

## Chapter 16

# How Does Schema Affect Stress and Productivity at the Workplace?

### Quantitative Analysis of Schema in the Occupational Setting

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#### **ABSTRACT**

*Maintaining mental health has become a great concern not only for one's well-being, but also for companies' management, while one's personality trait has gained its popularity as a cause. In this article, the authors then investigate how worksite productivity loss is accounted for by stress response accompanied with schema. To this end, the conventional stress model is extended so as to include schema. The pivotal idea of the extended model stands in that both stressor and strain are associated with schema. The result of multiple regression analysis showed that workplace productivity loss is most largely affected by irritability, fatigue, and depression. In addition, the result of hierarchical regression analysis revealed that schema affects stress reaction both directly and indirectly, and that there exists a so-called buffering effect between job control and coworkers' support. These findings suggest that work productivity may be improved by intervention regarding schema or by promoting the buffering effect.*

## **1. INTRODUCTION**

Handling and tackling psychological stress are pivotal issues from both humanitarian and economic viewpoints (Lerner et al., 2001). The term stress is now associated with various academic fields, including psychology, psychiatry, and physiology (Bamber, 2006). Particularly in the vocational setting, it is mostly often linked to cognitive theory. This article also highlights the cognitive approach for workplace stress reaction; more precisely speaking, this plugs into the existing cognitive framework for occupational stress reaction another concept of cognitive theory, namely, schema. To this end, this article consists mainly of three concepts: occupational stress, worksite productivity loss, and schema. These are briefly reviewed respectively as follows.

### **1.1. Stress**

An increasing amount of attention has been paid to mental stress at the workplace (Kivimäki, Vahtera, Pentti, & Ferrie, 2000; Theorell et al., 2003). Stress is now viewed in relation to physical, physiological, and psychological health, e.g., musculoskeletal symptoms (Boström, Dellve, Thomée, & Hagberg, 2008), sleep (Van Laethem, Beckers, Kompier, Dijksterhuis, & Geurts, 2013), depression (Mutkins, Brown, & Thorsteinsson, 2011), and so forth. Not until the adoption of cognitive theory was that promising pathways have been laid for occupational stress modeling (see (Staal, 2004), for review). One typical example of such models is the Job Demand-Control Support model (JDCS model), which delved into the causation of mental stress (Johnson & Hall, 1988; Johnson, Hall, & Theorell, 1989; Karasek, 1979). Karasek first presented this model, which characterizes psychological strain by the latitude of job demand and job control (Karasek, 1979). This model defines a stressful situation as the case where one has heavy job demand but has only a limited control over her/his task. Later, this idea was extended by adding a dimension of social support (Johnson & Hall, 1988; Johnson et al., 1989). This refined model postulates that one feels psychologically strained when s/he has greater job demand despite less latitude of control and support. This conceptualization is quite general and thus malleable enough to provide a basic framework for other later works (Häusser, Mojzisch, Niesel, & Schulz-Hardt, 2010).

One of the well-known stylized facts in the theory of stress reaction is the so-called *buffering effect* or *exacerbation effect*. These are generally the effects that the association of stressor with human relationships reduce or enrich with respect to their influence on stress outcomes (Cohen & Wills, 1985; Rook, 1984). In the context of the JDCS model, for example, the negative correlation of stressor and stress response is degraded by social support, which is the case where social support is buffering the stressor. The research on these phenomena has arguably been developed (Sapp, Kawachi, Sorensen, LaMontagne, & Subramanian, 2010), and the conclusions are often mixed (de Lange, Taris, Kompier, Houtman, & Bongers, 2003). Then, it is worthwhile investigating the existence of these effects and actually the present study shall contribute to this discussion to a certain extent.

### **1.2. Productivity**

With a view to financial coping of companies, practical interest in stress assessment also entails its economic impact, or simply, productivity (Donald et al., 2005; Faragher, Cooper, & Cartwright, 2004). Although this term has various dimensions of definition (Cocker, Martin, Scott, Venn, & Sanderson, 2013), ranging from individual (Kessler, Greenberg, Mickelson, K. D, Meneades, & Wang, 2001), to

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