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EXPLORING PERSONAL RESOURCES AND ITS RELATIONSHIP WITH WORK ENGAGEMENT: A SYSTEMATIC REVIEW

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ABSTRACT

This systematic review of 55 empirical studies explores the relationship between personal resources and work engagement in various work environments. Its contribution is threefold: first, to identify the constructs that illustrate the ability of personal resources; second, to analyse current methods for studying personal resources and highlighting their limitations in theoretical generalisation; and third, to examine the role of personal resources to influence work engagement. The review identifies notable gaps in existing research and offers valuable perspectives to promote employee engagement

in different professional settings. Findings highlight the need for cultural and sector-specific research to understand diverse responses to job demands and resources. It suggests the integration of emerging constructs like growth mindset and emotional intelligence into these models and emphasises the need for a more varied methodological approach, including longitudinal and qualitative studies. Additionally, it highlights the need to explore the impact of social, cultural, and technological factors in this relationship. An implication from this study is that organisations can improve job satisfaction, reduce turnover intentions, and enhance overall performance by creating a supportive environment that encourages personal resources. This can be achieved through offering training and development programmes, fostering a positive work culture, and ensuring a balance between job demands and resources.

Keywords: Systematic review, personal resources, work engagement, JD-R theory.

INTRODUCTION

In today's VUCA (Volatile, Uncertainty, Complex, Ambiguous) business environment, work engagement stands out as a critical factor of employee well-being and performance. It is defined as a fulfilling cognitive and emotional condition characterised by vigour, dedication, and absorption in one's role (Bakker et al., 2023; Bakker & de Vries, 2021; Macey & Schneider, 2008; Schaufeli et al., 2002). Work engagement has a significant impact on both individual and organisational outcomes, specifically positive aspects such as job satisfaction, lower turnover intentions, and higher employee performance, while disengagement has negative consequences such as absenteeism and burnout (Bakker & de Vries, 2021; Bakker & Demerouti, 2017; Kahn, 1990; Schaufeli & Taris, 2014).

Despite the extensive research on work engagement and its known importance for productivity and high performance, there is a high level of disengagement globally, as shown by reports that only 21% of employees worldwide are engaged at work (Gallup, 2022, 2023; Keating & Heslin, 2015). The fact that the concept of work engagement is very complex and influenced by many factors is the reason why there are many in-depth studies (Kooij et al., 2020; Okun

& Arun, 2020; Peláez Zuberbühler et al., 2021; Rashid & Harif, 2016; Saleem et al., 2022; Schaufeli, 2021). On the other hand, there is also a great need for a review to identify the weaknesses and gaps in this rapidly growing literature.

Work engagement is a multidimensional phenomenon that can be influenced by a variety of factors. However, the JD-R theory, which is accepted by researchers and mostly used to explain their models of work engagement, provides a clear and useful explanation of the antecedents of work engagement, namely job demands, job resources, and personal resources (Bakker, 2011; Bakker & Demerouti, 2008, 2017; Schaufeli & Taris, 2014). Job demands refer to the various aspects of a job, whether they involve physical, psychological, social, or organisational elements that require continuous effort and come at a cost, such as extended working hours, dealing with a fussy customer, and the need to manage multiple tasks simultaneously (Bakker, 2011; Bakker et al., 2023; Bakker & Demerouti, 2007, 2008, 2014). On the other hand, various job resources such as performance feedback, rewards, teamwork, and support from superiors mitigate the impact of job demands. These resources not only make it easier to deal with work-related pressure but also enable individuals to achieve their work goals and promote their personal growth (Bakker & Demerouti, 2017; Brenninkmeijer et al., 2010; Demerouti et al., 2001; Xanthopoulou et al., 2012).

Personal resources refer to psychological or cognitive attributes associated with the capacity to effectively influence one's environment (Bakker et al., 2023; Schaufeli & Taris, 2014). The emphasis of the Job Demands-Resources (JD-R) model on the role of personal resources alongside job resources and job demands in predicting work engagement shows how important they are in well-being research (Bakker et al., 2014; Bakker & Demerouti, 2017; Tummers & Bakker, 2021). Furthermore, meta-analyses suggest that personal resources have a stronger correlation with work engagement compared to other factors (Mazzetti et al., 2021, 2023). Therefore, there is a need for an integrated synthesis of existing research that explores the details of this relationship, focusing in particular on how changing work environments might impact this relationship. This study aims to systematically review the literature, particularly regarding personal resources and work engagement, to identify critical gaps, update recent developments, and provide actionable insights to promote employee engagement in a rapidly changing work landscape.

This paper systematically reviews 55 empirical studies that focus on personal resources and their impact on work engagement. This study aims to make three contributions. First, it aims to identify the constructs that demonstrate the capacity for personal resources. Second, to examine the current methodological approach to personal resources and its shortcomings in generalising into theories. Third, the role of personal resources in relation to work engagement will be explored, e.g., whether they are independent, mediating, or moderating.

The introductory section details the components of the article and the aim of the study. The next section addresses the literature review by examining personal resources and discussing their definition, relevance, and impact on work engagement in different theoretical contexts. Following this, the techniques of the systematic review are explained in detail, including search strategies and selection criteria. The review critically analyses the impact of personal resources on work engagement, considering various moderating and mediating factors. The discussion offers practical strategies for organisations to improve work engagement through personal resources while highlighting avenues for future research. The conclusion summarises the key findings of the study and highlights the critical role of personal resources in increasing work engagement.

LITERATURE REVIEW

Work Engagement and Theories Used in Work Engagement Studies

Work Engagement is defined as a positive state of mind about the work, and characterised by vigour, dedication, and absorption (Bakker, 2011, 2017; Schaufeli, 2017; Schaufeli & Salanova, 2007). Vigour is about the energy you feel when you think about your work, such as when you wake up, you feel energised about your work (Schaufeli & Bakker, 2004). Dedication is simply something about finding value in your work. Within the context of work engagement, dedication is described as a feeling of importance, excitement, pride, and a sense of challenge (Schaufeli et al., 2002), such as deriving a profound sense of fulfillment from contributing to meaningful projects or experiencing genuine enthusiasm for overcoming professional challenges. Absorption, the final dimension of work engagement, is

distinct by complete concentration, a sense of enjoyment in tasks, a perception that time passes rapidly, and challenges in separating yourself from work (Schaufeli & Bakker, 2010). This characteristic of work engagement is the most accepted one in the literature and is used by many researchers.

