Transfer of tacit knowledge in civil construction workers: The role of Work Engagement and Personality - A systematic review

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Review question / Objective: Objective: To fill gaps in studies and provide an up-to-date and comprehensive review of the latest developments in knowledge transfer assessment in civil construction, the present study reviews articles published on the variables under study in the period 2018–2022. In particular, the main objectives of this study are to categorize the published articles relating the three variables simultaneously and then two variables at a time: “Work Engagement” and “Personality” / “Work Engagement” and “Knowledge transfer” and “Knowledge Transfer” and “Personality”. Articles must be related to the world of organizations, being complete and published in at least one of the two languages: English; Portuguese. Thus, all other publications, such as theses, books and book chapters were excluded. This extensive bibliographical research was carried out using the following databases: SCOPUS, Web of Science and PubMed. of variables such as Work Engagement and personality.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 27 March 2023 and was last updated on 27 March 2023 (registration number INPLASY202330112).

INTRODUCTION

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Rationale: Knowledge transfer is a process that plays an important role in the success of companies, it is a factor of great importance in organizations, since knowledge is considered a crucial economic resource (Mubako et al., 2017). According to Liyanage (2009, p.119), knowledge transfer is the dissemination of knowledge from one place, person or property to another, in order to satisfy the needs of an organization. Takeuchie and Nonaka (2008) state that knowledge is formed by two elements: the explicit and the tacit, the latter being related to the knowledge obtained through personal experiences and therefore more difficult to analyze. However, most previous studies investigated only one variable in relation to knowledge transfer. There is still a lack of a general picture of the implication of personality and work engagement in knowledge transfer. Work engagement has become a very popular term and a subject of great interest in the field of human resource management and positive psychology over the past 20 years. Workers with work engagement are a competitive advantage for organizations, as this is associated with favorable organizational results, enhancing business success opportunities, and contributing to corporate and individual performance, productivity and well-being of all (Kahn, 1990; Saks, 2006; Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002; Schaufeli, 2021). When we refer to personality, we pay special attention to the big five personality traits: Extroversion (positive emotions; tendency to seek stimulation and company); Conscientiousness (tendency to show self-discipline); Affability (tendency to be compassionate and cooperative); Openness (interest in art, emotion, curiosity, and variety of experiences) and Neuroticism (tendency to experience negative emotions). According to Schaufeli (2016), certain traits have different influences on the various organizational variables. Previous studies have shown that different organizations were investigated in the context of knowledge transfer, but the construction industry is not reported much and the relationships between the different topics were not clear. In addition, only two systematic reviews were found in the last five years that lack information on knowledge transfer in companies (Ding, Zhu & Yan, 2022; Perotti, Ferraris, Candelo, & Busso, 2022). However, findings from previous studies have illustrated the strong academic interest in understanding the weight of these variables in this important market. Therefore, the present study is intended to provide a systematic review of 55 empirical research articles.

Condition being studied: We will carry out a systematic review of the literature, following the PRISMA methodology (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). Literature reviews have been considered essential to assess the nature of knowledge produced in a research field, fill gaps, and enable future developments (Liberati A et al, 2009). Despite this, there are few studies that assess the nature and quality of articles published in the literature in the area of civil construction, but it is known that this is an important activity because it is composed of countless and varied professions throughout the country, and works as an important economic “engine”, with a great capacity to generate wealth and jobs, currently having 325,000 people employed in this sector in Portugal, and around 7% of the world’s population. Due to the existing knowledge gaps in this industry (Ni, et al., 2020), still unexplored by research, 55 articles on knowledge transfer, work engagement and personality are reviewed in this article, with the aim of contributing positively to the scientific and organizational. This work will provide specific tools for carrying out two studies (quantitative and qualitative), with the aim
of improving their validity. This systematic review will be registered and subsequently reviewed in terms of quality on platforms such as AMSTAR2 and INPLASY. The collection of articles will be carried out in PubMed, Web of Science and SCOPUS, based on the following criteria: published in the last 5 years (2018 to 2022), it must be complete and published in at least one of the two languages: English; Portuguese. Thus, all other publications, such as theses, books and book chapters were excluded. The final criterion was that the article had to be based on an organizational theory and/or concept.

METHODS

Search strategy: Data were obtained from Web of Science, PubMed and SCOPUS, in September/October 2022. The first search terms were the three variables simultaneously. However, this research showed few results, so a second research was carried out with two variables at a time, which were "Work Engagement" and "Personality" / "Work Engagement" and "Knowledge transfer" and "Knowledge transfer" and "Personality". Supplementary information can be seen in the following table.

Participant or population: Civil construction workers.

Intervention: It's not going to have an intervention, however, the population studied are workers of the civil construction area.

Comparator: No comparative intervention

Study designs to be included: PRISMA Systematic review.

Eligibility criteria: The article must meet predefined criteria. First, it must be from the last 5 years (2018 to 2022), complete and published in at least one of the two languages: English; Portuguese. Thus, all other publications, such as theses, books and book chapters were excluded. The final criterion was that the article had to be based on an organizational theory and/or concept. Regarding this last criterion, it was not enough for an article to mention an organizational theory or concept to be selected, but the theory and/or concept needed to be central to the research.

Information sources: An extensive literature search was performed using various databases such as SCOPUS, Web of Science and PubMed. Second, citations of identified articles were examined. Among several identified publications, only empirical studies related to work engagement, knowledge transfer and personality were selected for analysis. The literature search was primarily performed in September/October 2022 and an additional literature search was performed in November 2022.

