ELSEVIER

Accident Analysis and Prevention 39 (2007) 1202–1211

ACCIDENT ANALYSIS & PREVENTION

www.elsevier.com/locate/aap

An evaluation of a new instrument to measure organisational safety culture values and practices

D. Díaz-Cabrera *, E. Hernández-Fernaud, R. Isla-Díaz

Departamento de Psicología Cognitiva, Social y Organizacional, Universidad de La Laguna, Campus de Guajara 38205, Tenerife, Spain

Received 6 March 2006; received in revised form 29 September 2006; accepted 18 March 2007

Abstract

The main aim of this research is to evaluate a safety culture measuring instrument centred upon relevant organisational values and practices related to the safety management system. Seven dimensions that reflect underlying safety meanings are proposed. A second objective is to explore the four cultural orientations in the field of safety arising from the competing values framework. The study sample consisted of 299 participants from five companies in different sectors. The results show six dimensions of organisational values and practices and different company profiles in the organisations studied. The four cultural orientations proposed by the competing values framework are not confirmed. Nevertheless, a coexistence of diverse cultural orientations or paradoxes in the companies is observed.
© 2007 Elsevier Ltd. All rights reserved.

Keywords: Safety culture; Organisational practices; Organisational values; Competing values framework

1. Introduction

This study focuses on the field of organisational safety and particularly on safety culture and organisational paradoxes associated with this concept. Its main aim is to evaluate a safety culture measurement instrument derived from relevant organisational values and practices as well as from the competing values framework (e.g. Cameron and Quinn, 1999; Quinn, 1988; Quinn and Rohrbaugh, 1983; Quinn and Spreitzer, 1991).

Despite its recent appearance in the organisational safety area, safety culture has begun to gain acceptance due to its theoretical, empirical and intervention-relevance in organisations (e.g. Booth, 1996; Cox and Flin, 1998; Glendon and Stanton, 2000; Hale, 2000; Pidgeon, 1991; Weick, 2001; Wilpert, 2001), in a similar way to safety climate studies a few years ago (e.g. Isla and Cabrera, 1997). In our opinion, three critical reasons explain this shift of attention by researchers and professionals. First, safety culture links significant micro and macro organisational variables by acknowledging the multicausality of accidents and, accordingly, assumes a more comprehensive and contextual approach. Second, safety culture implies a change from individual to group and social levels of analysis. The emphasis is on cognitions shared by groups or by the organisation overall. It therefore takes into account the group, the organisation as a mini-society, whose members come to share value and meaning systems about safety, thus facilitating the development of an organisational identity with a commitment to risk prevention.

Finally, it has to be recognised that it is practically impossible to develop safety rules and procedures that respond to all given situations in organisations. Thus, the values and meanings related to safety commitment and identification need to be considered. These three critical reasons of safety culture indicate significant implications for organisations. Thus, an organisation that encourages a positive safety culture would have a more holistic and comprehensive vision of the safety management system, develop more of a group meaning of safety, encouraging the participation of organisational members in risk prevention and influence members' initiatives and behaviours as a group in the face of unforeseen events and their adherence to standard safety rules and procedures. Along this line such as Weick (2001) have emphasized that safety culture development is a prerequisite for activity coordination through shared values, meanings and symbols. Moreover, various studies have shown that some safety culture indicators are related to accident rates (Donald and Young, 1996; Hurst et al., 1996; Itoh et al., 2004).

Safety culture concerns meanings, interpretations, attitudes, values, beliefs, rules and procedures related to safety (see Guldenmund, 2000, for a review). A central feature is that these

* Corresponding author. Tel.: +34 922 317523; fax: +34 922 317461.
E-mail address: mddiaz@ull.es (D. Díaz-Cabrera).

0001-4575/$ – see front matter © 2007 Elsevier Ltd. All rights reserved.
doi:10.1016/j.aap.2007.03.005

components must be constructed and shared by organisational participants through implicit or explicit negotiation.

Nevertheless, safety culture is a recent, polemic and complex concept that requires considerable theoretical and empirical clarification (Hale, 2000; Pidgeon and O'Leary, 2000; Wilpert, 2001). The concept of safety culture reflects and even highlights the conceptual divergences around organisational culture regarding their central components, visibility or invisibility, and how its basic dimensions can be evaluated. There are two main divergences of opinion relating to safety culture: (1) concerning the relationship between organisational and safety culture and (2) concerning two main theoretical approaches and how to investigate them.