Although many theories in the literature explain work engagement, some theories such as Job Demands-Resources (JD-R) theory, Conservation of Resources (COR) theory, Self-Determination theory (SDT), Self-Cognitive theory (SCT) are mostly used by researchers, and this reveals a complex understanding of the factors influencing employee well-being and performance. The JD-R model posits that work engagement is a result of the interplay between job demands and resources, and personal resources, emphasizing the role of personal and environmental factors (Bakker & Demerouti, 2017; Tummers & Bakker, 2021; Xanthopoulou et al., 2007, 2012). Similarly, COR theory underscores the significance of resource dynamics, positing work engagement as a process of resource gain and preservation (Halbesleben et al., 2014; Hobfoll et al., 2018). Both theories converge in recognising the crucial role of job resources in fostering work engagement, aligning with the shared idea that a resource-rich environment contributes to employee well-being.

On the other hand, Self-Determination Theory (SDT) and Social Cognitive Theory (SCT) bring unique perspectives to the concept of work engagement. SDT highlights the importance of intrinsic motivation and psychological needs, asserting that employees are more engaged when they experience autonomy, competence, and relatedness (Bakker & van Woerkom, 2017; Deci & Ryan, 2002; Ryan & Deci, 2000). SCT, rooted in observational learning and social influences, underscores the impact of role models and social support on work engagement (Bandura, 1989, 1999; Lyons & Bandura, 2021). While both SDT and SCT share the common ground of emphasizing the individual and social aspects of engagement, they diverge from JD-R and COR in their theoretical roots and focus, offering complementary insights into the psychological and social dimensions of work engagement.

As these theories are essential in explaining work engagement, researchers have conducted various studies on work engagement, highlighting its significance for employee well-being, performance,

satisfaction, and turnover intention, among other factors (Firzly et al., 2022; Karatepe & Karadas, 2015; Rich et al., 2010; Şahin & Çankır, 2018; Singh, 2018). In these studies, the countries and sectors examined are remarkably diverse, ranging from Pakistan to Chile and encompassing sectors such as telecommunications and healthcare. For instance, research conducted on a sample of healthcare employees in the Netherlands revealed that work engagement is mediated by self-leadership, performance, and commitment with the explanation grounded in the self-leadership concept within self-determination theory (van Dorssen-Boog et al., 2021). Furthermore, a study by Lupsa et al. (2020) found that in Romanian public and private sector employees, work engagement serves as a mediator between psychological capital, organizational justice, and health, and the motivational process outlined in the JD-R theory explained the relationships in this study.

Personal Resources and Their Relationship with Work Engagement

Personal resource is a concept related to aspects of individuals' capacity to actively shape their environment rather than passively existing in the workplace. These elements, linked to resilience, are essential components of one's identity, reflecting the individual's perception of their ability to influence and effectively manage their surroundings (Hobfoll et al., 2003). Similar to job resources, personal resources are essential in promoting personal growth and development, contributing significantly to the accomplishment of business objectives. These resources are integrated into the JD-R model through five ways (Schaufeli & Taris, 2014). Initially, as Bakker et al. (2010) demonstrated, personal resources directly impact well-being. Secondly, they act as moderators in the relationship between job characteristics and well-being, (Brenninkmeijer et al., 2010; van den Broeck et al., 2011). Thirdly, they mediate the relationship (Xanthopoulou et al., 2007), and fourthly, they are used to shape perceptions of job characteristics (Judge et al., 2000). And, finally, the JD-R model posits that personal resources serve as a third variable (Bakker et al., 2010).

Similar to the JD-R theory, the COR theory also uses personal resources and explains several research models related to work engagement. This theory is grounded in the idea that individuals possess a fixed amount

of personal resources, and their decisions to preserve or enhance these resources are influenced by motivational factors (Hobfoll, 1989). The quantity of personal resources an individual keeps at any given moment is believed to positively impact their ability to invest in a given situation (Alessandri et al., 2018). The literature gives examples of personal resources, such as psychological capital (PsyCap), and their relation to work engagement. Thus, the absolute level of PsyCap (referring to the individual's reported score at a specific moment) is an indicator of the personal resources available for investment in one's professional endeavours (Alessandri et al., 2018). Individuals with high PsyCap levels are more likely to be committed, channeling more energy into their work, and enhancing their dedication to achieving goals. This leads to deeper involvement in their work (Alessandri et al., 2018; George et al., 2022; Rozkwitalska et al., 2022).

In recent literature, personal resources and work engagement have been extensively studied, with certain constructs acknowledged as personal resources. These include PsyCap, self-efficacy, strength use, self-leadership, resiliency, self-esteem, psychological ownership, optimism, mindfulness, emotional intelligence, religiosity, intrinsic motivation, growth mindset, psychological detachment, and numerous others (Abualigah et al., 2023; Amponsah-Tawiah et al., 2023; Brennan et al., 2023; Ghosh et al., 2020; Hamel et al., 2023; Inam et al., 2021; Matsuo, 2022; Naeem et al., 2020; Nandini et al., 2022; Nehra, 2023; Saleem et al., 2022; Schilbach et al., 2023; Su et al., 2022). Notably, research in 2024 suggests personal resources predict work engagement and positive outcomes such as adaptation (Vincent et al., 2024). These personal resources have demonstrated their significance in influencing work engagement and other potential positive workplace outcomes across various sectors and countries, as evidenced by studies. Studies show that personal resources play roles in reducing the effects of job demands and enhancing the impact of job resources. For instance, in some studies, PsyCap and intrinsic motivation were found to mitigate the effects of job demands, resulting in increased work engagement (Ghosh et al., 2020; Lupsa et al., 2020; Peláez Zuberbühler et al., 2021). Additionally, other studies indicated that personal resources act as enhancers of job resources; employees with personal resources tend to make better use of job resources, leading to a heightened sense of engagement at work (Matsuo, 2022; Mubashar & Harzer, 2023).

