

Work engagement is a positive, fulfilling, work-related state of mind, characterized by dedication, absorption and vigor. The Job Demands–Resources (JD-R) theory is a theoretical model attempting to explain, when and why a state of engagement appears. The JD-R theory explains work engagement as an effect of interplay between job demands, job resources and personal resources. Job demands are defined as social, emotional, physical or cognitive factors, which the employees have to overcome while doing their job (e.g. emotional distress during work). On contrary, job resources are these aspects of work itself and work environment, which reduce the level of stress (e.g. interesting tasks). Job resources facilitate the achievement of goals, stimulate personal development, and help to deal with job demands and difficulties, thus, reduce stress and strain. Personal resources are defined as employees' physical, psychological or cognitive characteristics that allow them to control and impact their work environment successfully. Personal resources can take form of physical (e.g. skills), social (e.g. friendships), psychological (e.g. optimism) and cognitive (e.g. intellectual ability) resources. However, nowadays, the relationship between work engagement and cognitive characteristics of employees is completely ignored in a framework of JD-R theory.

One of the most important human cognitive characteristics is working memory capacity (WMC). WMC allows storing, processing, maintaining and updating information needed to support complex cognition processes. For instance, please imagine that you try to solve simple math equation, like $1,5 + 1,3 \times 2$. In order to do this task, you need to store all parts of equation in your memory, and then process them, according to some rules. Contemporary research studies indicate that these operations can take place thanks to the working memory system.

Capacity of working memory system determines how fast and accurate you can perform many mental operations related to the daily functioning. The wide range of research studies demonstrate an importance of WMC for higher cognitive processes, like: multitasking performance, language comprehension, proficiency in a second language, effects of task-irrelevant sound on cognition, reasoning ability, probabilistic judgment, creativity, explicative and predictive sentence comprehension.

The main assumption of planned research is that WMC in a framework on JD-R theory can be seen as a personal resource which helps to deal with job demands, and thus, is related to work engagement. It seems reasonable to consider that people with higher WMC could have some additional resources to do their job faster and more efficient, than people with lower WMC. Surprisingly, in JD-R theory the cognitive characteristics of employees are ignored and we know nothing about how the cognitive functioning of employees is related to work engagement. This study aims to fill this gap by asking the question: How is WMC, as a personal resource, related to work engagement? To find the answer, based on the assumptions of the JD-R theory and contemporary knowledge of WMC role for the job performance, following research hypotheses have been formulated: **hypothesis 1**: WMC is directly related to the level of work engagement; **hypothesis 2**: High job demands strengthen the relation between WMC and work engagement; **hypothesis 3**: WMC is related to work engagement due to working memory influence on the level of job resources; **hypothesis 4**: High WMC buffer the negative relationship between work demands and work engagement.

The planned study present novel and innovative approach to important topic of work engagement. The role of WMC in JD-R framework has not been examined so far. The results of the planned study will provide new and original knowledge which might help to better understand the nature of human functioning in a work place. Furthermore, empirical demonstration of linkage between WMC and work engagement may open up new research possibilities in employees' well-being studies. Moreover, the results of proposed study not only provide new and original knowledge, but also in a long perspective could help to design more engaging work environment. Understanding how cognitive characteristics influence work engagement might help to maximize employee's engagement and thus increase the chance for original and innovative work outcomes. In the long term, expected results may contribute to the development of society as a whole, because this development takes place mainly due to the efforts of engaged employees.