

The Impact of Mindfulness-based Initiatives on Employee
Engagement: An Integrative Review

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Abstract

This review synthesises and evaluates two decades of empirical research on mindfulness-based interventions (MBI) and general mindfulness in the workplace environment to reveal key insights into its relationship with employee engagement. To offer an understanding of MBIs and how they impact employee engagement to inform research and practice, 25 peer-reviewed empirical journal articles are reviewed. The results are organised into an integrated framework showing direct relationships between MBI, general mindfulness, and employee engagement, and indirect relationships through mediator variables. The findings reveal that existing research on MBI and mindfulness is disproportionately focused on employee well-being-related outcomes and performance-related outcomes other than employee engagement – despite evidence that MBI and mindfulness could crucially impact how engaged employees are with their work tasks. Overall, MBI and mindfulness have direct and indirect relationships with employee engagement. Although developed for the workplace context, the proposed integrated framework can be applied to a range of industries and professions.

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Attestation of Authorship

“I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor used artificial intelligence tools or generative artificial intelligence tools (unless it is clearly stated, and referenced, along with the purpose of use), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.”

Signed:

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Chapter 1: Introduction

"The best way to capture moments is to pay attention. This is how we cultivate mindfulness.

Mindfulness means being awake. It means knowing what you are doing." – Jon Kabat-Zinn (Founder of Mindfulness-Based Stress Reduction therapy)

In this day and age, the workplace landscape is heavily affected by increased globalisation, complexity, and a changing environment that can result in a heavy workload for employees, often making it difficult for employees to remain actively focused in their tasks. Mindfulness-based interventions (MBI) have garnered an explosion of interest in the healthcare domain and clinical settings as a means to promote mindfulness in individuals to help alleviate well-being challenges such as depression, anxiety, and stress (Kabat-Zinn, 2003). MBI as a term is not well-defined in the existing body of research, but is often introduced by scholars through its features and characteristics. MBI refers to systematic and tailored trainings designed to develop and enhance mindfulness levels in individuals through formal and informal mindfulness exercises and practices delivered by a qualified instructor (Crane et al., 2017). Recent decades have seen a rising scholarly interest into the application of MBI in the workplace setting in the fields of management, services, education, and hospitality for the benefits associated with employee well-being outcomes such as reduced stress and reduced job burnout, and performance outcomes such as job satisfaction, productivity and task performance (Donders et al., 2018; Fazia et al., 2021). While there is some evidence within this stream of research to suggest MBI leads to an increase in individuals' overall cognitive functioning and working memory capacity (Aikens et al., 2014; Zeidan et al., 2010), its impact on employee engagement is not well understood.

Examining the relationship between MBI and employee engagement would be crucial for both organisations and employees while dealing with the complexities in times of organisational crisis and change (Rich et al., 2010). Furthermore, the current mindfulness literature landscape contains a broad and fragmented cross-section of research that, in some places, isolates MBI and mindfulness as two

different constructs and in others, intertwines the two within the same category. The value and necessity of this research lies in addressing these gaps by focusing on the impact of MBI on employee engagement as it pertains to workers and workplaces. An integrative review method would be useful in this review to address this gap since the purpose of an integrative review is to enable the synthesis of knowledge from across research approaches in a fragmented field (Cronin & George, 2023). Integrative reviews are a systematic and rigorous method for synthesising existing knowledge on a particular topic, specifically valuable when dealing with fragmented research areas (Whittemore & Knafl, 2005). The objectives of this integrative review are twofold. Firstly, this review aims to provide an overview of the relationships between MBI, mindfulness, and employee engagement. Secondly, this review aims to critically synthesise and evaluate extant findings to advance new insights and develop an integrated framework for investigating the unique impact of MBI on the mindfulness levels of employees in the workplace, ultimately providing insight into how this impacts their engagement to work. To address the research objectives, this integrative review will be guided by the following research questions: (1) How have researchers studied mindfulness-based initiatives and employee engagement? (2) What are the key findings of research on mindfulness-based initiatives and employee engagement? (3) What are the underlying assumptions of research on mindfulness-based initiatives and employee engagement? (4) What are the limitations of research on mindfulness-based initiatives and employee engagement?

An integrative review on this topic is warranted to provide a holistic understanding of how MBIs influence employee engagement and offers recommendations for organizations seeking to enhance workplace culture and performance. The findings of this review could aid in developing effective strategies for employees' mental health. The proposed integrated framework could serve as a roadmap for implementing MBI initiatives across various occupational sectors including marketing, hospitality and manufacturing. Findings from this review could also provide organisation leaders with evidence for designing MBIs in a way that best suits their standards of time and cost-effectiveness.

Overall, this integrative review can facilitate a deeper understanding of the interactions and relationship among MBI, mindfulness, and employee engagement.

Chapter 2: Literature Review

Chapter 2 presents a literature review on the related topics, including an overview of mindfulness, employee engagement, and the relationship between MBI, mindfulness, and employee engagement in the workplace setting.

2.1 Mindfulness

Mindfulness is an ancient concept, with roots tracing back to Buddhist lines of practice dating back over two millennia (Brown et al., 2007). Bishop et al. (2004) define mindfulness as a process that allows an individual to regulate their attention to (1) bring awareness to their current experience, and (2) bring a quality of curiosity, openness and acceptance when relating to that experience. The construct of mindfulness has gained attention beyond the fields of philosophy and religious studies into the domain of public healthcare, psychology, education, and workplace settings in recent years (Dane, 2011; Good et al., 2016; Johnson et al., 2020). To date, most of the existing literature on mindfulness in the workplace setting has examined the relationship between mindfulness and (1) job-related outcomes and (2) well-being-related outcomes. Job-related outcomes measured include burnout, task performance, turnover intention, job satisfaction, and productivity (Dsouza et al., 2023; Hyland et al., 2015; Thinh-Van et al., 2022). Well-being-related outcomes include mental health, well-being, and stress (Johnson et al., 2020; Slutsky et al., 2019; Van Gordon et al., 2014). Researchers and scholars alike have pointed out the crucial role of mindfulness in the workplace.

While mindfulness has garnered popularity in recent decades, there has been a rich scholarly dialogue on how to define, let alone operationalise, mindfulness across all contexts (Grossman, 2008). Although scholars from various disciplines have brought forward different definitions, there is a degree of correspondence across this wide body of definitions that comes down to three common elements. Firstly, mindfulness is a state of present-moment awareness rather than a state where an individual focuses on experiences arising from the past or is oriented towards the future (Brown & Ryan, 2003).

Secondly, while in a state of mindfulness, an individual pays close attention to internal and external phenomena and is attentive to a wide range of internal and external stimuli, thus creating a wide attentional breadth (Brown & Ryan, 2003; Dane, 2011). Internal phenomena include stimuli associated with thoughts, feelings, and physical bodily sensations, and external phenomena include sights, smells, sounds and events that occur in one's physical and social surroundings. Thirdly, mindfulness involves an open and accepting attitude towards each experience, whether positive or negative, with a "non-judgement orientation to experience" (Lau et al., 2006, p. 1447). These three elements have been explored as facets or features of mindfulness in mindfulness literature that can be promoted or enhanced in individuals using MBI.

2.2 Employee engagement

Employee engagement has garnered significant attention within the organisation and management literature (Schaufeli, 2013; Taneja et al., 2015). Effective employee engagement is an important construct in promoting workplace success (Kahn, 1990; Malinowski & Lim, 2015). In addition, employees' psychological connection with their work is critical in enhancing organisational success (Bakker et al., 2011). Kahn (1990) was one of the first scholars to theorise work engagement, describing engaged employees as individuals who are fully (physically, cognitively, and emotionally) connected with their work roles. This multidimensional motivational view of employee engagement was supported by Rich et al. (2010), who noted that individuals in an engaged state invest their hands, heads and hearts into their work performance.

Another influential definition of employee engagement is rooted in the literature on job burnout, which views engagement as the opposite of burnout (Schaufeli et al., 2002). According to this definition, employees are engaged when they have high energy levels, are enthusiastic about their work, and are fully immersed in their work. Based on the above definitions, employee engagement can be considered a multi-faceted construct that encompasses the levels of energy, willingness, and

presence with which employees bring to their jobs. While evidence from engagement literature suggests that factors like leadership, working conditions, and job complexity influence or predict employee engagement levels (Christian et al., 2011; Macey & Schneider, 2008), there is a need for closer examination of other factors linked to the proactive role that individuals can play in boosting their work engagement. As a construct defined by how energetic, enthusiastic, or present employees are with their work, employee engagement would be crucially influenced by factors linked to employees' personal state of being.

2.3 Relationship between mindfulness, MBI and employee engagement

Whilst research into the relationship between mindfulness and employee engagement has been less explored in contrast to the relationship between mindfulness and other job-related and well-being-related outcomes, there is some evidence to suggest a direct link between the two constructs (Brown & Ryan, 2003; Dane, 2011; Rich et al., 2010). Most of this evidence comes from research centred within the business landscape, in the occupational sectors of management, service, hospitality, and education (Dane, 2011; Gabel-Shemueli et al., 2023; Liu et al., 2020; Sunaryo et al., 2023). In organisation management, mindfulness has been acknowledged as a useful tool in helping individuals pay stable and focused attention to information associated with work tasks (Dane, 2011). A study by Malinowski and Lim (2015) substantiated mindfulness as a predictor for work engagement and employee general well-being, casting light on how mindfulness enhances optimism and hope in individuals that directly impact their levels of engagement. Other empirical studies have also found that mindfulness and mindfulness training positively affect employee engagement (Leroy et al., 2013; Michel et al., 2021).

Perhaps most of the noteworthy exploration into mindfulness and engagement literature in workplace settings involves using MBI. The increased scientific attention in the research and practice of MBI began with the work of Dr. Jon Kabat-Zinn, who was a postdoctoral medical student at the University of Massachusetts Medical School in 1979 (see Kabat-Zinn, 1982). Kabat-Zinn initially

developed a mindfulness program designed to cater to patients suffering from chronic pain and illness, which he later refined with his colleagues to develop the Mindfulness-Based Stress Reduction program (MBSR). MBSR is an eight-week program where individuals meet for two and a half hours once a week, with an additional full-day class between the sixth and seventh weeks. The training program consists of mindfulness-based activities such as breath awareness exercises, visualisation meditations, yoga exercises, and body awareness scans, delivered by a trained and qualified instructor. Additionally, individuals are presented with guidelines to exercise present-moment awareness for at least 45 minutes daily in mindful practice (Johnson et al., 2020). Following the success of MBSR in clinical settings, in recent years, a variety of MBIs have emerged as an intervention tool in the organisational workplace setting to promote mindfulness levels in individuals, leading to a variety of physical-, psychological-, and performance-related benefits (Hyland et al., 2015).