METHODOLOGY

A systematic review was carried out to examine and detail the existing empirical studies on the relationship between personal resources and work engagement in work settings. This review followed the methodology outlined by Denyer & Tranfield (2009). The process involved searching through a scientific database using specific keywords. Research papers were selected based on established criteria, and their content was thoroughly evaluated and analysed. The insights were then categorized and presented in a coherent and structured manner.

Search Strategy

In order to find relevant research for the analysis, an electronic search was conducted based on an abstract screening. This search was carried out using two prominent databases: Scopus and Web of Science. The term ‘work engagement’ (WE) was expanded to include its other commonly used names, such as ‘employee engagement’ (Amponsah-Tawiah et al., 2023; Ghosh et al., 2020; Nehra, 2023; Rashid & Harif, 2016), and ‘job engagement’ (Ojo et al., 2021), these terms were also included in the search. The search was conducted using a combination of keywords: “personal resource” AND “work engagement” OR “employee engagement” OR “job engagement”.

Selection Criteria

To be included in the review, studies had to meet the following six requirements:

- 1) It had to be published in English
- 2) In a peer-reviewed academic journal
- 3) Within the last five years, from 2018 to 2023, which has seen an increase in empirical research on the topic
- 4) The research had to involve participants from the workforce, thus excluding reports on sports, clinical or academic groups
- 5) The relationship between personal resources and work engagement (WE) had to be explored
- 6) The study had to analyse current empirical evidence.

There was no exclusion based on the type of research method, so studies could be either quantitative or qualitative. They could include

different designs such as case studies, cross-sectional analyses, and quasi-experimental approaches. However, literature reviews, editorials, and studies of a purely theoretical nature were excluded as they did not meet the following criteria.

Data Abstraction and Synthesis

The researcher narrowed the search within the selected online databases by applying specific selection criteria:

- 1) Language
- 2) Year of publication
- 3) Peer-reviewed scientific journals

The initial search returned 239 records from Scopus and 59 from Web of Science. The researcher then reviewed the abstracts to remove duplicates, which refined the set of articles for a more thorough examination of their full texts. The researcher used the Mendeley desktop application to manage, organise, and categorise these articles. After applying the remaining criteria—4 (sample), 5 (subject area), and 6 (empirical study)—the researcher included a total of 55 studies published between 2018 and 2023 in the review. Figure 1 illustrates the search and selection process as a flowchart.

RESULTS AND DISCUSSIONS

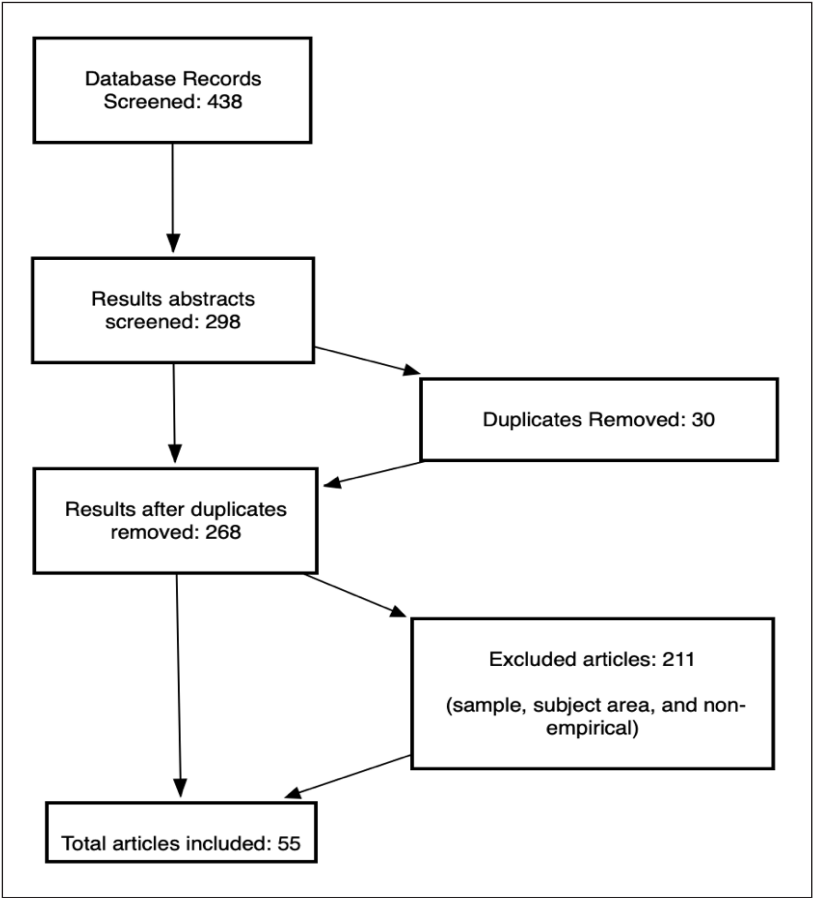
Results

After conducting extensive and detailed examinations, 55 papers were included in the analysis. After a thorough reading, analysis, and integration of these articles, four primary themes relevant to the objectives of the review emerged. The text outlines the following aspects:

- 1) Study characteristics
- 2) Theoretical underpinnings
- 3) Methods used
- 4) The relationship between personal resources and Work Engagement (WE).

Figure 1

Study Selection Flowchart



Theme 1: Study Characteristics

The review of the 55 research articles shows that studies were conducted across a diverse range of continents and countries: Asia (25 studies), Europe (18 studies), Africa (7 studies), South and North America (3 studies), Australia (1 study), and Multiple countries (1 study). China and India had the highest number of contributions, each accounting for five studies. The distribution of studies over the years is as follows: 2018 (2 studies), 2019 (3 studies), 2020 (4 studies), 2021 (12 studies), 2022 (18 studies), and 2023 (16 studies). The studies

covered various sectors, with 11 of them focusing on multiple sectors. Other noteworthy sectors were public, education, and healthcare.

