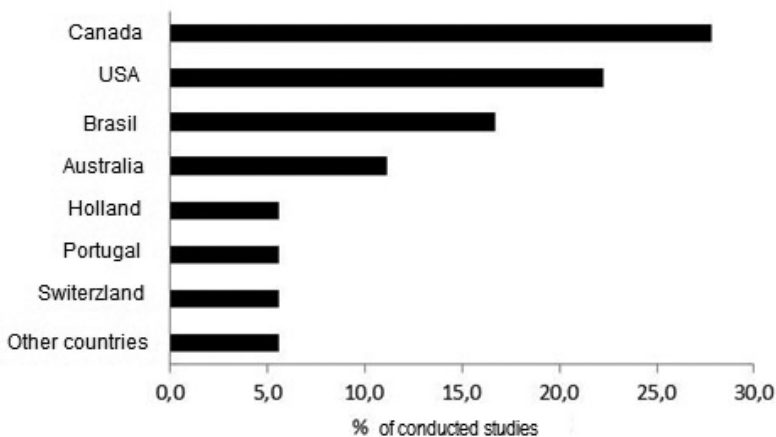Figure 2. Type of articles selected by year of publication

Figure 3. Selected articles by country

Table 1 briefly describes the characteristics of the empirical studies. Some studies focus on the importance of patient safety and health care quality: the studies by Aiken, Clarke, Sloane, Sochalski and Silber, 2002; Braga et al., 2012; Bezerra, Queiroz, Weber and Paranaguá, 2012; Chaboyer et al., 2010; Cho, Ketefian, Barkauskas and Smith, 2003; Dempsey, 2009; Hugonnet, Chevrolet and Pittet, 2007; Morton, Cook, Mengersen and Waterhouse, 2010; Needleman and Buerhaus, 2003; Stone et al., 2007; and Wegner and Pedro, 2012. Other studies address the importance of empowerment at the workplace: the studies by Armstrong and Laschinger, 2006; Carvalho, 2004; Fazenda, 2005; Gilbert, Laschinger and Leiter, 2010; Knol

and van Linge, 2009; Laschinger, Finegan, Shamian and Wilk, 2001; Quinn and Spreitzer, 1997; Sommer, Nunes, Hipólito, Brites, Pires and Pires, 2010; Spreitzer, 2008; Spreitzer, 1996; Stewart et al., 2010; and Wagner, Cummings, Smith, Olson, Anderson and Warren., 2010. Finally, some studies focus on the relevance of adopting mobilizing behaviours at the work environment: the studies by Paré and Tremblay, 2007; Tremblay, Chênevert, Simard, Lapalme and Doucet, 2005; Tremblay, Guay and Simard, 2000; Tremblay and Simard, 2005a; Tremblay and Simard, 2005b; Tremblay ad Wils, 2005; and Wils, Labelle, Guérin and Tremblay, 1998.

As regards the sample of the selected articles, 10 of the 18 empirical studies were composed only by nurses (see Table 1). Four empirical studies were based on a sample of healthcare professionals, 2 were based on a sample of patients and 1 was based on a sample of managers. Regarding the measures used in the studies, 5 of the 18 empirical articles used the *Conditions of Work Effectiveness Questionnaire II* (CWEQ-II), which assesses the four components of structural empowerment (specifically opportunities, information, support, and resources), in which a higher score in the scale represents a higher level of empowerment (Armstong & Laschinger, 2005; Gilbert et al., 2010; Knol & van Linge, 2009; Laschinger et al., 2001; Stewart et al., 2010). Three studies used the *Psychological Empowerment Instrument* (PEI), which aims at assessing the four dimensions of psychological empowerment, i.e., meaning of work, competence, self-determination and impact (Stewart et al., 2010; Knol & van Linge, 2009; Laschinger et al., 2001). The remaining articles used other measures, which are described in Table 1.