Existing mindfulness research addresses the efficacy of the different adaptations of the MBSR, where the content and format of the MBI have been adapted from the traditional MBSR and modified to make them more conducive to the workplace setting. Primarily, modifications relating to the duration of the mindfulness training and the delivery of the training have been implemented by organisations, due to concerns that the traditional MBSR could not realistically be applied owing to time constraints in the workplace environment. Variations of the MBSR include shortened mindfulness programs where the course is delivered for two to four weeks rather than the traditional eight-week program (Hyland et al., 2015). With the modified MBI, delivery modes have diversified including online or app-based training, instead of in-person attendance (Lu et al., 2021). While these modifications allow for a more viable and time- and cost-effective solution for organisations, concerns have been raised about the sustainability of the programs' results in terms of how successful they are (Hyland et al., 2015; Van Gordon et al., 2014).

In general, most of the existing mindfulness literature exploring MBI in workplace settings has measured the impact of MBI on employee well-being, stress, and burnout (Hülshager et al., 2013; Think-Van et al., 2022; Wolever et al., 2012). Only select studies have investigated the different versions of MBI and their impact on employee engagement. These studies point to benefits associated with MBSR, resulting in significantly increased attention and awareness in individuals (Jha et al., 2007), improvements in working memory capacity (Aikens et al., 2014), and work engagement (Chaskalson, 2011). Further, research also suggests that even modified, brief mindfulness interventions have benefits associated with individuals' overall cognitive functioning and working memory capacity (Zeidan et al., 2010). As an attention-related concept, mindfulness from MBI could have crucial implications for employee engagement.

In summary, several reasons support the application of MBI in the workplace setting: (1) the suitability of modified MBI for workplace settings in terms of cost-effectiveness and time-effectiveness; (2) the benefits of MBI associated with employee engagement and other performance-related outcomes; and (3) the benefits of MBI associated with employee well-being and other psychological outcomes. However, there is much discourse in current research on the effectiveness and efficacy of the shortened MBI variations and their impact on employee engagement. More specifically, the impact of the different modifications of MBI on mindfulness levels in employees and the effect this would have on their levels of engagement in organisational settings has not been adequately recognised. It is also interesting to note that most mindfulness and MBI literature has measured its impact against various outcomes rather than focusing on employee engagement as a sole construct. Therefore, by providing an integrative literature review, this study thoroughly examines the literature on mindfulness, MBI and its effects on employee engagement to provide more critical insight into the relationship between these constructs that can benefit the field of research and practice.

Chapter 3: Methodology

In this study, I conduct an integrative review to search for and assess the current state of scholarly research on the use of MBI in the workplace setting. Integrative reviews are tools for synthesising research to provide a holistic understanding of a particular phenomenon (Russell, 2005). Through this process, a well-prepared integrative review can precisely present a comprehensive view of current literature on the phenomenon. An integrative review follows a systematic process and synthesises literature from various streams or fields of research to address phenomena relevant to a particular topic (Toronto, 2020). This study uses an integrative review to synthesise the knowledge from previous studies on MBI and their impact on employee engagement in the workplace, following the Preferred Reporting Instrument for Systematic Reviews and Meta-analyses (PRISMA) guidelines for conducting a literature review (Page et al., 2021). The main steps in the review process include developing the research questions (RQs), identification, screening, assessment for eligibility, and data analysis.

To further elaborate on the PRISMA guidelines followed, the method for this integrative review consisted of these five main steps: (1) developing the RQs; (2) identification - developing a search strategy for identifying relevant literature and conducting a comprehensive search of academic databases; (3) screening - screening and selecting literature based on predefined criteria; (4) assessment for eligibility - assessing the quality of the included studies; (5) data analysis - extracting, analysing, interpreting, and synthesising data to formulate conclusions. According to Toronto (2020), a crucial step in the integrative review process is the development of research questions that should be broad and well-defined to inform the search criteria and data analysis process used in the review. The research questions for this dissertation were formulated as follows: How have researchers studied mindfulness-based initiatives and employee engagement? What are the key findings of research on mindfulness-based initiatives and employee engagement? What are the underlying assumptions of research on

mindfulness-based initiatives and employee engagement? What are the limitations of research on mindfulness-based initiatives and employee engagement? These research questions guide the identification of relevant literature and help establish the scope of the literature review.

In the second step, a comprehensive search was conducted on electronic databases as sources to identify relevant studies. It is recognised that the use of MBIs in the workplace setting is being investigated by scholars from a variety of disciplines (e.g. management, psychology, behavioural change, human resources), and thus acknowledged that this research can be enhanced by synthesising research findings across varied disciplines to generate new insights (Cronin & George, 2023). To this end, for the literature search, I examined electronic databases with streams of literature from various fields to source relevant studies. Since the focus of this integrative review was academic, the literature search focused on scholarly articles that informed the academic understanding of the role of MBI and their impact on employee performance in the workplace setting. To take a broad, scholarly, multidisciplinary approach, I searched for articles published in journals that specialise in management, psychology, human resources, and organisational behaviour. The electronic databases searched to yield a broad literature sample included: Scopus, PsycInfo, and EBSCOhost, the latter because it is integrated with other major databases such as Business Source Complete, Science Direct, and others.

A search term strategy, including different keywords related to MBI, employee engagement, and the workplace setting, was established to ensure adequate coverage of articles through the search of electronic databases. To ensure consistency in the search performed across all electronic databases, the same search term strings were used for every database, only modifying the search term strings to punctuation, based on the requirements of different databases where necessary. The search term strings used were: ("mindfulness" OR "mindfulness-based intervention" OR "mindfulness-based training" OR "mindfulness training" OR "mindfulness intervention" OR "mindfulness initiatives" OR "mindfulness program" OR "mindful employees" OR "workplace mindfulness" OR "mbi") AND ("employee

engagement" OR "work engagement" OR "workplace engagement" OR "engagement" OR "task engagement" OR "task performance" OR "employee performance") AND ("workplace" OR "organisation" OR "work environment"). The search time frame was limited to articles published between 2012 and 2024 to ensure the focus was maintained on findings relevant to the past 12 years. The first search results returned 591 articles; upon removing duplicates, there were 341 articles remaining (Details in **Figure 1**).

In the third step, the selected articles were screened by reading titles and abstracts to exclude articles with content not in line with the research problem, based on predefined inclusion and exclusion criteria. Melillo (2020) states that effective inclusion and exclusion criteria ensure the sample selected is manageable and help the researcher identify relevant articles for their review. The conditions of the inclusion criteria were: (1) peer-reviewed journals to ensure the articles contain an adequate theoretical background on the specific topic; (2) the articles must address the role of MBI against employee engagement or other closely-related parameters such as task performance, in the professional workplace. For the exclusion criteria, the following conditions were applied: (1) articles not written in English; (2) articles published before the year 2012; (3) articles that were not relevant, for instance, articles that did not specifically focus on the relationship between MBI and employee engagement or task performance (Jahanzeb et al., 2020; Salem et al., 2023; Zheng et al., 2022). After applying the inclusion and exclusion criteria, 49 articles were identified for further evaluation.

In the fourth step, the screened articles were passed through an eligibility assessment by reading article abstracts and, where necessary, full texts. The eligibility assessment was conducted to ensure the articles evaluated were not impacted by methodological flaws. The criterion for this stage was to ensure there was no risk of bias in the articles selected based on the methodology used in the articles (to avoid inclusion of articles where the sample used in the article was not appropriate to the research scope of

this integrative review). An additional 24 articles were excluded at this stage on the basis that: (1) they were

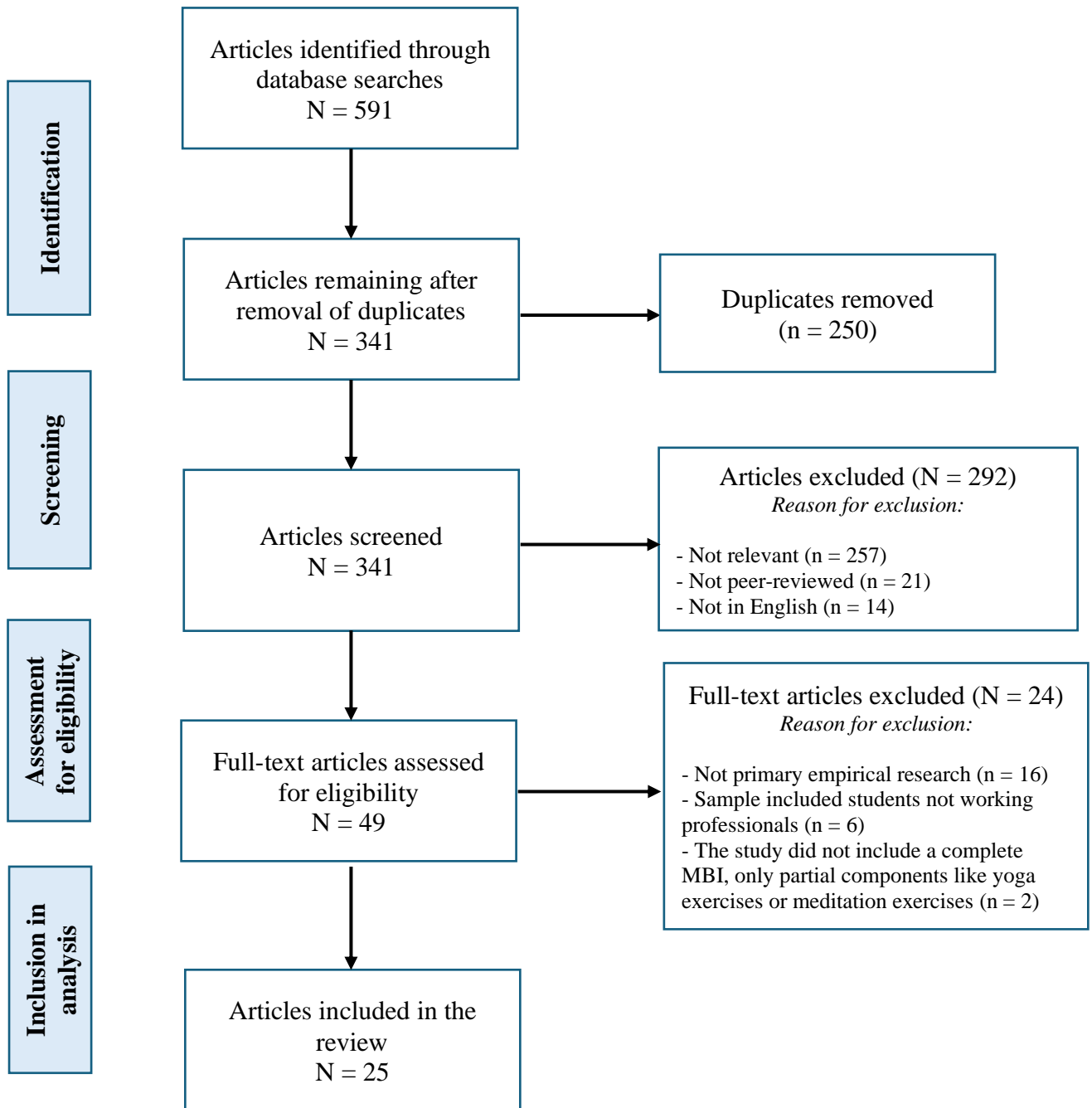


Figure 1. Flowchart of article selection

review papers that did not perform primary empirical research on the topic; (2) the empirical findings were based on a sample of individuals who did not match a professional work environment, for instance, the sample selected included students from a university background rather than working professionals (Dane, 2021; Karing, 2024); or (3) the empirical study included the use of trainings that were not specific to MBI, for example, studies examining the impact of only yoga exercises or meditation exercises rather than a comprehensive MBI (Hohnemann et al., 2024; Sreekumar et al., 2019). Upon exclusion of the ineligible articles at this stage, a sample of 25 articles remained for analysis. Only 25 articles were included for this review because these were the only articles that either exclusively explored the relationship between mindfulness, MBI and employee engagement; or studied employee engagement as one dependent variable among other dependent variables.