Figure 2

Studies by Year

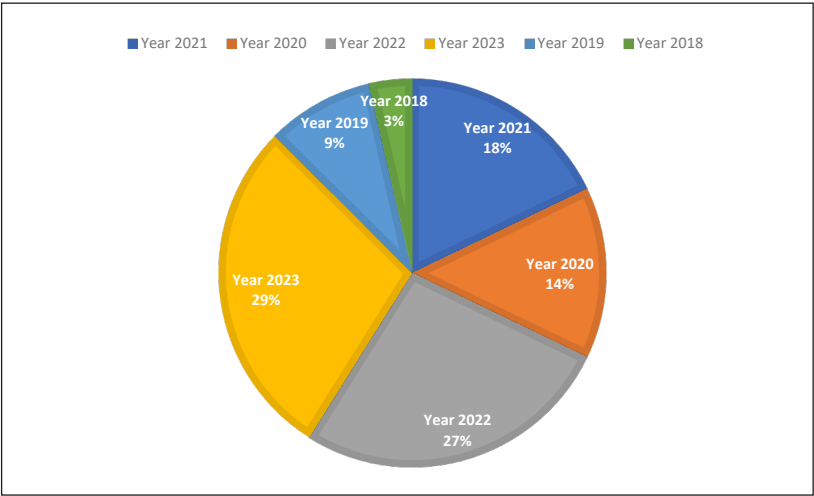


Figure 3

Studies by Country

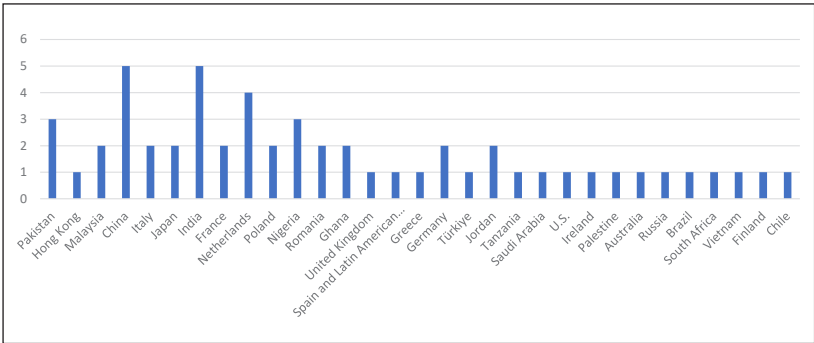


Figure 4

Studies by Sector

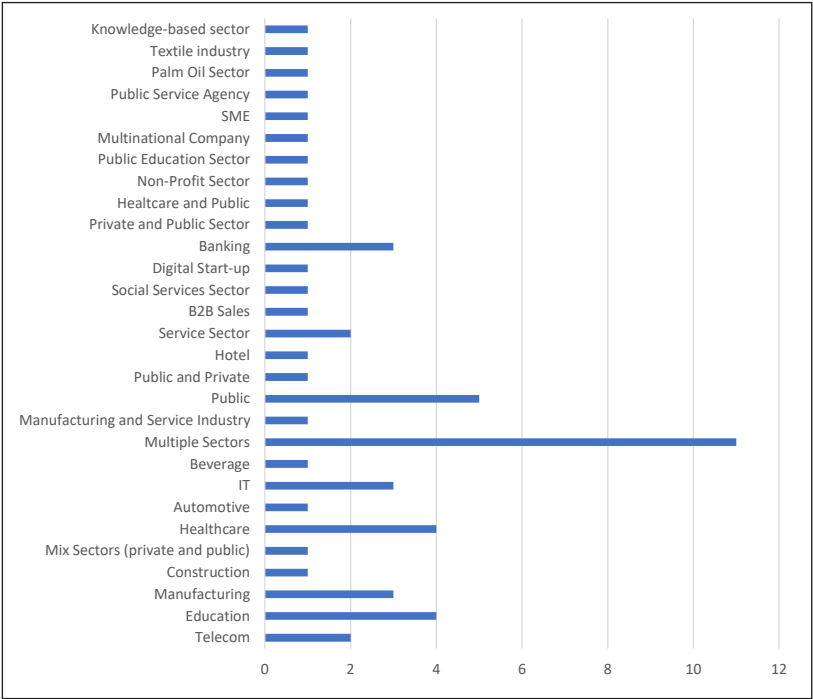


Table 1
Summary of the Review

	Authors (Citation)	Country of the Study/Sector	Variable as Personal Resource and Its Role	Unit of Analysis	Hypothesis between PR and WE	Theory Used	Method and Analysis	Sample/ Study Design
1	Inam et al. (2021)	Pakistan/ Telecom	Self- Leadership- Independent	Individual	Accepted	1. Social Cognitive Theory 2. Intrinsic Motivation Theory	Quantitative- SEM	318 middle-level manager- 2 wave data collection/ Non-experimental
2	Chan et al. (2020)	Hong Kong/ Education	Self-Efficacy- Independent	Individual	Accepted	1. Social Cognitive Theory 2. Self-Determination Theory	Quantitative -PLS- SEM	292 Teaching assistant/ Cross-sectional
3	Naeem et al. (2020)	Pakistan/ Manufacturing	Self-Efficacy- Independent	Individual	Accepted	1. Social Cognitive Theory	Quantitative- SPSS PROCESS MACRO model	373 employees working in different manufacturing organizations - 2 wave data collection/ Non-experimental
4	Saleem et al. (2022)	Malaysia/ Construction	PsyCap- Independent	Individual	Accepted	1. Social Cognitive Theory	Quantitative- SEM	345 construction workers/ Cross-sectional
5	Zhu et al. (2022)	China	Self-Efficacy- Independent	Individual	Accepted	1. Social Cognitive Theory 2. Cognitive Appraisal Theory	Quantitative- SEM LISREL	Cross-sectional - Quasi experimental

(continued)