Some researchers assume that safety culture is a type of organisational culture. Both are related, but safety culture has distinctive peculiarities and possesses its own identity. We agree with a second approach that suggests that safety culture is an expression or manifestation of a specific organisational culture, which is then crystallized into a safety management system (e.g. Glendon and Stanton, 2000; Guldenmund, 2000; Hale, 2000; Wilpert, 2001).

The second divergence – possibly with greater consequences for the empirical and intervention approach selected – emphasizes more obvious, concrete, visible and conscious cultural aspects versus tacit, hidden and unconscious ones (see Glendon and Stanton, 2000; Wilpert, 2001). The first approach accentuates behaviours whereas the second highlights meanings, values and symbols. Theoretical efforts have attempted to find an intermediate approach that links both stances. Thus, Wilpert (2001) points out that Schein's model (1985) integrates both perspectives and enables development of a visible cultural indicator. This model proposes three cultural levels with tangible indicators and reflecting practically the whole organisation.

Bearing this in mind, safety culture can be construed to be manifested in shared values and meanings, and in a particular organisational structure and processes, safety policies, strategies, goals, practices and leadership styles related to safety management system. Specifically, we refer to those aspects of organisational structure, policies and practices directly involved in risk prevention. These are components that come from underlying patterns of shared meanings and beliefs and can act as valid indicators in a culture evaluation process. This notion is closer to the vision of organisation as *being* culture as opposed to *having* culture. In our opinion, safety culture should be understood as an expression of organisational culture, in such a way that it implies values and meaning systems linked to safety developed through negotiations between members, which could result in subcultures. It is also expressed in organisational practices, symbols and rituals that can function as tangible indicators.

Numerous proposals share this conceptualisation (e.g. Booth, 1996; Cox and Cheyne, 2000; Guldenmund, 2000; Hale, 2000; Harvey et al., 2002; Vredenburgh, 2002), combining tacit dimensions (e.g. collective commitment towards safety, shared safety values and meanings, shared goals and learning culture), as well as other more concrete dimensions directly related to organisational practices (e.g. safety policies and objectives, rules and procedures, accident reporting systems, communication channels, leadership styles, motivation patterns and safety procedures evaluation systems).

Another area of organisational culture research that is beginning to attract attention is the existence of paradoxes in organisations. Organisations are considered to be complex, ambiguous and in some ways paradoxical. They present different facets that can initially seem contradictory (Morgan, 1943/1997). In the safety culture field, several researchers have pointed out the importance of these characteristics. Thus, Weick (2001) argues that high reliability organisations should simultaneously be centralized and decentralized. Similarly, Wahlstrom (2001) points out the importance of reconciling several dilemmas in nuclear power plants, with a view to achieving efficient management.

One approach, which highlights the contradictory nature of organisational culture is the competing values framework (e.g. Cameron and Quinn, 1999; Quinn, 1988; Quinn and Rohrbaugh, 1983; Quinn and Spreitzer, 1991). This framework has influenced the fields of organisational and safety culture (e.g. Reiman and Oedewald, 2004; Reiman et al., 2005; Silva et al., 2004; Van Muijen et al., 1999; Zammuto et al., 2000), and its main impact stems from its recognition that several management models can coexist in organisations, but also from its orientation towards diagnostic instrument development.

This model is elaborated around two central dimensions: internal–external and flexibility–control. These two dimensions form four quadrants representing organisational culture orientations or models that reflect shared or conflicting values of organisational life: (1) human relations model or clan culture; (2) open system model or adhocracy culture; (3) internal process model or hierarchy culture; (4) rational goal model or market culture. The notion of this approach is that organisations should be adaptable and flexible, but also stable and controllable. The presence of different metaphors or paradoxes coexisting in organisations is probably reflected in a similar fashion in safety culture.

The main aim of this study is to evaluate the empirical structure of safety culture values and practices questionnaire (QCS), analyzing the dimensions of safety culture related to specific organisational practices directed at risk prevention. These practices are considered cultural manifestations with underlying safety values and meanings. Secondly, the simultaneous presence of several orientations towards safety is assessed by considering the four cultural orientations indicated by the competing values framework: human relation or support, open system or innovation, internal process or rules, and rational goal or goal models. Finally, it explores the extent to which these dimensions lead to an image of organisational orientation towards safety.

Evidences suggests a group of critical dimensions such as those mentioned above. In line with the first objective and from the main safety culture indicators proposed in various studies, a group of seven dimensions describing various organisational practices and their underlying values was selected. In our opinion, these seven dimensions are central components of safety culture in organisations, and they form the basis

Download English Version:

https://daneshyari.com/en/article/573803

Download Persian Version:

https://daneshyari.com/article/573803

Daneshyari.com