Table 1

Authors, country, sample, measures and results of the studies described in the articles on structural empowerment, mobilizing behaviours and adverse events

Author(s)	Location of Study	Sample	Measures	Main Results
Bezerra et al., 2012	Brazil	50 Nurses	Structured questionnaire with objective and subjective questions related to the subjects' characterization, the understanding of adverse events, the most frequent adverse events and strategies to prevent it with objective and subjective questions related to the subjects' characterization, the understanding of adverse events, the most frequent adverse events and strategies to prevent it.	Some nurses have a superficial, limited and inadequate knowledge about adverse events, which hampers decision-making. This indicates the need for education initiatives to empower these professionals.
Wegner & Pedro, 2012	Brazil	23 Healthcare professionals	Semi-structured interview containing research questions based on two scripts directed to caregivers and health professionals involved in providing care.	The circumstances of care provision make hospitalized children vulnerable to adverse events in healthcare settings, which interfere with the patients' safety.
Braga et al., 2011	Brazil	94 Nurses	Semi-structured interview consisting of three parts: 1) sample characterization; 2) questions about the knowledge of professionals about the adverse event, preventive measures and risk management; 3) types of adverse events / incidents, consequences for the patient, clinical and administrative procedures adopted and knowledge of the patient / family about the incident.	Most professionals understand, in a superficial and non-systematized way, the meaning of adverse events.
Chaboyer et al, 2010	Australia	52 Nurses	File study based on: 1) clinical incidents anonymously reported by staff and recorded on a web-based reporting form (clinical incidents related to medication errors, patient falls, and pressure ulcers); Observational study based on; 2) clinical incidents reported by Transforming Care At the Bedside (TCAB), a framework for improving safety on medical and surgical units in acute care hospitals; 3) final determination of harm, made by the nurse unit manager who was required to review the incident report.	The proportion of medication errors, falls and pressure ulcers that resulted in injury was reduced by half after the implementation of a patient care management programme.

Carla Maria Santos de Carvalho, Ana Lau Gouvei , Carlos Américo Barreira Pinto,
Lisete dos Santos Mendes Mónico, Miguel Maltieira Fernandes Correia e Pedro Miguel Santos Dinis Parreira

Author/Year	Country	Sample	Instruments	Results
Gilbert et al., 2010	Canada	897 Healthcare professionals	1) Conditions of Work Effectiveness Questionnaire II (CWEQ-II); 2) Organizational Citizenship Behaviour Scale (OCBS); 3) Emotional Exhaustion subscale of the Maslach Burnout Inventory - General Survey (MBI-GS).	Empowerment is related to Organizational Citizenship Behaviour (OCB) and burnout. Emotional exhaustion is also associated with OCB, being a partially significant mediator on the relationship between empowerment and OCB-Organization, but not on the relationship between empowerment and OCB-Individual.
Sommer et al., 2010	Portugal	242 Healthcare professionals	1) Social-Demographic Questionnaire (*Questionário Sóciodemográfico*; QSD) 2) Questionnaire of Admission and Adaptation to Higher Education (*Questionário de Ingresso e Adaptação ao Ensino Superior*; IAES); 3) Portuguese Scale of Empowerment (*Escala Portuguesa de Empowerment*, EPE).	Despite the students' difficulty to adapt, the valorisation and recognition of abilities may promote individual processes of empowerment.
Stewart et al., 2010	USA	72 Nurses	1) Conditions of Work Effectiveness Questionnaire II (CWEQ-II); 2) Psychological Empowerment Scale (PES).	Structural empowerment influences the levels of communication, autonomy, and collaboration between nurses, doctors and managers, as well as the feelings of trust and respect. There is a significant correlation between the overall results regarding psychological and structural empowerment.
Dempsey, 2009	Australia	130 Nurses	1) Nurses' global self-esteem = Rosenberg Self-Esteem Scale (RSES); 2) Nurses' work-related values = Nursing Professional Value Scale (NPVS); 3) Nurses' job satisfaction = Index of Work Satisfaction (IWS).	The individual's values and attitudes influence his/her behaviour at the workplace. The participation in decision-making processes at work engages professionals and generates a greater consistency between values and behaviours
Knol & van Linge, 2009	Holland	847 Nurses	1) Conditions of Work Effectiveness Questionnaire II (CWEQ-II); 2) Psychological Empowerment Instrument (PEI); 3) Innovative Behaviour Questionnaire (IBQ).	The psychological and structural forms of empowerment are statistically significant predictors of innovative behaviours. Psychological empowerment worked as a mediator between structural empowerment and innovative behaviours.