Main outcome(s): Reading the articles showed that the set of variables analyzed in this study are relatively ignored. Of the articles analyzed (55), these provide information on the variables separately, in contexts different from the one analyzed in this study. In other words, the studies do not emphasize the importance of analyzing the interaction between work engagement, personality and knowledge transfer simultaneously. Likewise, the analysis of this civil construction context is ignored by 54 of the 55 articles, with the main focus being on organizations such as IT companies, health, schools/universities, offices, banks, among others. In fact, even in studies carried out at other intervals of years, only in rare cases are these variables reported in the context of civil construction. In most articles, for example, when analyzing the research clues provided by the authors, it was noticed that there is no mention of a series of sociodemographic variables or individual/organizational characteristics (which can probably explain the large variance in the results). In addition, it was noticed that the exploration of these variables in qualitative studies is only contemplated in two of the works.

Quality assessment / Risk of bias analysis: The risk of bias in the included studies will be assessed using the Cochrane “Risk of
bias" tool. RoB 2.0 addresses five specific domains: (1) bias arising from the randomization process; (2) bias due to deviations from intended interventions; (3) bias due to lack of outcome data; (4) bias in measuring the outcome; and (5) bias in the selection of the reported outcome. It will be independently applied by reviewers to each included study and recorded supporting information and justification for evidence of risk of bias in each domain. Any discrepancies in risk of bias assessments or justifications made will be resolved by discussion to reach consensus among reviewers, always following the guidance provided in RoB 2.0 (Section 1.3.4).

**Strategy of data synthesis:** The author individually read each article to select the relevant ones to be included, and any disagreement on inclusion and classification was discussed with the advisor until a consensus was reached.

**Subgroup analysis:** Each article was carefully read and information about the author, theme/research focus, variables, sample, investigation leads, type of study and results were recorded in Word tables.

**Sensitivity analysis:** None reported.

**Language restriction:** Only allowed Portuguese and English articles.

**Country(ies) involved:** Portugal.

**Other relevant information:** Scopus: Work Engagement; Personalidade; Transferência de conhecimento- TITLE-ABS-KEY((personality) AND (work) AND (engage*) AND(knowledge) AND (transfer OR shar*)) AND (LIMIT TO (DOCTYPE,"ar")) AND (LIMIT TO (PUBYEAR,2022) OR LIMIT TO (PUBYEAR,2021) OR LIMIT TO (PUBYEAR,2020) OR LIMIT TO (PUBYEAR,2019) OR LIMIT TO (PUBYEAR,2018)) N=7
Web of Science: Work Engagement; Personalidade; Transferência de conhecimento- TITLE=((personality work engagement) AND (knowledge share)) OR TITLE=(knowledge transfer) N=28
PubMed: Work Engagement; Transferência de conhecimento- (knowledge share) AND (work engagement) N=3
Web of Science: Personalidade; Transferência de conhecimento- (personality Knowledge share) and 2022 or 2021 or 2020 or 2019 or 2018 (Publication Years) N=18
PubMed: Personalidade; Work Engagement (personality work engagement) and 2022 or 2021 or 2020 or 2019 or 2018 (Publication Years) N=31
Scopus: Personalidade; Transfereência de conhecimento- personalidade AND knowledge AND transfer OR knowledge AND shar* N=7
Scopus: Personalidade; Transfereência de conhecimento- personalidade AND knowledge AND transfer OR knowledge AND shar* N=12
Scopus: Personalidade; Work Engagement-personalidade AND work AND engage* N=28
Web of Science: Work Engagement; Transferência de conhecimento- (personality work engagement) AND (knowledge share) OR TITLE=(knowledge transfer) OR TITLE=(knowledge share) N=14
Web of Science: Personalidade; Work Engagement- (personality work engagement) and 2022 or 2021 or 2020 or 2019 or 2018 (Publication Years) N=18
PubMed: Personalidade; Work Engagement- (personality work engagement) and 2022 or 2021 or 2020 or 2019 or 2018 (Publication Years) N=31
Scopus: Work Engagement; Personalidade; Transferência de conhecimento- TITLE-ABS-KEY((personality) AND (work) AND (engage*) AND (knowledge) AND (transfer OR shar*)) PUBLICATION YEARS -2018-2022 DOCUMENT TYPE-ARTICLE N=21
Scopus: Work Engagement; Transferência de conhecimento- work AND engage* AND knowledge AND transfer OR knowledge AND shar* N=7
Scopus: Personalidade; Transferência de conhecimento- personalidade AND knowledge AND transfer OR knowledge AND shar* N=12
Scopus: Personalidade; Work Engagement- personalidade AND work AND engage* N=28
Web of Science: Work Engagement; Transferência de conhecimento- (TITLE=(personality work engagement)) AND (TITLE=(knowledge transfer)) OR TITLE=(knowledge share) OR TITLE=(knowledge sharing)) N=14
Web of Science: Personalidade; Work Engagement- TITLE=((personality work engagement) AND (knowledge share)) OR TITLE=(knowledge transfer) N=18
PubMed: Work Engagement; Transferência de conhecimento- (knowledge share) AND (work engagement>Title) AND (knowledge transfer) AND (work engagement>Title) N=3
PubMed: Personalidade; Transferência de conhecimento- (personality>Title) AND (knowledge transfer>Title)
(personality[Title]) AND (knowledge share[Title]) N=0
PubMed: Personalidade; Work Engagement- (personality[Title]) AND (work engagement[Title]) N=7

Keywords: Knowledge transfer; Work Engagement; Personality, Civil Construction.

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