In the final step, the remaining 25 articles were extracted and organised for analysis and synthesis to answer the research questions for this review. **Table 1** presents a summary list of the empirical studies selected for this review. Data was extracted from the empirical studies to include key characteristics from each study in an Excel spreadsheet table to summarise and code information based on the purpose, design, method, and findings. Information recorded in the table included the article title, publication year, article type, research context, theoretical foundation, research method, key findings, and implications. The data extracted in the table enables the first two research questions to be answered: (1) How have researchers studied MBI and employee engagement; and (2) What are the key findings of research on MBI and employee engagement? I then analysed the data for similarities, patterns, and themes relevant to the research questions (Toronto, 2020). For instance, data was coded from the studies relating to the features of MBI, such as duration of MBI and mode of delivery, as well as the dependent variables studied. Where traditional MBI such as the MBSR or MBCT were used, they were combined in the same category; and where the MBI was modified based on the mode of delivery or duration of the intervention (e.g. training delivered online or training duration was

shortened to fewer weeks), they were assigned to different categories. This analysis and synthesis helped answer the last two research questions: (3) What are the underlying assumptions of research on MBI and employee engagement; and (4) What are the limitations of research on MBI and employee engagement?

The findings that provide a refined understanding of the impact of MBI on employee engagement in the workplace are reported in **Chapter 4**.

No.	Title	Author	Year	Journal	Location of Study	Study Method	Key Measures (EE: employee engagement)
1	Benefits of mindfulness at work: The role of mindfulness in emotion regulation, emotional exhaustion, and job satisfaction	(Hülshager et al.)	2013	Journal of Applied Psychology	Europe (Netherlands + Belgium)	Quantitative	- mindfulness - emotional regulation - emotional exhaustion - job satisfaction
2	A workplace mindfulness intervention may be associated with improved psychological well-being and productivity. A preliminary field study in a company setting	(Donders et al.)	2018	Frontiers in Psychology	not provided	Quantitative	- MBI - psychological well-being - productivity
3	The influence of individual and team mindfulness on work engagement	(Liu et al.)	2020	Frontiers in Psychology	China	Quantitative	- individual mindfulness - team mindfulness - EE
4	Mindfulness, authentic functioning, and work engagement: A growth modeling approach	(Leroy et al.)	2013	Journal of Vocational Behaviour	not provided	Quantitative	- mindfulness - authentic functioning - EE
5	Examining the effect of different facets of mindfulness on work engagement	(Gunasekara & Zheng)	2019	Employee Relations	Australia, Sri Lanka	Quantitative	- mindfulness - facets of mindfulness - EE
6	Mindfulness at work: positive affect, hope, and optimism mediate the relationship between dispositional mindfulness, work engagement, and well-being	(Malinowski & Lim)	2015	Mindfulness	36 Western countries	Quantitative	- dispositional mindfulness - facets of mindfulness - EE - general well-being
7	An app-based workplace mindfulness intervention, and its effects over time	(Lu et al.)	2021	Frontiers in Psychology	Australia, India, Indonesia, New Zealand, & U.S.A.	Quantitative	- MBI - app based - emotional exhaustion - work engagement - job satisfaction
8	Mindfulness training improves employee well-being: A randomised controlled trial	(Slutsky et al.)	2019	Journal of Occupational Health Psychology	U.S.A	Quantitative	- MBI - well-being - attentional focus at work (EE) - productivity - job satisfaction - work-life conflict
9	How does mindfulness affect employee attitude and behavior toward work-related outcomes?	(Sunaryo et al.)	2023	Tourism & Hospitality Management	Indonesia	Quantitative	- mindfulness - EE - creativity - performance - hotel industry
10	The role of perceived workplace safety practices and mindfulness in maintaining calm in employees during times of crisis	(Thin-Van et al.)	2022	Human Resource Management	Vietnam	Mixed-Methods	- Perceived workplace safety practices - Mindfulness - Burnout
11	Mindfulness and positive activities at work: Intervention effects on motivation-related constructs, sleep quality, and fatigue	(Michel et al.)	2021	Journal of Occupational & Organisational Psychology	Germany	Quantitative	- modified MBI - EE - hope - sleep quality fatigue

12	The interconnections of workplace spirituality, mindfulness, subjective well-being, and task performance: A study using structural equation modeling	(Alruwayti & Sulphay)	2023	Problems and Perspectives in Management	Saudi Arabia	Quantitative	- mindfulness - workplace spirituality - subjective well-being - task performance
13	Fusing character strengths and mindfulness interventions: Benefits for job satisfaction and performance	(Pang & Ruch)	2019	Journal of Occupational Health Psychology	Switzerland	Quantitative	- modified MBI - well-being - perceived stress - job satisfaction - task performance
14	A workplace mindfulness training program may affect mindfulness, well-being, health literacy and work performance of upper-level ICT-managers: An exploratory study in times of the COVID-19 pandemic	(Schubin et al.)	2023	Frontiers in Psychology	Germany	Mixed-Methods	- modified MBI - well-being - work performance
15	It's so boring – or is it? Examining the role of mindfulness for work performance and attitudes in monotonous jobs	(Wihler et al.)	2022	Journal of Occupational & Organisational Psychology	Mexico	Quantitative	- mindfulness - monotonous jobs boredom - task performance
16	Mindfulness is associated with lower stress and higher work engagement in a large sample of MOOC participants	(Bartlett et al.)	2021	Frontiers in Psychology	130 countries	Quantitative	- modified MBI - EE - perceived stress
17	Being present: A longitudinal study on the role of mindfulness on engagement and burnout in teachers	(Gabel-Shemueli et al.)	2023	Academia Revista Latinoamericana de Administración	Peru	Quantitative	- mindfulness - work engagement - burnout
18	The impact of an organisational-level mindfulness-based intervention on workplace social capital and psychological safety: A qualitative content analysis	(Bonde et al.)	2023	Frontiers in Psychology	Denmark	Qualitative	- modified MBI - workplace social capital - psychological safety
19	Mindfulness meditation training in an occupational setting: Effects of a 12-weeks mindfulness-based intervention on wellbeing	(Fazia et al.)	2021	Work	Italy	Quantitative	- modified MBI - psychological well-being - perceived stress - self-compassion
20	Mindfulness goes to work: Impact of an online workplace intervention	(Aikens et al.)	2014	Journal of Occupational and Environmental Medicine	U.S.A	Quantitative	- modified MBI - EE - stress - resilience - vigor - well-being
21	From mindfulness to work engagement: The mediating roles of work meaningfulness, emotion regulation, and job competence	(Chen et al.)	2022	Frontiers in Psychology	China	Quantitative	- modified MBI - EE - work meaningfulness - emotional regulation - job competence
22	Mindfulness at work: resource accumulation, well-being, and attitudes	(Zivnuska et al.)	2016	Career Development International	U.S.A	Quantitative	- mindfulness - EE - well-being - organisational attitudes
23	Mindfulness can make you happy-and-productive: A mindfulness controlled trial and its effects on happiness, work engagement and performance	(Calcagni & Salanova)	2018	Journal of Happiness Studies	Spain	Quantitative	- modified MBI - EE - happiness - performance

24	Differential effects of mindfulness-based intervention programs at work on psychological wellbeing and work Engagement	(Calcagni et al.)	2021	Frontiers in Psychology	Spain	Quantitative	- MBI - EE - well-being - performance
25	Mindfulness in an age of digital distraction and the effect of mindfulness on employee engagement, wellbeing, and perceived stress	(Khan et al.)	2020	Global Business and Management Research	Malaysia	Quantitative	- mindfulness - EE - perceived stress - well-being

Table 1. *List of articles used in this review*

Chapter 4: Findings

The following chapter discusses the findings of this integrative literature review. Firstly, the journal, year and method presents a descriptive summary of all the reviewed empirical studies. An overview of the empirical articles is put forward to highlight and discuss the key descriptive attributes of the studies according to the method, study context, and industry context. Next, different definitions of mindfulness and theories used in the literature are presented. Finally, a proposed integrative framework is introduced to highlight the relationship between MBI, mindfulness, and employee engagement, along with the mediators examined in previous studies to develop a comprehensive understanding of the literature. This is followed by an analysis of the relationships between MBI, mindfulness, and employee engagement, as well as the mediators used in the reviewed studies.

4.1 Overview of reviewed studies

In sum, 25 peer-reviewed articles were identified and published from 2013 to 2023. The first journal article was published in 2013. From 2013 to 2018, seven articles investigated the relationship between MBI and employee well-being and performance-related outcomes. The number of articles has shown a significant increase in recent years, with 18 articles published in the five years from 2019 to 2023, nearly triple the number of the previous period. A total of 22 out of the 25 articles used quantitative methods. (**Table 2** illustrates the descriptive summary of the journal articles).

No.	Journal	Years of publication											Study method				
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total	Quant	Qual	Mixed	Total
1	Journal of Applied Psychology	1											1	1			1
2	Frontiers in Psychology						1		1	3	1	2	8	6	1	1	8
3	Journal of Vocational Behaviour	1											1	1			1
4	Employee Relations							1					1	1			1

5	Mindfulness			1									1	1			1
6	Journal of Occupational Health Psychology						2						2	2			2
7	Tourism & Hospitality Management											1	1	1			1
8	Human Resource Management									1			1			1	1
9	Journal of Occupational & Organisational Psychology								1	1			2	2			2
10	Problems & Perspectives in Management											1	1	1			1
11	Academia Revista Latinoamericana de Administración											1	1	1			1
12	Work								1				1	1			1
13	Journal of Occupational and Environmental Medicine		1										1	1			1
14	Career Development International				1								1	1			1
15	Journal of Happiness Studies					1							1	1			1
16	Global Business and Management Research							1					1	1			1
Total		2	1	1	1	0	2	3	2	5	3	5	25	22	1	2	25

Quant: Quantitative method; Qual: Qualitative method; Mixed: Mixed methods

Table 2. *Reviewed by journal, year and study method*

Table 3 presents the descriptive attributes of the articles used according to the study method, study context, and industry context. Most of the studies used a quantitative approach using surveys (22 out of 25 articles), with a select few using a mixed methods approach (two out of 25 articles), and only one study used the qualitative approach using a semi-structured interview.