Study	Country	Sample	Instruments / Variables	Conclusions
Hugonnet et al., 2007	Switzerland	Unit with 18 beds/ 1.400 patients per year, for a median length of stay of 4 days. The study sample includes a group of 1.883 patients from a population of 10.637 patients over 4 years being followed in the Medical Intensive Care Unit of University of Geneva Hospitals	The outcome variable was the occurrence of ICU-acquired infection. The main exposure variable was workload, measured by the 24-hr nurse-to-patient ratio. Other variables included demographic characteristics, admission diagnosis and comorbidities, type of admission, Acute Physiology and Chronic Health Evaluation (APACHE) II score, daily invasive device and antibiotic use, daily individual PRN (Project of Research in Nursing, a Canadian system used to estimate the required nursing staff for each shift with 214 indicators or tasks that nurses complete on behalf of each patient during each 8-hr shift), admission and discharge date, and status at discharge from the unit.	The association between a low number of nursing professionals and the increase in the number of infections, such as infections acquired in intensive care units, indicate that the prevention of infections can be achieved by increasing the nursing staff.
Paré & Tremblay, 2007	Canada	394 Members of the Canada's Association of I.T. Professionals (CIPS)	1) Scale developed by Meyer et al. (1993) to measure turnover intentions; 2) Instrument developed by Meyer & Allen (1991) to measure organizational commitment; 3) Scale developed by Tremblay et al. (2001) to measure procedural justice; 4) Scale adopted from Podsakoff et al. (1997) and Williams & Anderson (1991) to measure organizational citizenship behaviours; 5) Scales developed by Tremblay et al. (1998) to measure human resources practices (HRP).	Non-monetary recognition, the development of abilities, fair compensation, and information sharing practices are negatively and directly related to turnover intentions.
Stone et al., 2007	USA	1.095 Nurses	1) Medicare files; 2) National Nosocomial Infections Surveillance (NNIS) data; 3) Administrative data; 4) American Hospital Association's (AHA) annual survey data; 5) Registered Nurse (RN) survey.	Nurses' working conditions are associated with the results of care performance. As such, improving these conditions will promote the improvement of the patients' safety.

Armstrong & Laschinger, 2005	Canada	34 Nursing professionals	1) Conditions of Work Effectiveness Questionnaire II (CWEQ-II); 2) Lake's Practice Environment Scale of the Nursing Work Index (PES-NWI); 3) Safety Climate Survey (SCS).	Empowerment is positively related to the characteristics of professional practice and to the perceptions on the culture of patients' safety. The combination of structural empowerment and the hospital characteristics were predictors of the nurses' perception in relation to the patients' safety climate.
Cho et al., 2003	USA	232 Hospitals and 124.204 patients	1) Hospital Financial Data released by California's Office of Statewide Health Planning and Development (OSHPD); 2) California's State Inpatient Database (SID) produced by the Agency for Healthcare Research and Quality (AHRQ).	The occurrence of adverse events is associated with prolonged hospital stay and increased medical costs. The patients' characteristics affect the occurrence of adverse events, while the hospital's characteristics have less influence.
Aiken et al., 2002	USA	10.184 Nurses	1999 American Hospital Association (AHA) Annual Survey; 1999 Pennsylvania Department of Health Hospital Survey; structured questionnaire; records of patient admission by the Pennsylvania Health Care Cost Containment Council between 1998 and 1999.	In hospitals with a high patient-nurse ratio, patients face a high risk of mortality, and nurses are more prone to experience burnout and work dissatisfaction.
Laschinger et al., 2001	Canada	404 Nurses	1) Conditions of Work Effectiveness Questionnaire II (CWEQ-II); 2) Psychological Empowerment Instrument (PEI); 3) Job Content Questionnaire (JCQ) 4) Global Satisfaction Scale (GSS).	Structural empowerment at the workplace results in higher levels of psychological empowerment, which influences stress and work satisfaction.
Tremblay et al., 2000	Canada	536 employees of several organizations in Quebec	1) Structured questionnaire about measurement of human resources management practices ("Mesure des pratiques de gestion des ressources humaines"; 51 items; 7-point Likert scale; 8 factors); 2) Work Engagement Scale (Meyer & Allen, 1990; 19 items; 2 factors); 3) Mobilization behavior scale (Wils, Labelle, Guérin, & Tremblay, 1998; global score).	Discretionary behaviours represent a greater mobilizing factor when collaborators have a strong emotional connection to the organization. The perceived level of autonomy and influence at work, and the possibility of using one's own abilities, influence mobilization more positively.
Spreitzer, 1996	USA	393 Managers	1) Questionnaire on empowerment; 2) Questionnaire on social and structural characteristics; 3) Questionnaire on the perception of socio-political support, access to information and access to resources; 4) Questionnaire on the Organizational Climate.	Social characteristics allow for a more intense involvement of collaborators, creating opportunities for empowerment at the workplace.

