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Doctoral dissertation

The degree of satisfaction of basic psychological needs according to E.L. Deci and R.M. Ryan  
and the effectiveness of meeting work-related requirements

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### **Summary**

This dissertation addresses the role of Deci and Ryan's (2017) basic psychological needs in the fulfillment of work-related demands. To be able to define this role, attention must first be paid to the processes in the work environment itself. A model that enables the description of these processes is the Job Demands - Resource Model (Bakker and Demerouti, 2007, 2017). It indicates that there are two parallel processes in the work environment, namely the health-impairment process (Demerouti et al., 2001) and the motivational process (Bakker, Demerouti, & Schaufeli, 2003). Both are based on the main characteristics of work, namely job demands (Bakker & Demerouti, 2007, 2017; Demerouti et al., 2001) and job resources (Bakker, 2011; Bakker & Demerouti, 2007, 2017; Lesener et al., 2020; Van den Broeck et al., 2010). The mechanism implies that job resources have motivational potential and lead to high levels of work engagement, resulting in efficiency (Bakker and Demerouti, 2017; Schaufeli, 2017). For this potential to be unleashed, it is necessary for the subject to engage themselves (Macey and Schneider, 2008), that is to arouse its sense of empowerment, which forms the basis for the arousal of intrinsic motivation (Deci et al., 2017; Gasiuła, 2007). These enabling elements for inducing a sense of subjectivity were basic psychological needs, namely autonomy, relatedness, and competence (Deci and Ryan 2017). Thus, these are elements of micro-level subjectivity arousal (Spreitzer, 1995), the fulfillment of which will involve the realization of goals

consistent with the Self that are meaningful to the employee, enable the realization of competencies, and give meaning to the employee's actions, thus achieving a sense of subjectivity (Gasiul, 2007; Spreitzer, 1995; Thomas and Velthouse, 1990).

As such, the degree of satisfaction of basic psychological needs is dependent on the context, the environment in which the individual functions (Deci & Ryan, 2017; Vansteenkiste & Ryan, 2013). In this study, it is assumed that the components of the JD-R model, namely job resources, job demands, and engagement (Bakker and Demerouti, 2007, 2017), will be understood as indicators of structural empowerment. Basic psychological needs (Deci & Ryan, 2017), which can be satisfied or frustrated (Deci & Ryan, 2017; Vansteenkiste & Ryan, 2013), have been taken as elements of micro-scale empowerment. In turn, the result of the interactions of empowering factors at the micro and macro scales will be the effectiveness of the employee, understood as an overall indicator of mental health (Langseth-Eide, Vittersø, 2021).

For the purpose of analysis, the following structural empowerment elements derived from the JD-R Model were selected. Support from a supervisor was considered a job resource (Jolly et al., 2021), emotional demands were considered a job requirement (Pejtersen et al., 2010), and meaningfulness of work was selected as an indicator of engagement (Kern et al., 2015). In turn, the micro-level elements of empowerment were the needs for autonomy, relatedness, and competence. Both satisfaction and frustration dimensions of basic psychological needs were considered (Deci & Ryan, 2017; Vansteenkiste & Ryan, 2013).

To operationalize the variables, support from the supervisor, emotional demands, and meaning of work, the COPSQ II PL questionnaire was used (Orlak et al., 2019), to measure basic psychological needs the Second Polish version of the Basic Psychological Needs Satisfaction and Frustration scale was used (Tabiś et al., 2021). An overall mental health index was measured using the Mental Health Continuum (Karaś et al., 2014). N = 130 employees of an IT company participated in the study. The respondents included 50 females (38.5%) and 80 males (61.5%). Structural equation modeling partial least squares (PLS-SEM) analyses were then performed (Hair Jr, Hult, et al., 2017; Hair Jr, Sarstedt, et al., 2017).

In the first step, all variables were analyzed separately as predictors of overall mental health. It was found that only emotional demands were not a significant predictor of overall mental health for IT workers.

In the second step, models including both elements of work environment and basic psychological needs were analyzed. When supervisor support, job meaning, and satisfaction of

basic psychological needs were included, basic psychological needs proved to be the only significant predictor. Individual psychological needs were then included in the analyses. When considering both environmental factors as well as the autonomy, relatedness, and competence, only the satisfaction of the need for autonomy proved to be a significant predictor of overall health.

In the third step, the dimension of frustration of basic psychological needs was included in the model. The analyses revealed that when supervisor support, sense of work, and frustration of basic psychological needs were included, frustrated psychological needs were significant negative predictors of overall health status. When considering all psychological needs, frustration of the competence and relatedness were significant negative predictors of overall health status. At the same time, sense of work was a positive predictor of overall mental health for IT workers.

In summary, this dissertation has shown that the degree of satisfaction of basic psychological needs is a significant predictor of job demands performance. With the satisfaction of the need for autonomy being a positive predictor, and the frustration of the needs for relatedness and competence being negative predictors. It was also revealed that in case of frustration of basic psychological needs, sense of work is a significant positive predictor of performance. The analyses carried out indicate that it is necessary to take into account the realization of individual potential which leads to an increased sense of subjectivity and thus explains the effectiveness of coping with work demands.

**Keywords:** *basic psychological needs, job demands and resources, empowerment, general health*