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The Project Involvement Index, psychological distress, and psychological well-being: Comparing workers from projectized and non-projectized organizations

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Abstract

It is important to understand the extent to which project involvement affects mental health. As projects and project management expand beyond traditional fields, it is also important to compare project involvement and mental health across settings that vary in terms of management structure. This study is the first to validate a Project Involvement Index (PII) useful in various settings to understand how workload relates to mental health defined as high psychological well-being and low psychological distress. Our results demonstrate that the PII is parsimonious measure showing reliability, predictive validity, and discriminant validity. Furthermore, results show that people involved in projects from a non-projectized organization show less mental health than those from a projectized organization.

Keywords: Psychological distress; Well-being; Organizational structure

1. Introduction

Projects and project management are expanding beyond traditional fields. They are no longer the province of naturally projectized industries such as in the construction industry (Ives, 2005). This may be because organizations use projects to move towards greater efficiency, pushed by increased globalization, competitiveness and complexity (Reilly and McGourty, 1998). Through project management and thus, by pooling and leveling human resources across time, space, or organizational boundaries, organizations aim to reduce idle time and gain productivity (Zika-Viktorsson et al., 2006). In addition to more traditional applications, project work is the vehicle through which organizations implement change (Ives, 2005), and expand employee's knowledge base (Sense, 2003). Projects work is also expanding into university settings to teach complex subject matter (Chiocchio and Lafrenière, 2009), and into other sectors such as in equipment and system suppliers (Arenius et al., 2002). Not surprisingly then, the contexts in which projects unfold to meet organizational objectives vary greatly, and so does the formal training, experiences, and competencies of those involved in managing and carrying them out. Although the construction industry may be the most mature in terms of project management, there is still much variability and they can still be managed haphazardly (Sauer, 2006). Less than well managed projects greatly limit an organization's potential to evolve through continuous improvement (Carrillo et al., 2004) and stretches an already limited pool of human resources' ability to handle an ever increasing number of projects (Zika-Viktorsson et al., 2006). Given that poor mental health reduces productivity (Dewa et al., 2004), one key question emerges: How much project involvement is ideal for maintaining healthy levels of mental health?

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In order to answer this question across contexts that may not use the same terminology or share a common understanding of what a project is, we need a short self-reported instrument that is simple and efficient to use. Next, we need to establish the utility of that instrument against established measures of mental health. Hence, our first objective is to present initial validation data on the development of the Project Involvement Index (PII). The second objective is to pinpoint just how much project involvement best predict mental health. By meeting these objectives, this article will contribute guidelines for human resources management regarding project assignments. Furthermore, this research will extend knowledge gained in previous studies that were conducted in projectized organizations only and that limited their scope to negative measures of mental health (i.e., psychological stress response). First, it will do so by refining the definition of mental health to include both high levels of psychological well-being and low levels of psychological distress; second, by broadening the understanding of the mental health of employees involved in projects through comparisons between projectized and non-projectized organizations as well as across job categories.

2. Key concepts

2.1. Definition and importance of mental health in the work place

Mental health is a complex, multidimensional construct (Achille, 2003), defined as a combination of the absence of negative symptoms and the presence of well-being (Massé et al., 1998a,b,c). These components are not opposite ends of a single continuum; rather, they represent two distinct, yet negatively related continuums (Page and Vella-Brodrick, 2009). Stated differently, the absence of psychological distress does not automatically imply the presence of psychological well-being.

Employees' mental health affects individuals and organizations (Diener, 1994) in terms of both associated problems and benefits. In severe forms, mental health problems become debilitating and restrict one's capacities to perform work within a normal range of productivity (Ormel et al., 1995). In turn, organizations can also be less productive (Dewa et al., 2004). In terms of benefits, high levels of psychological well-being and job satisfaction predict job performance (Wright et al., 2007) even over a few years' span (Wright et al., 2002).

2.2. The Demand–Control–Support model

Organizations foster time pressure, value increased efficiency, and promote constant structural changes. In doing so, organizations clash with individuals' need for self-determination and this conflict contributes to the formation of work environments of high demand together with low control (Peterson and Wilson, 2004). The Demand–Control–Support (DCS) model dominates the field of occupational health psychology (De Lange et al., 2004). The model posits that high strain jobs, those that have high demand (i.e., workload conceptualized as time pressure and role conflicts), low control (i.e., restricted decision latitude), and low social support, generate higher than average physical and mental health problems (Van Der Doef and Maes, 1999). Most studies on the subject conclude that employees working in high demands–low control–low support jobs experience lower psychological well-being, lower job satisfaction, more burnout, and more job-related psychological distress (Baker et al., 1996; Karasek, 1979; Strazdins et al., 2004; Van Der Doef and Maes, 1999).

2.3. Job demand and project work

Job demands, such as work overload or time pressure, refer to physical, psychological, social, or organizational aspects of the job that require sustained physical, cognitive, or emotional effort (Peterson et al., 2008). Time pressure is an important feature of work (Peterson and Wilson, 2004) and predicts fatigue across many industries (van Veldhoven et al., 2005). Time pressure is particularly relevant to project work (Nordqvist et al., 2004; Zika-Viktorsson et al., 2006). There is strong anecdotal evidence that project work is stressful (Wilemon, 2002) – most project managers will testify that they work overtime, and that they are stressed and overworked.

Zika-Viktorsson et al. (2006) posited that number of projects and time spent working on them, among other determinants, predict project overload (i.e., fragmentation, disruption, and inefficiency caused by competing commitments between projects in employees working in multi-project organizations). In turn, they posit a positive relationship between project overload and psychological stress response (i.e., sleeping problems, fatigue, and inability to let go of problems). Their results indicate that the correlation between the number of projects and time spent on them appears to be 0. Furthermore, number of projects and time spent working on them are not statistically related to psychological stress response (i.e., $r = -.09$, *n.s.* and $r = -.04$, *n.s.* respectively) but, project overload is ($r = .28$, $p < .05$). Another study by the same group shows that employees involved in construction projects show higher psychological stress response compared to product development projects; however, no statistically significant differences were detected regarding workload (Zika-Viktorsson et al., 2003). Finally, another study from this group shows that time pressure is negatively correlated with job satisfaction ($r = -.18$, $p < .05$) (Nordqvist et al., 2004).

Although generally supporting the hypothesis that high demand and low control predicts low level of mental health, results from these studies are difficult to interpret. First for Zika-Viktorsson et al. (2006), given the correlation between number of projects and time spent on them appears to be 0, one can question the reliability and validity of these measures. Second, the relationship between these