Regarding the study context, most studies were conducted in European and American countries using quantitative methods, with research participants mainly being employees. It is interesting to note how the use of MBI in workplace settings is primarily being studied in the Western world, despite these interventions having the potential to impact employees across all cultures and geographical backgrounds (Van Gordon et al., 2014). However, it is also acknowledged that, more recently, from 2020 onwards, a few of the studies included in this review were conducted with employees in Asian countries.

More than half of the studies included research participants working across multiple industries. Some studies (N = 3) included research participants working in the service sector, where customer interactions were an important part of their job role. Some studies (N = 4) also included research participants in the management and manufacturing sectors. The rest of the studies were evenly spread, with research participants working in the marketing, education, and hospitality sectors.

	-	Frequency	Percentage
Method	Quantitative	22	88%
	Qualitative	1	4%
	Mixed methods	2	8%
Study context	China	2	8%
	USA	3	12%
	Germany	3	12%
	Switzerland	1	4%
	Denmark	1	4%
	Italy	1	4%
	Spain	2	8%
	Mexico	1	4%
	Peru	1	4%
	Malaysia	1	4%
	Indonesia	1	4%
	Vietnam	1	4%
	Saudi Arabia	1	4%
	Multiple countries	6	24%
	Industry context	Service	3
Management		2	8%
Manufacturing		2	8%
Marketing		1	4%
Education		1	4%
Hospitality		1	4%
Healthcare		1	4%
Multiple industries		14	56%

Table 3. *Descriptive attributes of studies*

4.2 Definitions of mindfulness and theories used

4.2.1 Definitions of mindfulness used

Among the 25 reviewed articles, the authors used six different definitions of mindfulness. None of the reviewed studies provided their own definition of mindfulness, instead drawing upon definitions from the works of existing scholars. **Table 4** summarises the definitions of mindfulness used, the works they were cited from, and the associated studies that used these definitions. Except for the 21 reviewed studies included in this summary table, all the remaining articles discussed features of mindfulness rather than drawing upon definitions of mindfulness from existing literature.

<u>Reference of work cited</u>	<u>Definition</u>	<u>Reviewed studies that used this definition</u>
Kabat-Zinn (1994, p. 4)	“paying attention in a particular way: on purpose, in the present moment non-judgmentally”	Liu et al. (2020) Gunasekara and Zheng (2019) Pang and Ruch (2019) Zivnuska et al. (2016)
Kabat-Zinn (2003, p. 145)	"the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment."	Donders et al. (2018) Malinowski and Lim (2015) Alruwayti and Sulphey (2023) Schubin et al. (2023)
Kabat-Zinn (2018, p. 10)	"the awareness that arises from paying attention on purpose, in the present moment, and non-judgementally...in the service of wisdom, self-understanding, and recognising our intrinsic interconnectedness with others and with the world, and thus, also in the service of kindness and compassion."	Bonde et al. (2023)
Brown & Ryan (2003, p. 824)	“the presence or absence of attention to, and awareness of, what is occurring in the present moment”	Hülshager et al. (2013) Leroy et al. (2013) Wihler et al. (2022) Gabel-Shemuely et al. (2023)
Brown et al. (2007, p. 212)	"a receptive attention to and awareness of present events and experience"	Lu et al. (2021) Sunaryo et al. (2023) Michel et al. (2021) Chen et al. (2022)
Bishop et al. (2004, p. 234)	"In summary, we see mindfulness as a process of regulating attention in order to bring a quality of nonelaborative awareness to current experience and a quality of relating to one’s experience within an orientation of curiosity, experiential openness, and acceptance."	Slutsky et al. (2019) Bartlett et al. (2021) Calcagni and Salanova (2018) Calcagni et al. (2021)

Table 4. *Definitions of mindfulness used in the reviewed studies*

Although mindfulness has been discussed across various philosophical and religious backgrounds over the years, the most comprehensive definition and conceptualisation of the concept in academic literature was brought about by Kabat-Zinn (1994). Perhaps this is why most of the authors from the reviewed studies drew upon his definition from various works over the years. While the remaining studies drew from other scholars' definitions (Bishop et al., 2004; Brown & Ryan, 2003; Brown et al., 2007), these definitions still maintain a degree of correspondence with the definition distilled by Kabat-Zinn (1994). Common components among these definitions are present-moment awareness, attention to the present events and experiences, and a non-judgemental orientation.

4.2.2 Theories used in the reviewed studies

Seven theories are used to explain the relationship between mindfulness and employee engagement in the workplace setting. Self-determination theory (four studies), conservation of resources theory (four studies), and job demands-resources model (four studies) are the most used. Mindfulness-to-meaning theory and the broaden-and-build theory of positive emotions are used in two studies each, and the remaining theory is used in one study. The remaining six studies reviewed do not draw on any theories to explain the relationship between mindfulness and employee engagement.

Table 5 presents the theories used in the reviewed studies.

<u>Theory</u>	<u>Frequency</u>
Affective events	2
Broaden-and-build theory of positive emotions	2
Conservation of resources	4
Job demands-resources model	4
Kahn's theory of employee engagement	1
Mindfulness-to-meaning	2
Self-determination	4
Total	19

Table 5. *Theories used in the reviewed studies*

Sixteen articles use theories related to psychological factors to explain the relationship between the use of mindfulness and employee engagement, along with other outcomes. These theories are the affective events theory (AET), the broaden-and-build theory of positive emotions, the conservation of resources theory (COR), Kahn's theory of employee engagement, the mindfulness-to-meaning theory, and self-determination theory (SDT).

AET is an industrial and organisational psychology model that explains the linkages between employees' internal influences (cognitive, emotional, mental state) and their reaction to external events in their work environment that affect their performance (Weiss & Cropanzano, 1996). Hülshager et al. (2013) applied AET to propose that, in a state of mindfulness, employees can attend to the present moment in a receptive, non-judgemental way and thus respond objectively to stressful work situations. In this state, employees perceive their work events as less stressful, eliciting more positive and fewer negative affective reactions, leading to a more positive appraisal of their work situation. Lu et al. (2021) also applied AET. They found that mindfulness helps employees appraise adverse work events less negatively, in a non-judgemental, accepting way, thus positively influencing work engagement. This allows employees to build an accepting mindset and be less prone to distractions from work events.

The broaden-and-build theory of positive emotions was proposed by Fredrickson (2004) and asserts that positive emotions like happiness, interest, and anticipation experienced by an individual can broaden their awareness, enhance their attention span, and broaden their thought-action repertoire, which in turn leads to an increase in personal resources. Based on the broaden-and-build theory, Malinowski and Lim (2015) found that mindfulness leads to an enhanced positive affect, a broadened thought-action repertoire, and, consequently, more personal resources (psychological capital), resulting in enhanced employee engagement. Michel et al. (2021) also applied the broaden-and-build theory.

They found that mindfulness helped individuals develop a mindful attitude, build more positive emotions, and promoted an openness to new experiences, thereby increasing work engagement.

COR is a stress theory that describes the motivation that drives people to pursue new resources while maintaining their current ones (Hobfoll, 1989). Hobfoll (1989) posits three instances when stress occurs in individuals: when there is a threat of loss of resources, when the resources are actually lost, and when there is a lack of gain in resources following resources used. In such scenarios, people will make every effort to protect their interests and resources to avoid an additional loss of resources. Based on the COR theory, Liu et al. (2020) proposed that mindfulness, as a unique internal psychological resource for employees, will enhance other personal resources like attention, objective evaluation of experience, and concentration of work, leading to enhanced work engagement. Another study by Gunasekara and Zheng (2019) also used the COR theory and found that mindfulness acts as a personal resource for employees, giving them the ability to control and conserve their personal resilience while handling dynamic work environments, resulting in increased work engagement. Think-Van et al. (2022) asserted that, when employees feel their resources are threatened or lost in a crisis, they can experience burnout, but mindfulness can mitigate this effect by enhancing employees' personal resources. Zivnuska et al. (2016) deployed the COR theory. They found that mindfulness at work is a tool that employees can use to obtain resources across their careers, which allows them to build their energy resources by attaining work engagement and work-life balance.

According to Kahn's theory of employee engagement, the psychological conditions of employees will determine their levels of psychological engagement in the workplace (Kahn, 1990). According to Kahn (1990), the preconditions for workplace engagement are rooted in three psychological states: meaningfulness, safety, and availability. By using this theory, Chen et al. (2022) examined the state of safety as a reflection of an individual's emotional regulation and the state of availability as a reflection of the level of competence employees have regarding their capability to

complete work tasks. The findings of their study showed that mindfulness facilitates employees' perceived work meaningfulness, emotion regulation, and perceived job competence, which in turn enhances their work engagement.

The mindfulness-to-meaning theory asserts that mindfulness allows an individual to decentre from stress into a metacognitive state of awareness, promoting positive emotion regulation, health and resilience (Garland et al., 2015). By deploying the mindfulness-to-meaning theory, Calcagni and Salanova (2018) posited that, in a state of mindfulness, individuals are likely to accept experiences instead of dwelling on them, freeing up their cognitive resources to broaden the scope of attention to work events, thus increasing their levels of work engagement.

SDT proposes that there are two main motivation types — intrinsic (motivation that comes from within) and extrinsic (motivation based on external sources) — that shape who individuals are and how they behave (Ryan & Deci, 2000). Four studies used SDT to examine the relationship between mindfulness and employee engagement (Hülshager et al., 2013; Khan et al., 2020; Leroy et al., 2013; Lu et al., 2021) with the idea that mindfulness makes employees more attentive and focused to work experiences, allowing them to become fully immersed and intrinsically motivated in them, thus leading to higher work engagement. Additionally, Leroy et al. (2013) also found that in a state of mindfulness, individuals have an enhanced quality of internal awareness, which fosters more autonomous motivation, thus supporting work engagement.

Another theory used in four studies was the job demands-resources model, which categorises all forms of job characteristics into job demands (organisation-related, social-related, or physical-related components of work that demand effort from individuals) or job resources (job-related features that encourage and help individuals attain their work goals) (Demerouti et al., 2001). According to the job demands-resources model, factors such as stress and burnout increase when job demands are high, and job resources are low. Alternatively, when job demands are high, but job resources are also high,

factors such as work engagement and performance levels are improved. The four studies that deploy this theory argued that mindfulness is a personal resource for individuals in the workplace, thereby increasing an individual's job resources, and hence plays a role in enhancing employee engagement (Alruwayti & Sulphay, 2023; Gabel-Shemueli et al., 2023; Schubin et al., 2023; Thinh-Van et al., 2022).

4.3 Proposed integrated framework

Figure 2 shows the proposed integrated framework for the relationship between MBI, mindfulness and employee engagement directly and indirectly through mediators.