As a main result, the analysed studies reported that structural empowerment generates positive results at the workplace, which relate to: 1) an increased job satisfaction; 2) an increased organizational commitment; 3) the adoption of innovative behaviours; and 4) the reduction of burnout and turnover. Regarding secondary results, some articles suggest that empowerment has a positive influence on: 1) the patients' safety, translating into a reduction of adverse events; and 2) the adoption of mobilizing behaviours by healthcare professionals.

DISCUSSION

Our findings concern research studies on to the topics of empowerment, adverse events, and mobilizing behaviours. The literature on this topic is extensive, with a majority of empirical studies. We did not find any article that specifically associated the variables of empowerment, mobilizing behaviours and adverse events.

The literature review according to the established criteria allows us to say that patient safety is currently one of the major concerns in healthcare settings. It is essential to adopt practices that ensure the quality of care provision, mobilizing healthcare professionals to perform their work more efficiently (Armstrong & Laschinger, 2006). Healthcare professionals, particularly nurses, have a common goal, regardless of the country, context or culture in which they operate: the responsibility of caring for their patients in the best way they can (Dempsey, 2009), providing quality care and a service that ensures the safety of patients. For instance, nurses who feel empowered in their working environment show a higher level of job satisfaction are more committed to the organization and provide better care (Laschinger et al., 2003; Laschinger, 2004). Empowerment is often found in association with the healthcare professionals' perception on their autonomy and control over their own work. Both autonomy and control influence the levels of burnout, a construct that has a mediating influence in organizational management. Thus, health care settings must be designed to enhance honest communication and teamwork in a way that creates a culture of safety and quality. In health care settings, the efficient mobilization of resources for the benefit of the patients' care will result in high levels of safety and satisfaction of those who receive care. Health care professionals should collaborate and cooperate with each other, considering the multidisciplinary work they perform (Armstrong & Laschinger, 2006).

According to Wagner et al. (2010), studies on structural empowerment in healthcare services indicate that a change in the working environment structures may improve the collaborators' health, reduce stress and increase the workers' com-

mitment toward organizational goals, leading to improved organizational results, which include better patient care. Thus, structural empowerment represents a gain for healthcare professionals, particularly for nurses, as it positively influences the levels of communication, autonomy and collaboration, as well as the feelings of trust and respect. In turn, this allows reducing the occurrence of adverse events (Armstrong & Laschinger, 2006). When there is a high perception of structural empowerment, the levels of collaboration and autonomy increase, resulting in a reduction of stress, emotional exhaustion and burnout among healthcare professionals (Gilbert et al., 2010; Laschinger, 2004).