	Authors (Citation)	Country of the Study/Sector	Variable as Personal Resource and Its Role	Unit of Analysis	Hypothesis between PR and WE	Theory Used	Method and Analysis	Sample/ Study Design
6	Giancaspro et al. (2022)	Italy/ Mix Sectors (private and public)	PsyCap- Independent	Individual	Accepted	1. JD-R Theory 2. COR Theory 3. Social Cognitive Theory	Quantitative- SEM	1219 employees/ Cross-sectional
7	Matsuo (2022)	Japan/ Healthcare	Strength Use, and Mindfulness- Independent	Individual	Accepted	1. Self-Determination Theory	Quantitative- SEM	Study 1- 459 nurses Study 2- 248 nurses 3 wave data collection Non-experimental
8	Inaneswar & Ranjit (2023)	India/ Automotive	Self- Leadership- Independent	Individual	Accepted	1. Self-Determination Theory 2. Broaden and Build Theory	Quantitative- SPSS PROCESS MACRO model	324 employees in automobile sector/ Cross-sectional
9	Nehra (2023)	India/ IT	Psychological Detachment- Independent	Individual	Accepted	1. Self-Determination Theory 2. Broaden and Build Theory	Quantitative- SEM	408 employees - 3 wave data collection. Non-experimental
10	Roussillon Soyer et al. (2022)	France/ Beverage	Autonomous Motivation- Independent	Individual	Accepted	1. Self-Determination Theory	Quantitative- SPSS PROCESS MACRO model	120 employees - 3 wave data collection/ Longitudinal study design

(continued)

	Authors (Citation)	Country of the Study/Sector	Variable as Personal Resource and Its Role	Unit of Analysis	Hypothesis between PR and WE	Theory Used	Method and Analysis	Sample/ Study Design
11	van Dorssen- Boog et al. (2021)	Netherlands/ Healthcare	Self- Leadership- Independent	Individual	Accepted	1. Self-Determination Theory 2. Self-Leadership Theory	Quantitative- Logistic Regression	195 health care professionals - 3 wave/ Longitudinal study design
12	Ghosh et al. (2020)	Japan/ Multiple Sectors	Intrinsic Motivation	Individual	Accepted	1. Self-Determination Theory 2. Unconscious thought theory 3. JD-R Theory	Quantitative- first stage moderated mediation model	288 employees/ Cross-sectional
13	Rozkwitalska et al. (2022)	Poland/ Manufacturing and Service Industry	PsyCap - Independent	Individual	Accepted	1. JD-R Theory 2. COR Theory	Quantitative- SEM	495 Polish office employees/ Cross-sectional
14	George et al. (2022)	Nigeria/ Public	Emotional Intelligence- PsyCap - Independent	Individual	Accepted	1. COR Theory 2. The cognitive- motivational- reactional theory	Quantitative - a serial mediation model	528 Public sector employees/ Cross-sectional
15	Lupsa et al. (2020)	Romania/ Public and Private	PsyCap - Independent	Individual	Accepted	1. JD-R Theory 2. COR Theory	Quantitative- SEM	193 social workers/ Cross-sectional
16	Alessandri et al. (2018)	Italy/ Multiple Sectors	PsyCap - Independent	Individual	Accepted	1. COR Theory	Quantitative- SEM	420 white-collar employees/ Cross-sectional

(continued)

Authors (Citation)	Country of the Study/Sector	Variable as Personal Resource and Its Role	Unit of Analysis	Hypothesis between PR and WE	Theory Used	Method and Analysis	Sample/ Study Design
17 Ampofo (2021)	Ghana/ Hotel	Psychological Contract - Independent	Individual	Accepted	1. COR Theory	Quantitative- SEM	274 full-time frontline employees - 2 wave data collection/ Non-experimental
18 Obschonka et al. (2023)	United Kingdom/ Multiple Sectors	PsyCap - Mediating	Individual	Accepted	1. JD-R Theory 2. Work Recovery Approach	Quantitative- SEM	348 entrepreneurs- 1002 employees- 4-wave data collection/ Non-experimental
19 Peláez Zuberbühler et al. (2021)	Spain and Latin American Countries/ Service Sector	PsyCap - Mediating	Individual	Accepted	1. JD-R Theory 2. COR Theory	Quantitative- SEM	252 employees/ Cross-sectional
20 Gupta et al. (2022)	India/ B2B Sales	PsyCap - Independent	Individual	Accepted	1. Social Cognitive Theory 2. JD-R Theory	Quantitative- SEM	530 salespeople/ Cross-sectional
21 Katou et al. (2022)	Greece/ Multiple Sectors	Personal Resource- Independent	Individual	Accepted	1. JD-R Theory	Quantitative- Multilevel SEM	1011 employees/ Cross-sectional
22 Döbler et al. (2022)	Germany/ Manufacturing	Personal Resource- Moderating	Individual	Accepted	1. JD-R Theory	Quantitative- SEM	1145 manufacturing employees/ Cross-sectional

(continued)

	Authors (Citation)	Country of the Study/Sector	Variable as Personal Resource and Its Role	Unit of Analysis	Hypothesis between PR and WE	Theory Used	Method and Analysis	Sample/ Study Design
23	Koroglu & Ozmen (2022)	Türkiye/ Multiple Sectors	Psychological Well-Being- Independent	Individual	Accepted	1. JD-R Theory	Quantitative- SEM	416 employees/ Cross-sectional
24	Su et al. (2022)	China/ Social Services Sector	Psychological Ownership - Mediating	Individual	Accepted	1. JD-R Theory	Quantitative- SEM	276 employees/ Cross-sectional
25	Borst et al. (2019)	Netherlands/ Public	Personal Resource- Independent	Individual	Accepted	1. JD-R Theory	Quantitative- Mplus SEM	9,465 employees/ Cross-sectional
26	Nandini et al. (2022)	Indonesia/ Digital Start- up	Self-Efficacy, and growth mindset - Independent	Individual	Accepted	1. JD-R Theory	Mixed Method- Semi Structured Interview, content analysis and SEM	Study 1 - 185 employees/ survey Study 2 - 17 managers/semi- structured interview Cross-Sectional
27	Pathardikar et al. (2023)	India/ Education	Self-Esteem - Independent	Individual	Accepted	1. JD-R Theory 2. Social cognitive career theory	Quantitative- SEM	630 Indian school teachers/ Cross-Sectional
28	Mubashar & Harzer (2023)	Pakistan/ Banking	Signature Strength Use - Independent	Individual	Accepted	1. JD-R Theory	Quantitative- SEM	202 top managers/ Cross-Sectional

(continued)