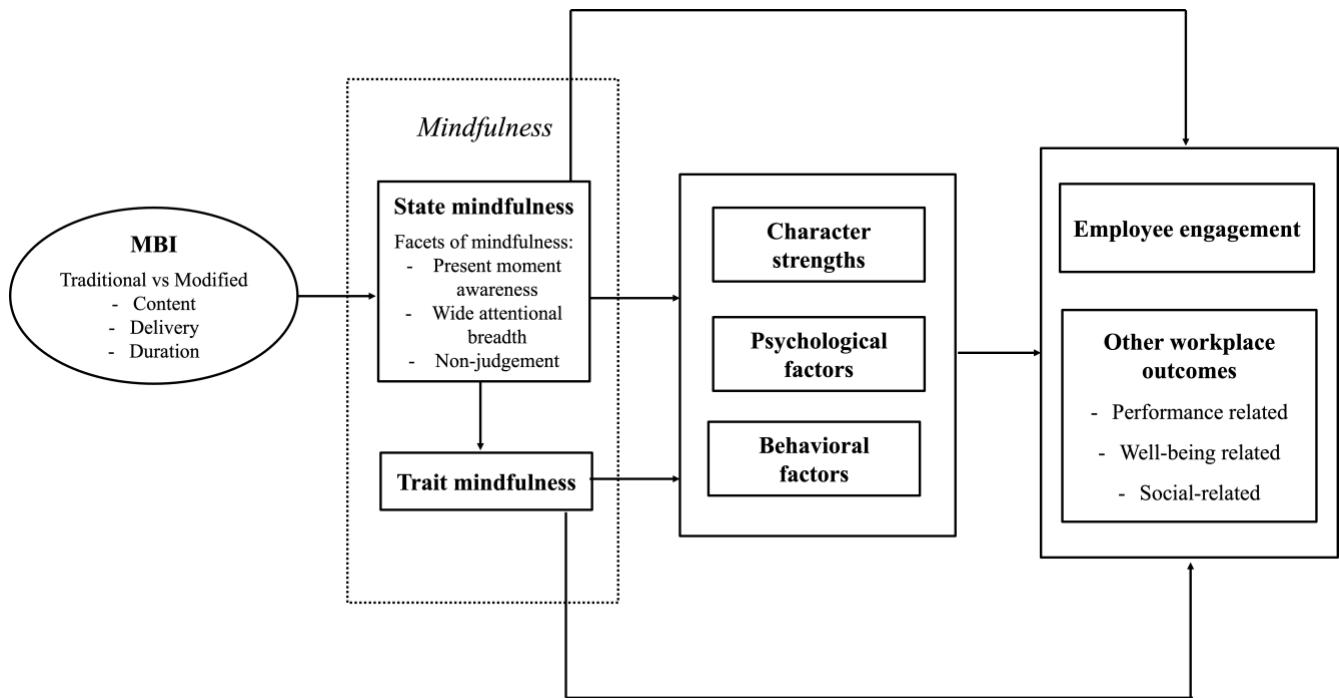


Figure 2. Proposed integrated framework

MBI is organised into two categories: traditional and modified. These categories are based on differences in the content, mode of delivery, and duration of the interventions. Traditional MBI include mindfulness trainings based on the content, mode of delivery, and duration of the MBSR developed by

Kabat-Zinn (1982). Alternatively, modified MBI include mindfulness trainings that have been altered based on the content, mode of delivery (in-person, online or hybrid), and duration (shortened or lengthened) in order to better suit the needs of the workplace environment. Mindfulness is also organised into two categories: state mindfulness and trait mindfulness. State mindfulness refers to the mindfulness that occurs in individuals as a result of meditation exercises through mindfulness trainings or MBI. On the other hand, trait mindfulness refers to the innate capacity of an individual to be mindful in everyday life without the use of any intervention. Overall, MBI only has a direct effect on state mindfulness. Three mediator categories were identified: character strengths, psychological factors, and behavioural factors. The character strengths category includes mediator variables related to the positive qualities in individuals as reflected in their thoughts, emotions, and actions. In contrast, the psychological factors category includes mediator variables related to psychological elements of an individual's personality that limit or enhance the way they think. The behavioural factors category includes mediator variables related to factors that exert an influence on the decision-making process that results in actions individuals take. The outcome variables are divided into two categories: employee engagement and all other workplace outcomes. Outcome variables are further categorised into performance-related, well-being-related, and social-related sub-categories. Performance-related outcomes include outcome variables associated with the work experience of employees in relation to their work tasks or functions. Well-being related outcomes include outcome variables associated with the physical, mental or psychological welfare of employees. Social-related outcomes include outcome variables associated with the interaction of employees with events, people or experiences in their social environment.

4.3.1 Findings on mindfulness

Existing articles investigating the relationship between MBI, mindfulness, and employee engagement (or other related workplace outcomes) investigate two types of mindfulness. Articles

examining the impact of MBI in the workplace focus on state mindfulness, and articles that do not use any interventions in their investigations focus on trait (or dispositional) mindfulness. State mindfulness is described as mindfulness resulting from engaging in regular meditation or mindfulness practices over time, while trait mindfulness is refers to an individual's inherent predisposed natural characteristic to remain aware of the present moment without judgement (Hülshager et al., 2013). **Figure 3** summarises the number of studies that: (1) use state or trait mindfulness, and (2) explore the outcomes of either employee engagement, employee engagement along with other workplace outcomes, or only other workplace outcomes in their investigation.

Among the included studies, the most frequently researched type of mindfulness is state mindfulness. All 15 studies that explore state mindfulness include the use of MBI in their investigation. The studies suggest that MBI enhances state mindfulness by expanding various characteristics or facets of mindfulness. Common features present in these facets of mindfulness are: present moment awareness, wide attentional breadth, and non-judgement. Present-moment awareness refers to a state where an individual is focused entirely on the present, rather than on experiences arising from the past or oriented towards the future. Wide attentional breadth refers to an individual's capacity to pay close attention to both internal phenomena (stimuli associated with thoughts, feelings, and physical bodily sensations), and external phenomena (stimuli associated with sights, smells, sounds, and events that occur in one's physical and social surroundings). Non-judgement refers to an individual's capacity to maintain an open and accepting attitude towards each experience. These studies show how the use of MBI in the workplace leads to an increased state mindfulness in individuals, thereby enhancing either employee engagement (one study), employee engagement and other workplace outcomes (10 studies), or simply other workplace outcomes (four studies). On the other hand, the remaining 10 included studies investigate trait mindfulness without the use of MBI, and explore its effects on employee

engagement (two studies), employee engagement and other workplace outcomes (five studies), or simply other workplace outcomes (three studies).

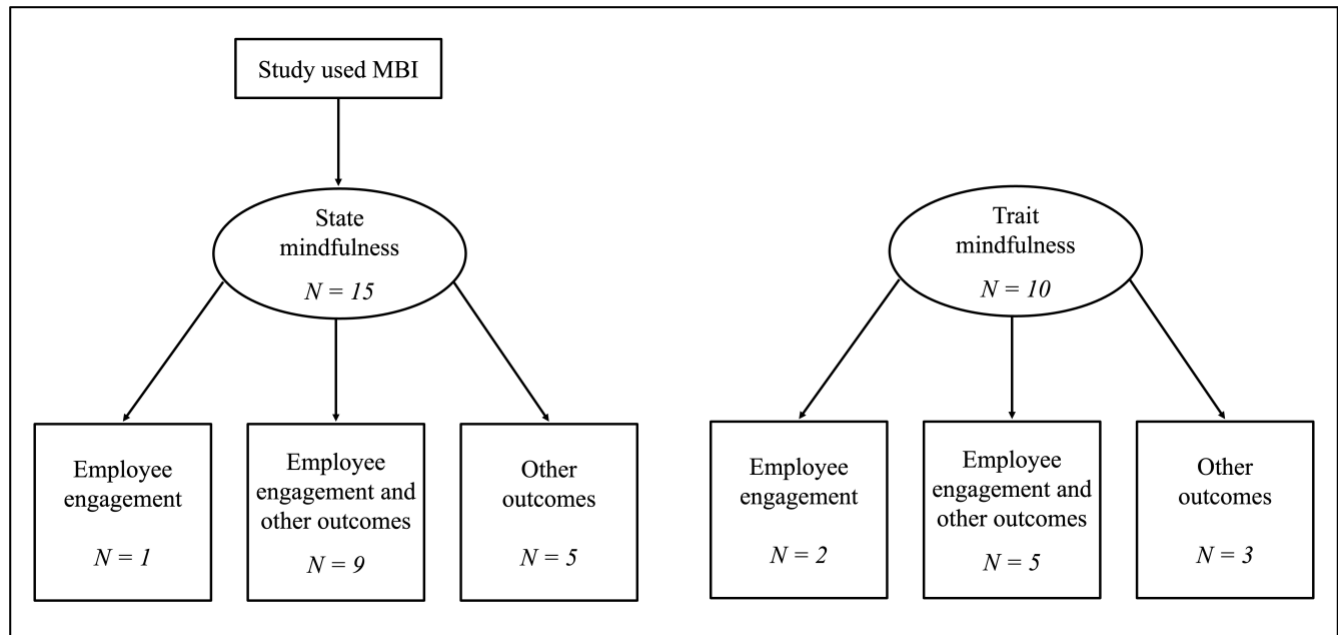


Figure 3. Summary of state vs trait mindfulness investigated in the included studies

Among the outcome variables, the most frequently researched outcome variable studied in all the included studies with the different types of mindfulness is employee engagement, which was studied 17 times. However, only three studies focus solely on employee engagement in their investigation without any other workplace outcomes involved.

4.3.2 Findings on MBI

A total of 15 out of the 25 included studies include the use of MBI in their investigation. The MBI used in the included studies have been categorised into two types – the traditional MBI and the modified MBI. The traditional MBI follows the content, mode of delivery and duration of the Kabat-Zinn (1982) MBSR training. The modified MBI are separated into two sub-categories: (1) modified MBI adapted with elements from the MBSR and (2) modified MBI that are not adapted from the MBSR. With the modified MBI, changes have been made to the interventions with respect to the content (inclusion or exclusion of various mindfulness-based exercises), duration (shorter or longer

run-time than the traditional MBI), and mode of delivery (training delivered in-class, online-based training, or hybrid training with a mixture of the two). **Table 6** presents the characteristics of the different types of MBI used in the selected studies.