The healthcare professionals' access to information, support, resources and opportunities allows for a culture of patient safety, which suggests that organizations that empower professionals have the conditions to provide an effective and safe care, which simultaneously translate into a reduced occurrence of adverse events (Armstrong & Laschinger, 2006). Promoting structural empowerment among healthcare professionals allows increasing job satisfaction, innovation and organizational commitment (Knol & van Linge, 2009; Laschinger et al., 2003, 2009), improving the quality of care and reducing stress (Wagner et al., 2010), enhancing autonomy, efficiency and organizational productivity (Laschinger et al., 2001; Spreitzer, 2007; Spreitzer & Doneson, 2005), and, finally, promoting the adoption of mobilizing behaviours (Tremblay & Simard, 2005a). In this sense, structural empowerment is a very useful tool, by improving the communication between healthcare professionals, allowing the participation of all team members in decision-making processes and promoting the quality of care.

Empowerment and mobilization seem to have a positive and significant effect in reducing the occurrence of adverse events in healthcare settings. These two processes influence, in a positive way, the collaborators' behaviours and feelings regarding their own performance. This leads, ultimately, to the improvement of the quality of care and patients' safety.

We did not find any article simultaneously relating the three constructs analysed (adverse events, structural empowerment and mobilizing behaviours) in healthcare settings. This evidence emphasizes the need for and relevance of research on this topic, whether theoretical or empirical. Furthermore, we consider relevant to analyse the occurrence of adverse events in healthcare settings. This topic is, to a certain extent, a taboo. Health care professionals and organizations often tend to hide their mistakes, which may have immediate or long-term consequences to the extent that the occurrence of adverse events causes heavy losses, both for the patient and the healthcare organizations. Such events will result, on one hand, in an increase in the length of hospital stay, lack of trust toward healthcare professionals and higher hospital costs. On the other hand, adverse events will lead to a

decrease of patient safety and quality of care. Thus, it is essential to adopt continuous education strategies with the purpose of changing attitudes and behaviours, managing risk and developing a culture of safety.

CONCLUSIONS

Healthcare systems have evolved significantly in the last decades due to structural changes, resulting from globalization and technological advances. Analysing the implemented organizational practices in healthcare organizations and their influence on the occurrence of adverse events and on the healthcare professionals' mobilizing behaviours is, undoubtedly, of great importance. Nonetheless, these studies are still scarce, with most of them being conducted in the USA and Canada.

The conditions that promote the professionals' empowerment, engagement, commitment and mobilization must be created to improve organizational outcomes. Empowerment increases the satisfaction and sense of usefulness at work, ensuring that every collaborator influences his/her own work, participates in decision-making and is more autonomous and responsible.

Safety is currently one of the major concerns of health systems. Empowerment is a core concept in health promotion and may act as a tool that allows improving the quality of healthcare. Hospital organizations may become more effective by adopting a set of practices allowing for structural empowerment and mobilization, which will promote the healthcare professionals' psychological and emotional satisfaction. This empowerment will result not only in attracting and in securing nurses and other professionals, but also in creating a safety climate for patients that supports the quality of care (Salgueiro-Oliveira, Parreira, & Basto, 2015). As such, further research is necessary in different settings, particularly in organizations that operate in complex environments, such as healthcare. In these settings, decisions must be taken, whether they refer to simple and routine situations or highly complex situations (Parreira et al., 2006). These decisions require great coordination between professionals (Parreira, 2005; Parreira et al., 2015; Parreira, Lopes, & Salgueiro, 2013). Collaboration, support and team efforts are necessary to establish the connection within a system that is considered poorly or imperfectly connected (Orton & Weick, 1990). In this sense, according to organizational psychology, decisions must be shared to avoid risks, improve teamwork and increase the coordination between professionals. A culture of empowerment and mobilization allows collaborators to better identify themselves with the organization and perform better at work. In the case of healthcare organizations, these two processes may

improve the quality of care, as well as the patients' safety, which, in turn, allows reducing the occurrence of adverse events.

Thus, we suggest conducting empirical studies to measure the impact of professional empowerment in teamwork, adverse events, quality of care and organizational performance, emphasizing the role of organizational psychology in conducting such studies.

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