	Authors (Citation)	Country of the Study/Sector	Variable as Personal Resource and Its Role	Unit of Analysis	Hypothesis between PR and WE	Theory Used	Method and Analysis	Sample/ Study Design
29	Amponsah-Tawiah et al. (2023)	Ghana/ Banking	Emotional Intelligence - Independent	Individual	Accepted	1. Appraisal Theory	Quantitative- SEM	482 bank employees/ Cross-Sectional
30	Abuaigah & Koburtay, (2023)	Jordan/ Telecom	Religiosity - Independent	Individual	Accepted	1. JD-R Theory	Quantitative -PLS- SEM	338 telecom employees/ Cross-Sectional
31	Jiang et al. (2023)	Tanzania/ Private and Public Sector	Career Adaptability - Mediating Variable	Individual	Accepted	1. JD-R Theory	Quantitative- CFA	202 public schools' employees- 3-wave data collection/ Non-experimental
32	Alamri (2023)	Saudi Arabia/ Public	Public Service motivation - Moderating	Individual	Accepted	1. Self-regulatory theory 2. Public Service Motivation Theory	Quantitative- SPSS PROCESS MACRO model	306 employees in Government organisations/ Cross-Sectional
33	Kataria et al. (2023)	India/ IT	PsyCap- Moderating	Individual	Accepted	1. Social Exchange Theory	Quantitative- SEM	284 HR managers/ Cross-Sectional
34	Balogun (2023)	Nigeria/ Healthcare and Public	Self-Efficacy, and resilience - Moderating compassionate goal orientation - mediating	Individual	Accepted	1. COR Theory	Quantitative- Moderated Regression	233 nurses/ Cross-Sectional
35	Etzel et al. (2023)	U.S./ IT		Individual	not accepted	1. Ecosystem-Ecosystem theory of social motivation	Quantitative-random intercepts cross- lagged panel model	850 employees- 3-wave/ Longitudinal study design

(continued)

	Authors (Citation)	Country of the Study/Sector	Variable as Personal Resource and Its Role	Unit of Analysis	Hypothesis between PR and WE	Theory Used	Method and Analysis	Sample/ Study Design
36	Brennan et al. (2023)	Ireland / Public	optimism - Moderating	Individual	Accepted	1. COR Theory	Quantitative- Hierarchical linear regression	Study 1- 279 employees- 3-wave data collection Study 2- 46 supervisors/ Longitudinal and Cross sectional
37	Abualigah et al. (2023)	Jordan/ Multiple Sectors	Religiosity - Moderating	Individual	Accepted	1. JD-R Theory	Quantitative -PLS- SEM	367 telecom employees/ Cross-sectional
38	Abukhalifa et al. (2023)	Palestine/ Non-Profit Sector	PsyCap - Moderating	Individual	Accepted	1. JD-R Theory 2. Broaden and Builid theory	Quantitative- SEM	423 employees/ Cross-sectional
39	Edokpolor et al. (2022)	Nigeria/ Public Education Sector	Self-Efficacy- Independent	Individual	Accepted	1. JD-R Theory	Quantitative- Simple linear regression	139 lecturers/ Cross-sectional
40	Pap et al. (2022)	Romania/ Multinational Company	Stength Use - Moderating 1. Work-life segmentation preference, and 2. digital leadership- Moderating	Individual	Accepted	1. JD-R Theory 2. COR Theory	Quantitative -Hierarchical Linear Modeling	87 employees- 5-daysdata collection/ Daily diary studies
41	van Gelder et al. (2022)	Netherlands/ Multiple Sectors		Individual	1. Accepted 2. Not accepted	1. JD-R Theory	Quantitative- CFA	144 employees/ Cross-sectional

(continued)

	Authors (Citation)	Country of the Study/Sector	Variable as Personal Resource and Its Role	Unit of Analysis	Hypothesis between PR and WE	Theory Used	Method and Analysis	Sample/ Study Design
42	Wojcizuk- Turek (2022)	Poland/ Multiple Sectors	Personal Values- Moderating PsyCap - Independent Psychological Well-Being - Mediating Personal resources at home and at work - Independent and mediating	Individual	Accepted	1. JD-R Theory	Quantitative- CFA	450 knowledge workers/ Cross-sectional
43	Grover et al. (2018)	Australia/ Healthcare		Individual	Accepted	1. JD-R Theory	Quantitative- SEM	401 nurses / Cross-sectional
44	Chen & Fellenz (2020)	China/ Service Sector		Individual	Accepted	1. COR Theory	Quantitative -Hierarchical Linear Modeling	97 employees- 2-days study Daily diary studies
45	Karatepe et al. (2019)	Russia/ Banking	Self-Efficacy- Independent	Individual	Accepted	1. JD-R Theory 2. COR Theory 3. Social Information Processes	Quantitative- SEM	141 bank employees- 3-wave data collection Non-experimental
46	da Silva et al. (2021)	Brazil/ Education	Self-Efficacy- Independent	Individual	Accepted	1. JD-R Theory	Quantitative- SEM	451 teachers/ Cross-sectional
47	(Vermooten et al., 2021)	South Africa/ Education	PsyCap, and emotional intelligence - Independent	Individual	Accepted	1. JD-R Theory	Quantitative- SEM	353 teachers/ Cross-sectional

(continued)

	Authors (Citation)	Country of the Study/Sector	Variable as Personal Resource and Its Role	Unit of Analysis	Hypothesis between PR and WE	Theory Used	Method and Analysis	Sample/ Study Design
48	Truong et al. (2021)	Vietnam / SME	Personal Resources - Independent	Individual	Accepted	1. JD-R Theory 2. Social exchange theory	Quantitative -PLS- SEM	602 employees / Cross-sectional
49	Mazzetti & Schaufeli (2022)	Netherlands/ Public Service Agency	Optimism, efficacy, resiliency, and flexibility - Mediating	Team and Multilevel	Accepted	1. Self-determination theory	Quantitative- SEM	1,048 employees- 2-wave data collection/ Longitudinal study design
50	Toth et al. (2023)	Finland/ Multiple Sectors	PsyCap - Independent	Individual	Accepted	1. COR Theory	Quantitative- SEM	396 academic engineers and architects/ Cross-sectional
51	Zulkarnain et al. (2023)	Indonesia/ Palm Oil Sector	Personality Character	Individual	Accepted	1. Work Engagement Theory	Quantitative- Hierarchical Regression	782 employees / Cross-sectional
52	Yin (2023)	China/ Multiple Sectors	Paradox Mindset	Individual	Accepted	1. JD-R Theory	Quantitative- SEM	358 employees/ Cross-sectional
53	Hamel et al. (2023)	France/ Multiple Sectors	Secure Workplace attachment	Individual	Accepted	1. JD-R Theory	Quantitative- SPSS PROCESS MACRO model	472 employees/ Cross-sectional
54	Juyumaya (2022)	Chile/ Textile industry	psychological empowerment	Individual	Accepted	1. JD-R Theory	Quantitative- SPSS PROCESS MACRO model	200 employees/ Cross-sectional
55	Ojo et al. (2021)	Malaysia/ Knowledge- based sector	Resilience - Independent	Individual	Accepted	1. COR Theory	Quantitative -PLS- SEM	259 employees/ Cross-sectional

