



Nordic Safety Climate Questionnaire (NOSACQ-50): A new tool for diagnosing occupational safety climate

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ABSTRACT

Although there is a plethora of questionnaire instruments for measuring safety climate or culture, very few have proven able to present a factor structure that is consistent in different contexts, and many have a vague theoretical grounding. The Nordic Safety Climate Questionnaire (NOSACQ-50) was developed by a team of Nordic occupational safety researchers based on organizational and safety climate theory, psychological theory, previous empirical research, empirical results acquired through international studies, and a continuous development process. Safety climate is defined as workgroup members' shared perceptions of management and workgroup safety related policies, procedures and practices. NOSACQ-50 consists of 50 items across seven dimensions, i.e. shared perceptions of: 1) management safety priority, commitment and competence; 2) management safety empowerment; and 3) management safety justice; as well as shared perceptions of 4) workers' safety commitment; 5) workers' safety priority and risk non-acceptance; 6) safety communication, learning, and trust in co-workers' safety competence; and 7) workers' trust in the efficacy of safety systems. Initial versions of the instrument were tested for validity and reliability in four separate Nordic studies using native language versions in each respective Nordic country. NOSACQ-50 was found to be a reliable instrument for measuring safety climate, and valid for predicting safety motivation, perceived safety level, and self-rated safety behavior. The validity of NOSACQ-50 was further confirmed by its ability to distinguish between organizational units through detecting significant differences in safety climate.

Relevance to industry: NOSACQ-50 will enable comparative studies of safety climate between and within companies, industries and countries. It is suitable for research purposes as well as for practical use in evaluating safety climate status, as a diagnostic tool, and in evaluating the effect of safety climate interventions.

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1. Introduction

Occupational accidents give rise to much human suffering as well as high costs for society, companies and individuals. Although in Europe the frequency of occupational accidents decreased steadily over a number of decades (Hudson, 2007), it still constitutes a substantial problem, and in the last two decades the decrease has leveled out (Regeringskansliet, 2006).

In recent years the awareness of the importance for safety performance of organizational, managerial and social factors, has increased. Safety climate, an aspect of organizational climate, offers a route for safety management, complementing the often predominant engineering approach. In addition, safety climate investigations are more sensitive (e.g. multi-faceted) and proactive bases for developing safety, rather than reactive (after the fact) information from accident rates and accident and incident reports (Seo et al., 2004). Although longitudinal studies are still few, there is growing evidence of safety climate as an antecedent of safety performance (Clarke, 2010, 2006a; Pousette et al., 2008; Kuenzi and Schminke, 2009; Nielsen and Lyngby Mikkelsen, 2007; Wallace et al., 2006;

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