<u>Study</u>	<u>MBI type</u>	<u>MBI Name</u>	<u>No. of participants: intervention: control group</u>	<u>Duration/ Total contact hours</u>	<u>Mode of delivery</u>	<u>Follow-up</u>	<u>Outcome(s)</u>
Hülshager et al. (2013)	modified*	not provided	50; 51	2 weeks/ not provided	online	n/a	1. Burnout 2. Job satisfaction
Donders et al. (2018)	modified*	"WorkingMind"	425; n/a	2 weeks/ 36 hrs	in-class	n/a	1. Burnout 2. Perceived stress 4. Well-being 5. Team climate 6. Organizational climate 7. Personal performance
Leroy et al. (2013)	modified*	not provided	76; 14	8 weeks/ 24 hrs	in-class	4 months	Employee engagement
Lu et al. (2021)	modified	"Awakened Mind"	221; n/a	8 weeks/ 6 hrs	online (app)	n/a	1. Employee engagement 2. Burnout 3. Job satisfaction
Slutsky et al. (2019)	modified	1. "Low-dose mindfulness training (LDMT)" 2. "High-dose mindfulness training (HDMT)"	31; 29	1. LDMT: 4 hrs 2. HDMT: 6 weeks/ 12.5 hrs	online	n/a	1. Attentional focus 2. Job satisfaction 3. Productivity 4. Work-life conflict 5. Life-work conflict
Michel et al. (2021)	modified*	not provided	139; 129	3 weeks/ not provided	online	2 weeks	1. Employee engagement 2. Hope 3. Sleep quality 4. Fatigue
Pang and Ruch (2019)	1. modified 2. traditional	1. "Mindfulness-based strengths practice (MBSP)" 2. MBSR	42; 21	1. MBSP: 8 weeks/ 16 hrs 2. MBSR: 8 weeks/ 28 hrs	in-class	1 month, 3 months and 6 months	1. Well-being 2. Perceived stress 3. Job satisfaction 4. Task performance
Schubin et al. (2023)	modified	not provided	56; n/a	2 months/ not provided	hybrid (in-class, online, group meetings)	3 months	1. Well-being 2. Health literacy 3. Absolute presenteeism
Bartlett et al. (2021)	modified*	"The Mindfulness for Well-being and Peak Performance Mindfulness Massive Open Online Course (MWPP-MOOC)"	2105; n/a	6 weeks/ 18 hrs	online	n/a	1. Employee engagement 2. Perceived stress
Bonde et al. (2023)	modified*	not provided	76; n/a	10 weeks/ 15 hrs	online	n/a	1. Workplace social capital 2. Psychological safety
Fazia et al. (2021)	modified	"Integral Meditation"	23; 19	12 weeks/ 12 hrs	in-class	n/a	1. Subjective well-being 2. Perceived stress 3. Self-compassion 4. Interoception
Aikens et al. (2014)	modified*	"Dow Mindful Resilience Program"	44; 45	7 weeks/ 18 hrs	hybrid (in-class, online)	6 months	1. Perceived stress 2. Resilience 3. Vigor

Chen et al. (2022)	traditional	MBSR	77; 52	8 weeks/ 28 hrs	in-class	n/a	Employee engagement
Calcagni and Salanova (2018)	modified*	"Stress Management and Well-being promotion for Health Professionals Program"	19; 15	3 weeks/ 7.5 hrs	online	n/a	1. Employee engagement 2. Happiness 3. Performance
Calcagni et al. (2021)	modified*	1. "Mindfulness and positive stress management (MPSM)" 2. "Mindfulness and self-compassion intervention (MSCBI)"	28; 33	1. MPSM: 3 weeks/ 12 hrs 2. MSCBI: 8 weeks/ 16-32 hrs	in-class	n/a	1. Employee engagement 2. Well-being 3. Performance 4. Stress

* - adaptation of the MBSR (traditional MBI)

Table 6. *Characteristics of MBI in the included studies*

Modified MBI has received more attention from scholars, with 13 studies, than traditional MBI (MBSR), with only two studies. Out of the 13 studies that include the use of modified MBI, studies include modified MBIs adapted from the MBSR and modified to suit the workplace setting. In comparison, four studies include modified MBI that are not adapted from the MBSR but still include mindfulness-based exercises in their content. Ten out of the 15 studies allocate a set of participants to an intervention group (that undergoes either type of MBI) and another set of participants to a control group (that does not undergo either type of MBI). Only four out of the 15 studies include a follow-up period in their investigation after the timeline of the intervention itself, ranging from two weeks to six months. Notably, 11 of the 15 studies using MBI focus on employee engagement as the outcome variable in their investigation.

The traditional MBI (MBSR) training content is based on four primary mindfulness practices: (1) The Body Scan – a mindful exercise to bring attention to the body while lying down; (2) Mindful Walking – a mindful exercise to bring awareness to daily life activities; (3) Mindful Sitting Meditation – a guided meditation exercise to bring attention to the present moment while sitting in stillness; and (4) Mindful Stretching – physical mindfulness exercises related to body stretching or yoga. The modified MBI training content retains some components of the content from the traditional MBI with modifications to incorporate other additional mindfulness exercises such as breathing awareness

exercises, guided visualisation meditations, compassionate meditations, journaling of daily experiences, mindful eating exercises, and group reflection exercises.

Concerning the mode of delivery of the MBI, seven out of the 15 studies include online-based interventions, where the participants have access to the training through online portals like Zoom, mobile-based applications, or other web-based applications. Six of the 15 studies include the participants being physically present in class with qualified mindfulness instructors as they undergo the MBI for the entire duration of the training. Only two studies include a hybrid mode of delivery, with elements of both in-class and online-based sessions during the training intervention.

With the modified MBI, the shortest duration of the intervention used in a study is four hours (Slutsky et al., 2019), while the longest duration used in a study is 36 hours (Donders et al., 2018). Most of the modified MBI used in the studies have a shortened duration of training compared to the traditional MBSR, except for two studies that have been modified with a longer run-time of 36 hours (Donders et al., 2018) and two months (Schubin et al., 2023) respectively. Only three studies explore the effects of a shorter and longer MBI on employee engagement and other workplace outcomes in the same investigation (Calcagni et al., 2021; Pang & Ruch, 2019; Slutsky et al., 2019). Slutsky et al. (2019) contend that, while a shortened modification of MBI is effective on employee attentional focus, a longer modification of MBI shows a more significant and lasting effect on employee attentional focus, suggesting that a longer mindfulness intervention might yield stronger results. Conversely, Pang and Ruch (2019) argue that while the traditional MBSR (with a longer training duration) is more effective in enhancing employee well-being, the modified MBI (with a shorter training duration) is more effective in enhancing employee task performance outcomes. In a more recent study, Calcagni et al. (2021) suggest that a shorter modified MBI and longer modified MBI are equally successful and effective in enhancing employee engagement and other workplace outcomes.

4.3.3 Findings on employee engagement and other workplace outcomes

A total of 26 outcome variables were studied. The outcome variables were organised into two categories: (1) employee engagement outcomes and (2) other workplace outcomes (further separated into sub-categories of performance, well-being, and social-related). While the other workplace outcomes category has garnered more research than the employee engagement outcome category, employee engagement has received the most attention from scholars among all the outcomes studied, with 17 occurrences. **Table 7** presents a summary of all the outcomes used in the studies.

No.	Outcome	Frequency	Article Reference
Employee engagement outcomes			
1	Employee engagement	14	(Bartlett et al., 2021; Calcagni & Salanova, 2018; Calcagni et al., 2021; Chen et al., 2022; Gabel-Shemueli et al., 2023; Gunasekara & Zheng, 2019; Khan et al., 2020; Leroy et al., 2013; Liu et al., 2020; Lu et al., 2021; Malinowski & Lim, 2015; Michel et al., 2021; Sunaryo et al., 2023; Zivnuska et al., 2016)
2	Attentional focus	1	(Slutsky et al., 2019)
3	Absolute presenteeism	1	(Schubin et al., 2023)
4	Vigour	1	(Aikens et al., 2014)
Other workplace outcomes			
(A) Performance related			
1	Task performance	6	(Alruwayti & Sulphay, 2023; Calcagni & Salanova, 2018; Calcagni et al., 2021; Pang & Ruch, 2019; Sunaryo et al., 2023; Wihler et al., 2022)
2	Job satisfaction	6	(Hülsheger et al., 2013; Lu et al., 2021; Pang & Ruch, 2019; Slutsky et al., 2019; Wihler et al., 2022; Zivnuska et al., 2016)
3	Productivity	2	(Donders et al., 2018; Slutsky et al., 2019)
4	Turnover intention	2	(Wihler et al., 2022; Zivnuska et al., 2016)
5	Affective commitment	1	(Zivnuska et al., 2016)
6	Creativity	1	(Sunaryo et al., 2023)
(B) Well-being related			
7	Well-being	8	(Calcagni et al., 2021; Donders et al., 2018; Fazia et al., 2021; Khan et al., 2020; Malinowski & Lim, 2015; Pang & Ruch, 2019; Schubin et al., 2023; Zivnuska et al., 2016)
8	Perceived stress	7	(Aikens et al., 2014; Bartlett et al., 2021; Calcagni et al., 2021; Donders et al., 2018; Fazia et al., 2021; Khan et al., 2020; Pang & Ruch, 2019)
9	Burnout	5	(Donders et al., 2018; Gabel-Shemueli et al., 2023; Hülsheger et al., 2013; Lu et al., 2021; Tinh-Van et al., 2022)
10	Fatigue	1	(Michel et al., 2021)

11	Sleep quality	1	(Michel et al., 2021)
12	Health literacy	1	(Schubin et al., 2023)
13	Psychological Safety	1	(Bonde et al., 2023)
14	Resilience	1	(Aikens et al., 2014)
15	Self-compassion	1	(Fazia et al., 2021)
16	Happiness	1	(Calcagni & Salanova, 2018)
17	Hope	1	(Michel et al., 2021)
<i>(C) Social-related</i>			
18	Work-life balance	1	(Slutsky et al., 2019)
19	Team climate	1	(Donders et al., 2018)
20	Organisational climate	1	(Donders et al., 2018)
21	Workplace social capital	1	(Bonde et al., 2023)
Total		26	

Table 7. *Outcome variables used in the studies*

Outcome variables related to employee engagement outcomes include employee engagement, attentional focus, absolute presenteeism, and vigour. Among these, the most frequently researched outcome variable is employee engagement, which was studied 14 times. Attentional focus, absolute presenteeism and vigor were each studied only once.

Other workplace outcome variables include performance, well-being, and social-related outcomes. Among these, well-being-related outcomes have received the most attention (28 occurrences), followed by performance-related outcomes (18 occurrences), and then social-related outcomes (four occurrences). The most commonly researched well-being-related outcomes are well-being (eight occurrences), perceived stress (seven occurrences) and burnout (five occurrences). The rest of the well-being-related outcomes have only been studied once each. Performance-related outcomes include task performance, job satisfaction, productivity, turnover intention, affective commitment, and creativity. Among these, task performance and job satisfaction were researched the most (six occurrences each). Productivity and turnover intention were studied two times each, while affective commitment and creativity were only studied once each. Social-related outcomes include work-life

balance, team climate, organisational climate, and workplace social capital, which were all studied only once.

Figure 3 illustrates the outcome variables in reviewed studies over time. In general, the number of times that examined other workplace outcomes (performance-related, well-being-related, and social-related) tended to exceed exponentially over the years, while the number of studies that examined employee engagement-related outcomes showed a slower increase.