Theme 2: Theoretical Underpinnings

Among the 55 studies analysed, all studies employed theoretical frameworks to explore work engagement and personal resources. The most frequent was the JD-R (Job Demands-Resources) theory, which appeared in 31 studies. This theory posits that individuals high in personal resources are more successful in leveraging job resources, effectively dealing with job demands, and thus remaining more engaged in their work (Xanthopoulou et al., 2007). Following closely, the Conservation of Resources (COR) Theory was used in 13 studies. This theory, focusing on the resource caravan principle ('resources travel in packs'), suggests that individuals with rich personal resources tend to use these resources to acquire others, thereby helping them stay engaged in their work (Hobfoll et al., 2018). Six studies combined JD-R and COR theories to explain their models. Studies that have used both COR and JD-R theories have explained the relationship between personal resources and work engagement, by using the characteristic in the theories that personal resources, when coupled with job resources, contribute synergistically to improved work engagement.

Additionally, several studies proposed diverse models: Ryan & Deci's (2000) Self-Determination Theory was mentioned eight times, Bandura's (1999) Social Cognitive Theory seven times, and Fredrickson's (2001) Broaden-and-Build Theory three times. Other theories, each cited once, include Cognitive Appraisal Theory (Zhu et al., 2022), Unconscious Thought Theory (Ghosh et al., 2020), Social Exchange Theory (Kataria et al., 2023), Intrinsic Motivation Theory (Inam et al., 2021), Cognitive–Motivational–Reactional Theory (George et al., 2022), Appraisal Theory (Amponsah-Tawiah et al., 2023), and Public Service Motivation Theory (Alamri, 2023). Collectively, the variety of theories used could indicate the complexity of the subject matter, or it might suggest evolving perspectives in the field of work engagement and personal resources.

Theme 3: Methods Used

Almost all the articles reviewed used quantitative methods, except for one study that used a mixed method (Nandini et al., 2022). There were no qualitative studies. Structural Equation Modeling (SEM) was used in 27 of the studies, with other quantitative methods including Partial

Least Squares (PLS-SEM) and Hierarchical Linear Modeling. These findings highlight the prevalence of advanced statistical techniques in this research area.

The studies' sample sizes varied significantly, ranging from 87 in a daily diary study (Pap et al., 2022) to 9,465 participants in the largest study (Borst et al., 2019). The mean sample size was approximately 551 (SD = 1,221.20). To determine the sample size, the researcher considered 57 studies as two of the articles contained two separate studies each (Brennan et al., 2023; Matsuo, 2022).

Of the 54 quantitative studies, 46 were non-experimental and cross-sectional (eight of which collected data in two or more waves), four used a longitudinal study design, including two daily diary studies, four conducted quasi-experimental designs involving pre-post tests, and one was a non-experimental study with data collected at two or more time points. The unit of analysis was predominantly at the individual level, except for one study that assessed both multilevel and team levels (Mazzetti & Schaufeli, 2022).

Theme 4: Relationship Between Personal Resources and Work Engagement

In the studies reviewed, 31 constructs have been identified as personal resources positively related to work engagement. The table below lists these constructs according to their roles as independent, mediating, or moderating variables. The frequency of use varies; some constructs were used only once, others multiple times, and a few were referenced more than five times. Predominantly, these constructs have been examined as independent variables, though their mediating and moderating effects have also been subjected to empirical investigation. This review highlights PsyCap as the most frequently cited personal resource, referenced 14 times, making it the primary construct of interest. Self-Efficacy, a component of PsyCap, has been independently identified 9 times in the reviewed papers. The construct of 'personal resource' has been used 4 times. Resilience and Self-Leadership have each been acknowledged 3 times, indicating their perceived importance. Other constructs were mentioned only once or twice. Overall, the data suggests that PsyCap, including its constituent dimensions such as Self-Efficacy, is considered a vital personal resource, mainly due to its positive association with work engagement.

Table 2

Constructs as Personal Resources

Personal Resource	Independent	Mediating	Moderating	Total
Self-Leadership	3	0	0	3
Self-Efficacy	7	1	1	9
PsyCap	10	2	2	14
Strength Use	1	0	1	2
Psychological Detachment	1	0	0	1
Spirituality	0	1	0	1
Autonomous Motivation	1	0	0	1
Intrinsic Motivation	1	1	0	2
Emotional Intelligence	2	0	0	2
Psychological Contract	1	0	0	1
Personal Resource	3	1	0	4
Psychological Well-Being	1	1	0	2
Psychological Ownership	0	1	0	1
Growth mindset	1	0	0	1
Flexibility	0	1	0	1
Signature Strength Use	1	0	0	1
Religiosity	1	0	1	2
Career Adaptability	0	1	0	1
Public Service motivation	0	0	1	1
Mindfulness	1	0	1	2
Resilience	1	1	1	3
Compassionate goal orientation	0	1	0	1
Optimism	0	1	1	2
Work-life segmentation preference	0	0	1	1
Personal Values	0	0	1	1
Digital leadership	0	0	1	1
Personal resources at home and at work	1	1	0	2
Personality Character	1	0	0	1
Paradox Mindset	1	0	0	1
Secure Workplace attachment	1	0	0	1
Psychological Empowerment	1	0	0	1
Total	41	14	12	67

