

Safety Leadership in the Construction Industry

Managing safety at Swedish and Danish construction sites

Akademisk avhandling

Som för avläggande av medicine doktorexamen vid Sahlgrenska akademien, Göteborgs universitet kommer att offentligen försvaras i hörsal Europa, Konferenscentrum Wallenberg, Medicinargatan 20A, den 26 januari, klockan 9:00.

av Martin Grill

Fakultetsopponent:

Professor Sharon Clarke

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Avhandlingen baseras på följande delarbeten

- I. Grill M, Grytnes R, Törner M. Approaching safety in the Swedish and Danish construction industry: professionals' perceptions of safety culture differences. *Safety Science Monitor*. 2015;19(2):1–17.
- II. Grill M, Pousette A, Nielsen K, Grytnes R, Törner M. Supervisors and teachers' influence on expectations on empowering leadership among students in vocational education and training. *Empirical Research in Vocational Education and Training*. 2017;9(2):1–15.
- III. Grill M, Pousette A, Nielsen K, Grytnes R, Törner M. Safety leadership at construction sites: the importance of rule oriented and participative leadership. *Scandinavian Journal of Work, Environment & Health*. 2017;43(4):375–384.
- IV. Grill M, Nielsen K, Grytnes R, Pousette A, Törner M Construction site managers' leadership practices and their influence on safety climate: an observational study of transformational, active transactional and passive/avoidant leadership. Submitted manuscript.

**SAHLGRENKA AKADEMIN
INSTITUTIONEN FÖR MEDICIN**



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Abstract

The overall aim of this thesis was to identify and describe essential components of safety leadership behavior in the construction industry in Sweden and Denmark. The methods used were semi-structured interviews, cross-sectional and longitudinal questionnaire studies, and behavioral observations. The results of Paper I indicate that participative leadership and rule-oriented leadership may be vital for occupational safety at construction sites. The results of Paper II indicate that participative leadership is learned by future construction managers and employees during their vocational education and training. The results of Paper III indicate that transformational, active transactional, participative, and rule-oriented leadership were positively associated with occupational safety at construction sites; and that laissez-faire leadership was negatively associated with occupational safety at construction sites. The results of Paper IV provides qualitative context-specific descriptions of how transformational, active transactional, and passive/avoidant leadership are enacted by construction site managers. In addition, Paper IV confirm the positive association between transformational leadership and construction site safety climate as well as the negative association between passive/avoidant leadership and construction site safety climate. The results of Papers I and III indicate that a high occurrence of rule-oriented and participative leadership behaviors among construction managers at Swedish construction sites may help explain the relatively low injury rates in the Swedish construction industry.

Keywords: occupational safety, leadership, safety leadership, construction manager, participative leadership, rule-oriented leadership, transformational leadership, transactional leadership, passive leadership, safety climate