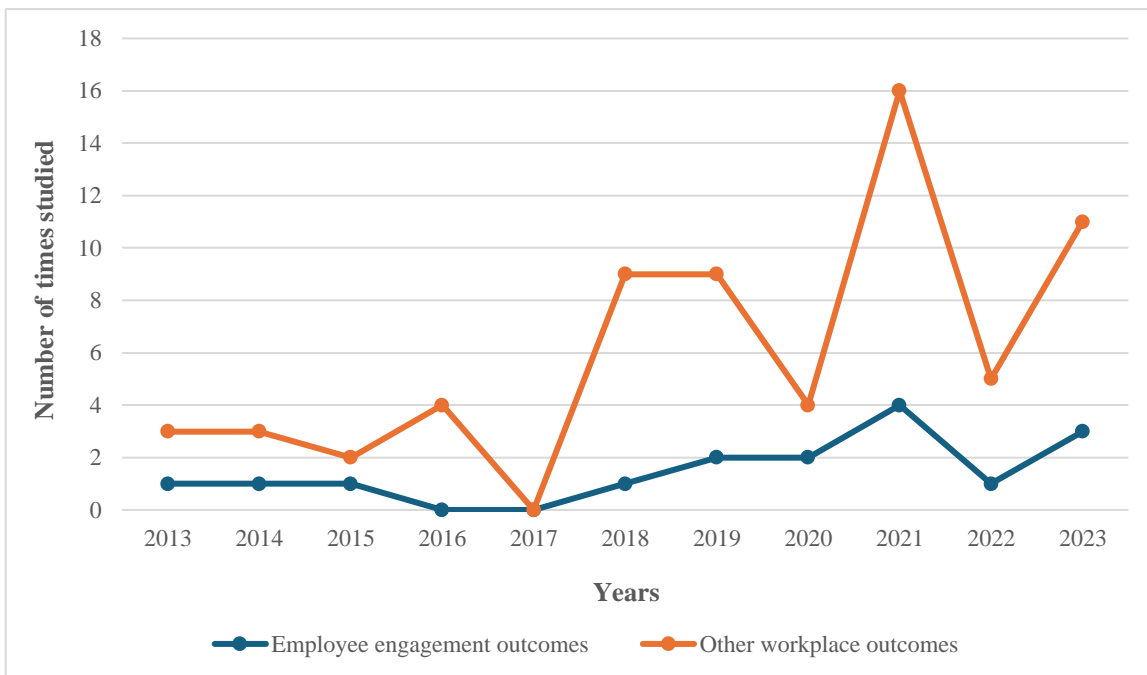


Figure 4. *Outcome variables in reviewed studies over time*

Notably, employee engagement outcomes were first studied in 2013 where they were studied once, which stayed constant till 2015. Then no research was done on employee engagement outcomes in 2016 and 2017. In 2018, they were studied once, followed by a steady increase until 2021, when they were studied the most often (N = 4). In 2022 this decreased to one time, before picking up to three times in 2023.

In contrast, other workplace outcomes were studied at an increasing rate over the years, starting in 2013, where they were studied three times. From 2018, there was a sharp spike in the times they

were studied (N = 9), which remained consistent in 2019. In the year 2021, they reached their peak of 16 times. Interestingly, both employee engagement outcomes and other workplace outcomes experienced their research peaks in 2021.

4.3.4 Findings on mediators

There are a total of 14 mediator variables used in the studies. Only 11 out of the 25 studies explored the relationship between MBI, mindfulness, employee engagement and other workplace outcomes indirectly through mediator variables. In the remaining 14 studies, MBI and mindfulness directly influence employee engagement and other workplace outcomes. These mediators are divided into three categories: (1) character strengths; (2) psychological factors; and (3) behavioural factors. The character strengths category is associated with the positive qualities in individuals as reflected in their thoughts, emotions and actions, and includes the following mediator variables: love of learning, curiosity, emotion regulation, and job competence. The psychological factors category is associated with the psychological elements in an individual's personality that limit or enhance the way they think, and includes the following mediator variables: positive affect, psychological capital, recovery level, work meaningfulness, subjective well-being, boredom, and work-life balance. The behavioural factors category is associated with factors that exert an influence on the decision-making process of an individual, and include the following mediator variables: surface acting, authentic functioning, and customer incivility. Overall, the psychological factors category is the most studied, and it mediated the relationship between MBI, mindfulness, employee engagement, and other workplace outcomes. While studies using MBI suggest an increase in state mindfulness, which leads to a positive effect on the outcome variables through some of the mediators in the categories highlighted, state mindfulness is considered an antecedent and has not been included as a mediator category.

Figure 4 shows the grouping of mediator variables and how many times each has been used in the studies. Of the 11 studies that include mediator variables in their investigation, most include the use

of MBI and explore state mindfulness effects on the outcome variables (N = 6). In contrast, the remaining studies explore trait mindfulness effects on the outcome variables (N = 5). Out of these, seven studies include outcome variables relating to employee engagement, while the rest focus on other workplace outcomes. Emotion regulation (from the character strengths category) and positive affect (from the psychological factors category) are the only mediators used twice in the studies. All the remaining mediators have been used once each.

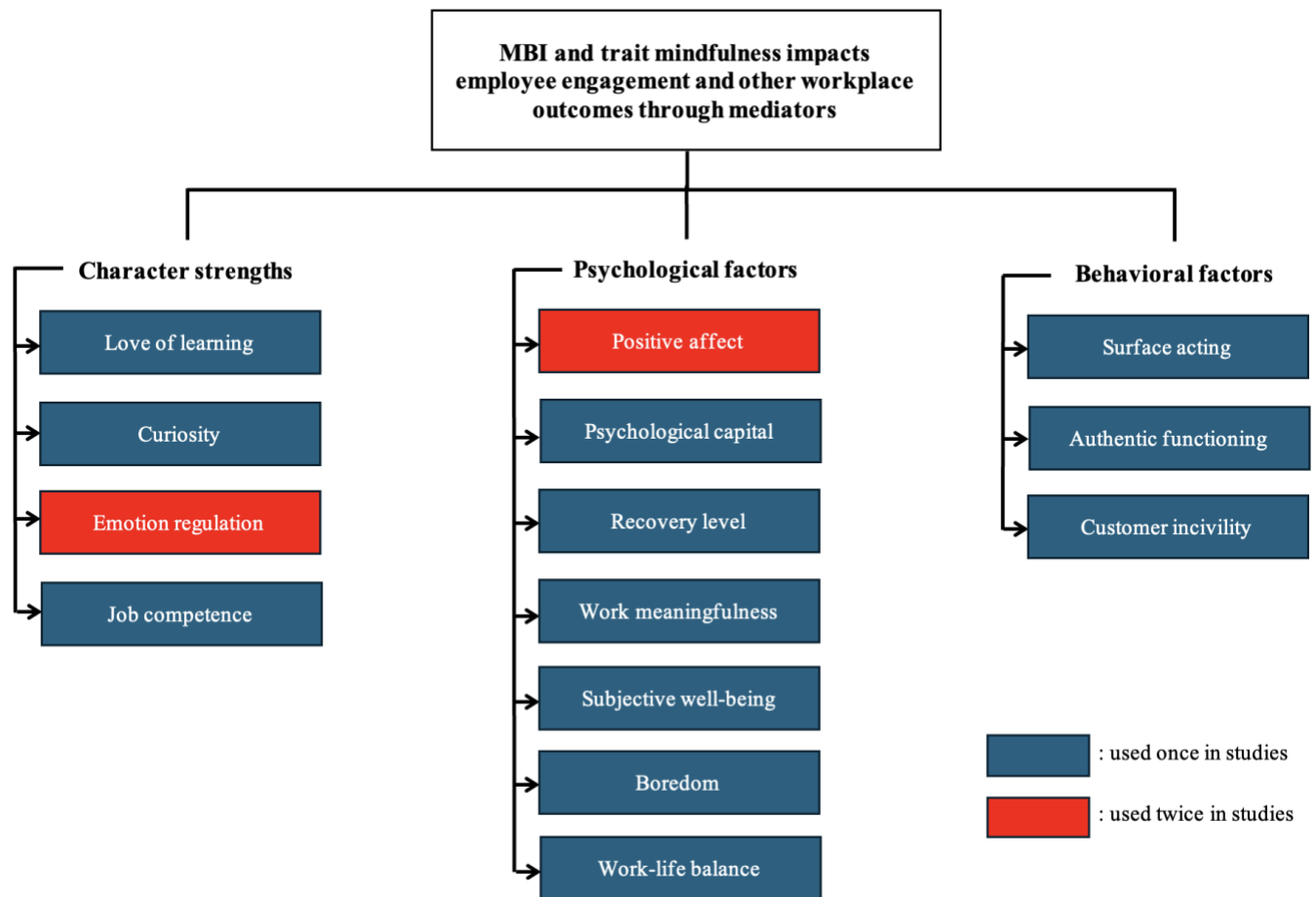


Figure 5. *Grouped mediator variables*

4.3.5 Relationship between MBI, mindfulness and employee engagement

Table 8 shows the relationship between MBI, mindfulness, and employee engagement directly or indirectly through mediators, in 17 out of the 25 studies that include employee engagement as the outcome variable. The majority of these studies focus on the use of MBI and investigate the effects of

state mindfulness (N = 10). In contrast, the remaining studies do not include the use of MBI and investigate the effects of trait mindfulness (N = 7). There is a direct relationship between mindfulness (state or trait) and employee engagement without using mediator variables in 10 of the 17 studies.

Article Reference	Antecedent	Positive effect on employee engagement	Mediators	Other outcomes included in the study
Liu et al. (2020)	Trait mindfulness	x*	Recovery level	-
Leroy et al. (2013)	MBI [—> state mindfulness]	x*	Authentic functioning	-
Gunasekara and Zheng (2019)	Trait mindfulness	x	-	-
Malinowski and Lim (2015)	Trait mindfulness	x*	1. Positive affect 2. Psychological capital (hope, optimism, resiliency, self-efficacy)	Well-being
Lu et al. (2021)	MBI [—> state mindfulness]	x	-	1. Burnout 2. Job satisfaction
Slutsky et al. (2019)	MBI [—> state mindfulness]	x	-	1. Job satisfaction 2. Productivity 3. Work-life balance
Sunaryo et al. (2023)	Trait mindfulness	x*	Customer incivility	1. Creativity 2. Task performance
Michel et al. (2021)	MBI [—> state mindfulness]	x*	Positive affect	1. Hope 2. Sleep quality 3. Fatigue
Schubin et al. (2023)	MBI [—> state mindfulness]	x	-	1. Well-being 2. Health literacy
Bartlett et al. (2021)	MBI [—> state mindfulness]	x	-	Perceived stress
Gabel-Shemueli et al. (2023)	Trait mindfulness	x	-	Burnout
Aikens et al. (2014)	MBI [—> state mindfulness]	x	-	1. Perceived stress 2. Resilience
Chen et al. (2022)	MBI [—> state mindfulness]	x*	1. Work meaningfulness 2. Emotion regulation 3. Job competence	-
Zivnuska et al. (2016)	Trait mindfulness	x*	Work-life balance	1. Well-being 2. Turnover intention 3. Affective commitment
Calcagni and Salanova (2018)	MBI [—> state mindfulness]	x	-	1. Happiness 2. Task performance
Calcagni et al. (2021)	MBI [—> state mindfulness]	x	-	1. Well-being 2. Task performance 3. Perceived stress
Khan et al. (2020)	Trait mindfulness	x	-	1. Perceived stress 2. Well-being

x – mindfulness (state or trait) directly influences employee engagement

x* - mindfulness (state or trait) indirectly influences employee engagement through a mediator

Table 8. Direct and indirect relationships between MBI, mindfulness, and employee engagement

Chapter 5: Discussion

This review synthesises existing articles on the use of MBI and mindfulness, and its impact on employee engagement and other workplace outcomes, with the aim of providing an integrative literature review along with the proposed integrated framework to provide a comprehensive understanding of the relationship between MBI, mindfulness, and employee engagement. In sum, 25 articles have been reviewed identifying two types of MBI, two types of mindfulness, 14 mediating variables, and 26 outcome variables – of which the focus for this review has been narrowed down to employee engagement outcome variables. There were 10 direct relationships between the antecedents (MBI or trait mindfulness) and outcome variable (employee engagement), and seven indirect relationships between the antecedent and outcome variable through a mediator, all of which were positive and significant. The review found that MBI and mindfulness, directly or indirectly through mediators, enhance employee engagement.