As expected, all hypotheses were accepted except for the moderating role of digital leadership in the relationship between job characteristics

and work engagement (van Gelder et al., 2022) and the mediating role of compassionate goal orientation in the relationship between job resources and work engagement (Etzet et al., 2023). The results indicate that personal resources are positively related to work engagement. Notably, personal resources are mostly identified as independent variables in relation to work engagement (N=41; Alessandri et al., 2018; Ampofo, 2021; Borst et al., 2019; Katou et al., 2022; Koroglu & Ozmen, 2022; Lupsa et al., 2020; Mubashar & Harzer, 2023; Vermooten et al., 2021), with fewer studies identifying them as mediating variables (N=14; Mazzetti & Schaufeli, 2022; Obschonka et al., 2023; Peláez Zuberbühler et al., 2021). Additionally, some research has recognised personal resources as moderating the relationship between job resources and work engagement (N=12; Abukhalifa et al., 2023; Pap et al., 2022; Wojtczuk-Turek, 2022). These findings mainly focus on the individual level, except for one study that explores both team and multilevel dimensions, including insights from both employees and managers (Mazzetti & Schaufeli, 2022). Both individual-level and multilevel studies have consistently found a positive relationship between personal resources and work engagement.

Discussion on the Findings

Theme 1: Study Characteristics

The interaction between personal resources, work engagement and cultural/sectoral context represents an interesting research landscape. While this analysis offers valuable insights from different countries and sectors, there are notable limitations. Firstly, studies from North, Central and South America and Africa are underrepresented, and a deeper understanding requires sector and culture-specific research. Investigating how cultural backgrounds influence responses to resources, alongside demographic factors such as gender and education, could enrich our understanding. However, it is not evident that there is a strong relationship between sector, country and cultural details that influence the selection and effectiveness of personal resources. For example, while sectors may prioritise resources relevant to their requirements (e.g. negotiation skills for lawyers), few sectoral or cultural nuances were identified. Studies in a Dutch public service agency emphasise resources such as communication skills and emotional intelligence for effective teamwork (Mazzetti & Schaufeli,

2022), while studies in Japan focus on mindfulness alongside self-efficacy, reflecting the cultural emphasis on focus and well-being (Matsuo, 2022). Further research that takes into account cultural, sectoral and demographic context will provide a more comprehensive understanding of the interaction between personal resources and work environments worldwide.

Theme 2: Theoretical Underpinnings

The review shows that the JD-R and COR theories are used in the majority of studies to explain these relationships between personal resources and work engagement. In these theories, personal resources are important factors in benefiting from job resources and effectively coping with job demands in order to be engaged at work. Existing studies on personal resources have predominantly focused on self-efficacy, resilience and optimism, with more recent research emphasising additional constructs such as growth mindset, strength use, emotional intelligence, religiosity, and mindfulness.

In the literature, self-efficacy, resilience, and optimism have been successfully theorised as personal resources, as shown by the JD-R theory (Mazzetti & Schaufeli, 2022; Schaufeli & Taris, 2014). However, while several other concepts have already demonstrated personal resource capabilities in recent studies, there is a lack of theoretical integration of these concepts into models of work engagement. The present study emphasises this gap. If explored in a broader context in the future, other concepts could also be theorised into these models for their personal resource capabilities, similar to how self-efficacy, resilience and optimism have been theorised. By identifying a broad range of personal resources beyond those commonly recognised, this review extends the theoretical understanding of what constitutes personal resources in the workplace.

Theme 3: Methods Used

In this review, with the exception of one study, it is clear that the studies are mostly quantitative, and the data are collected cross-sectionally. The use of cross-sectional studies limits the possibility of establishing causality and generalisability. This necessitates a more diverse methodological approach, including longitudinal studies, qualitative studies, and daily diary methods, to broaden our understanding of these

workplace resources. Furthermore, the dominance of quantitative studies points to a gap. Qualitative research is needed to explore why people in countries with very low engagement levels may not be fully engaged in today's business world. This can help to understand how change in the business world is experienced in terms of employee wellbeing.

Theme 4: Relationship Between Personal Resources and Work Engagement

The results of this study indicate that personal resources have a significant positive influence on work engagement. This systematic review shows that personal resources are primarily seen as independent variables, but their mediating and moderating roles are also recognised. Furthermore, today's technology-driven business environment and rapidly growing AI technologies may impact the relationship between personal resources and work engagement which is an under-researched area.

As personal resources play an independent and mediating role, some moderating factors can also be explored, such as some social, cultural, and religious factors. These further studies can broaden the understanding of how these factors play a role in this equation of resources and engagement.

CONCLUSION, PRACTICAL IMPLICATIONS, AND LIMITATIONS

This research highlights the multifaceted nature of personal resources in influencing work engagement. It identifies a range of personal resources, with PsyCap being the most prominent. This review implies that recognising and promoting personal resources among employees to increase work engagement is important for productivity and higher performance. Organisations can improve employee engagement by creating a supportive environment that encourages these personal resources. This approach can include offering training and development programmes, creating a positive work culture, and ensuring a balance between job demands and resources. By focusing on personal resources, organisations can potentially increase job satisfaction, reduce turnover intentions, and improve overall performance.

This study makes an important contribution to research by expanding the scope of personal resources considered for work engagement and proposing a more complex interaction model between these resources and engagement. As study characteristics, it is recommended to investigate the role of demographic factors such as gender, age, and education. Theoretically, this study extends the theoretical understanding of what constitutes personal resources in the workplace by identifying a wide range of personal resources beyond those commonly recognised. Methodologically, future research should explore longitudinal and qualitative methods, examine the impact of digitalisation, technology and AI, and consider cross-cultural differences. The studies reviewed rely largely on quantitative research, particularly cross-sectional studies, which limits the ability to establish causal relationships between personal resources and work engagement. Based on the relationship between personal resources and work engagement, this review shows that these resources act not only as independent factors, but also as mediators and moderators, which broadens our understanding of their role in the workplace.

The paper's scope is limited to peer-reviewed academic journals published in English within a specific timeframe, which may overlook relevant research published in other languages or outside academic channels. This could potentially limit the diversity and comprehensiveness of the findings.

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