

Patient versus Occupational Safety Culture: Competing Forces Or Two Sides of the Same Coin?

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ABSTRACT

The creation of a positive patient safety culture is viewed by many as crucial for patient safety improvement. Patient safety culture is based on the earlier construct of industrial safety culture. It is therefore surprising that very little is known about the relationship between patient safety culture and occupational safety culture. The aim of this study was to investigate the relationship between patient safety culture and occupational safety culture using a newly developed healthcare climate instrument.

INTRODUCTION

- ❖ Within healthcare, patients and healthcare professionals experience adverse events and injuries. Therefore, it is important to have both a strong patient safety culture and occupational safety culture.
- ❖ Surprisingly, little is known about the relationship between patient safety and occupational safety.
- ❖ Typically, healthcare organizations assess patient safety culture by surveying healthcare professionals using climate questionnaires.
- ❖ Recent reviews of these instruments (Colla et al., 2005; Flin et al., 2006; Singla et al., 2006) have been critical of their psychometric properties (i.e., reliability and validity), and have criticized these instruments for lacking any explicit theoretical model to support their development (Flin et al., 2006).
- ❖ Therefore, the **objectives** of this research were:
 1. To develop a patient safety climate questionnaire based on a sound theoretical framework, that demonstrated good psychometric properties.
 2. To examine the relationship between healthcare professionals' perceptions of patient safety culture and occupational safety culture.

METHOD

Participants & Measures

- ❖ A convenience sample of healthcare professionals from three Canadian acute care hospitals (n = 418)
 - Included a variety of occupations (e.g., nurses, administrators, physicians)
- ❖ Participants completed:
 - Demographic questions
 - Four patient safety climate scales
 - Two occupational safety climate scales
 - Department and region ratings for patient safety and occupational safety

METHOD

Healthcare Climate Questionnaire Development

- ❖ Social influence theory (Eagly & Chaiken, 1993) was selected as the framework to develop the healthcare safety climate questionnaire.
- ❖ A strong patient safety climate occurs when there is group consensus in perceptions of patient safety, and therefore, should be considered a social phenomena.
- ❖ The theory of social influence explains how individuals use social and informational resources to shape patient safety climate perceptions. Climate perceptions are based on relevant information that is communicated to individuals, and social cues (or actions) from others in the healthcare setting.
- ❖ Within healthcare, information and social cues about patient safety can come from: 1) Colleagues, 2) Supervisors, 3) Senior management, and 4) Physicians
 - Four scales were developed to assess the extent to which these four groups provide information and display social cues about patient safety to others.
 - Parallel scales for senior management and supervisors were created to assess occupational safety climate perceptions.

Data Analysis

- ❖ Exploratory factor analysis (PCA), and reliability analyses were conducted on each of the patient safety climate and occupational safety climate measures to establish the psychometric properties
 - Regression analyses with the four patient safety climate scales predicting department and region rating of patient safety
- ❖ Correlation analyses were conducted to examine the relationship between patient safety climate and occupational safety climate perceptions

Table 1: Factor Structure & Reliability

Scales	% of Variance	Lowest Factor Loading	Cronbach's Alpha
Patient Safety			
Cues from Supervisors	32.2%	.62	.83
Cues from Senior Managers	11.1%	.57	.79
Cues from Physicians	8.4%	.61	.80
Cues from Colleagues	6.5%	.66	.76
Occupational Safety			
Cues from Supervisors	46.4%	.67	.84
Cues from Senior Managers	12.4%	.53	.80

RESULTS

Exploratory Factor Analysis (Patient Safety)

- ❖ EFA indicated a four-factor model (see Table 1) accounting for 58.2% of variance

Exploratory Factor Analysis (Occupational Safety)

- ❖ EFA indicated a two-factor model (see Table 1) accounting for 58.9% of variance

Regression Analysis: Patient Safety Predicting Ratings of Patient Safety Efforts

- ❖ Patient safety perceptions accounted for 30% of the variance in department ratings of patient safety efforts.
 - Cues from colleagues ($\beta = .22, p = .00$), supervisors ($\beta = .25, p = .00$), and physicians ($\beta = .22, p = .00$) predicted department ratings.
- ❖ Patient safety perceptions accounted for 26% of the variance in ratings of regional patient safety efforts.
 - Cues from senior managers ($\beta = .30, p = .00$) and physicians ($\beta = .22, p = .00$) predicted regional ratings.

Correlation between Patient Safety and Occupational Safety

- ❖ Patient safety climate and occupational safety climate were positively related ($r = .67, p = .00$) (see Table 2)

Table 2: Correlation between Patient Safety and Occupational Safety

	Overall PS Climate	Overall WS Climate
Overall PS Climate	1	
Overall WS Climate	.67**	1

CONCLUSIONS

- ❖ This study developed a healthcare climate questionnaire using social influence theory, for the purpose of determining the relationship between occupational safety culture and patient safety culture
- Results indicate that:
- ❖ The new healthcare climate questionnaire demonstrates good psychometric properties
 - ❖ Occupational safety climate and patient safety climate are related. This suggests that:
 - Staff safety and patient safety are inevitably intertwined
 - Considering staff safety issues and patient safety issues separately is inappropriate
 - Occupational safety should be considered when trying to create a positive patient safety culture