Existing research has investigated the use of MBI in the workplace domain against a number of employee well-being-related and performance-related outcomes. In these investigations, MBI is seen to promote state mindfulness in individuals, which in turn has a positive effect on the different outcomes studied. Among the 25 empirical studies included in this review, employee engagement is the most studied outcome variable, and has been studied 17 times. In these studies, scholars have adopted the use of a range of MBI, starting from the traditional MBI based on the MBSR training established by Kabat-Zinn (1982), moving to modified versions of MBI where changes have been made to the content, mode of delivery, and duration of the interventions to better suit the demands of the workplace environment. Variations in the modified MBI are based on the following: (1) modifications in the training content to include or exclude a variety of mindfulness practices like breath awareness scans, guided meditations, and mindful movement; (2) modifications in the mode of delivery where some trainings are delivered in person while others are delivered in an online setting (or a hybrid setting that

involves a combination of the two); and (3) modifications in the duration of the training where the duration has been shortened from or lengthened beyond the traditional 8-week duration of the traditional MBSR training.

Only three out of the 25 studies have attempted to discern the effectiveness of a shorter modified MBI against a longer modified MBI against employee engagement and other workplace outcomes (Calcagni et al., 2021; Pang & Ruch, 2019; Slutsky et al., 2019). The contradictory findings from these three studies make it difficult to generalise whether shorter modified MBI would indeed be more effective than the longer modified or more traditional MBI. While it is unclear from the current literature what type of MBI would be most effective, results from the empirical findings in the included studies point to a clear consensus that both traditional and modified MBI have a significant positive impact on employee engagement in the workplace to some degree. Similarly, both the traditional MBI that require in-person presence and modified MBI where the mode of delivery is through an online platform or a hybrid method, show a significant positive impact on participants' employee engagement levels. The delineation of the different types of MBI and mindfulness, and the findings of their impact on employee engagement answers the first and second research questions: (1) How have researchers studied MBI and employee engagement? (2) What are the key findings of research on MBI and employee engagement?

The analysis of included studies in this review reveals how fragmented the current mindfulness literature landscape is as it stands. Only 15 out of the 25 included studies in this review include the use of MBI in their investigation. While these studies measure the impact of state mindfulness on employee engagement and other workplace outcomes, the remaining 10 studies investigate the impact of trait mindfulness on employee engagement and other workplace outcomes. Kiken et al. (2015) provide evidence that changes in state mindfulness levels arising through mindfulness interventions (MBI) over a period of time can predict changes in the trait mindfulness levels in individuals. This would mean

MBI, state mindfulness, and trait mindfulness could be closely connected in the way they impact employee engagement. However, none of the included studies in this review integrate the investigation of both trait and state mindfulness in their research. Instead, existing research creates a divide in the mindfulness literature where studies that include the use of MBI focus solely on state mindfulness, leaving the remaining studies to focus on trait mindfulness as an antecedent of its own. Another noteworthy observation is that very few of the included studies make it a point to differentiate what type of mindfulness is being studied. Most of the studies investigating MBI term mindfulness broadly, rather than providing any background that the mindfulness in question relates to state mindfulness rather than trait mindfulness.

Further, very little attention has been drawn into the investigation of which type of MBI would be more effective against employee engagement – the longer, traditional MBI or the shorter, modified MBI. Findings of such an investigation could have crucial implications on how willing organisations are to allocate internal resources in terms of the time-effectiveness and cost-effectiveness of the MBI. Notably, only four out of the 15 studies that investigate the use of MBI include a post-intervention follow-up period to measure the more long-term effects of state mindfulness against employee engagement and other workplace outcomes. Adding to this, employee engagement has been included as an outcome variable in only 17 out of the 25 studies that do include an investigation into the impact of either state mindfulness (through MBI) or trait mindfulness. With mindfulness primarily being an attention-related construct, there is a need for a more robust investigation into the ways it impacts how engaged employees are with the work tasks they perform. This analysis answers the third and fourth research questions: (3) What are the underlying assumptions of research on mindfulness-based initiatives and employee engagement? (4) What are the limitations of research on mindfulness-based initiatives and employee engagement?

Chapter 6: Conclusion, Limitations, and Future Research

6.1. Conclusion

This integrative review sought to systematically identify and collate literature on MBI and mindfulness in the workplace setting. Through a critical analysis, synthesis and evaluation of the literature, an attempt was made to understand how MBI has been studied in the workplace context, what the key findings are on the impact of MBI against employee engagement, what the underlying assumptions are in the extant research, and what limitations restrict a more complete understanding of the relationship between MBI and employee engagement. The findings reveal that the existing stream of research dedicated to the impact of MBI on employee engagement is broad and fragmented, the relationships between different types of MBI and mindfulness have not been clearly defined, and the focus of research on MBI in the workplace extends beyond employee engagement to a variety of workplace outcomes.

Based on the findings of this review, there is sufficient evidence to conclude that MBI can be effective in enhancing employee engagement. Moreover, results from this integrative review also provide an integrated framework to guide our understanding of the different types of MBI, different types of mindfulness and how they relate to employee engagement. The integrated framework helps to streamline the current MBI and mindfulness research landscape by clearly drawing the focus to the different types of MBI – traditional and modified — and the different types of mindfulness – state and trait — that have not always been explicitly addressed as separate constructs in previous scholarly research. The identification of the different aspects of MBI, in relation to the content, mode of delivery, and duration, allow for a deeper understanding on how effective different MBI designs could be when altered to match with different workplace environments. The novelty of this integrative review lies in the synthesis and analysis of the different relationships between MBI, mindfulness, and employee engagement.

6.1.1 Theoretical contributions

The theoretical contributions of this study are threefold. Firstly, the review provides a summary of the diverse theories, contexts, methodologies, and variables (independent, dependent and mediator variables) across the reviewed empirical studies, which is beneficial in ascertaining the foundations, conditions, and variables that influence MBI use to yield positive results on employee engagement. This offers other mindfulness scholars an overview of the possible underlying theories when selecting their constructs and measurements regarding the research questions that match their research aim.

Secondly, the analysis of the 25 studies included in this review and the proposed integrated framework advances our understanding on the current state of literature on MBI, mindfulness and employee engagement in the workplace. The proposed integrated framework offered in this review integrates the constructs of MBI (traditional and modified), mindfulness (state and trait), employee engagement, and mediators that are associated with the use of MBI and its impact on employee engagement. The findings from the reviewed empirical studies show that mindfulness research has been fragmented, and that there is a lack of clarity in explaining the interconnection between the different types of mindfulness and MBI, and their impact on employee engagement outcomes. The proposed integrated framework provides a suggested outline to overcome this limitation by clearly highlighting the relationships between MBI, mindfulness, and employee engagement. This can help scholars gain a comprehensive insight into the current state of research on this topic.

Finally, the review's findings indicate key mediating variables that shape the relationship between MBI use, mindfulness, and employee engagement. Thus, this review shows the roles of mediator variables in explaining the relationships between MBI use, mindfulness, and employee engagement. This provides an all-rounding encompassing insight to scholars on the mediator variables that can enhance the impact of MBI and mindfulness on employee engagement in the workplace.

6.1.2 Practical contributions

This review has implications for managers and organisation leaders who are interested in the use of MBI to promote employee engagement in the workplace. Similarly, employees can also gain knowledge through this review on the potential benefits of mindfulness practices to boost their levels of engagement with work-related tasks. The proposed integrated framework provides a baseline explaining the effectiveness of MBI, its effect on mindfulness, and as a result, on enhancing employee engagement in the workplace. This can help organisations create and encourage a culture of mindfulness in their employees, which can prove to be beneficial in times of crisis and organisational change, and particularly to gain a competitive edge. Added to that, employee engagement has a positive effect on employee performance. This review provides a reference for organisations to effectively promote employee task performance through employee engagement.

The proposed integrated framework can also be used to guide the process of introducing MBI initiatives in organisations from a variety of industries (services, marketing, management, hospitality, and manufacturing), and to help gain an understanding of the interplay between MBI, mindfulness, and employee engagement. This review shows that both longer, traditional MBI and shorter, modified MBI have a significant positive impact on employee engagement. By modifying MBI through the diverse modes of delivery (in-person, online, or a combination of both), and the duration of the MBI (shortening the intervention timing or extending the intervention timing), management can tailor their choice of MBI in a manner that is most conducive to their workplace environment in terms of cost-effectiveness and time-effectiveness.

6.2 Limitations and Future Research

There are four limitations in this review. Firstly, this review draws on findings from the investigations reported in previous studies. Therefore, while I performed a quality assessment of the reviewed articles through the searching and filtering process, existing shortcomings in the studies

included might be reflected in the analysis in this review. Secondly, it is difficult to ascertain and ensure that all the published empirical research on the use of MBI in the workplace and its impact on employee engagement is included in this review, since the searching of articles relies on the search keywords and databases used. However, I attempted to conduct a thorough backward and forward search to ensure this limitation was minimised as much as possible.

Thirdly, although research on mindfulness has received increasingly scholarly attention, studies on the impact of MBI use on employee engagement in the workplace are still scarce, resulting in small sample sizes for review. The findings in this review reveal an obvious link between MBI and employee engagement. Future studies should focus more on exploring the impact of the different types of MBI (traditional and modified) against employee engagement compared to well-being-related or other performance-related outcomes to provide a more robust view on the topic. Additionally, scholars are encouraged to include both traditional and modified MBI in the same investigation to determine which type of MBI would be more effective in enhancing employee engagement in future research. Future studies might also benefit from including a longer post-intervention follow-up period to test the more long-term effects of MBI on employee engagement to ascertain the viability of using MBI in the long-term in a workplace setting.

Finally, existing mindfulness research suggests that culture and ethnicity could both directly influence the levels of trait mindfulness present in individuals (Van Gordon et al., 2014). For instance, in some Asian religions like Buddhism and Hinduism, certain cultural values are rooted into spiritual practices like meditation, which could have a direct impact on the levels of trait mindfulness in the individuals practising them (Kirmayer, 2015). Since this review synthesises the findings of existing articles, which have been studied across a range of different contexts across different cultures and industries, other researchers should be cautious to generalise from the integrated framework presented in this review. Further, future studies should consider covering cultural characteristics of participants to

better understand the dynamic influences that culture and religion play in employees' trait mindfulness levels.

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