ARTIFICIAL INTELLIGENCE AND MINDFULNESS: SYSTEMATIC LITERATURE REVIEW BASED ON PRISMA METHOD

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Abstract

Isolating oneself from the constant barrage of new technologies and machines in today's fast-paced world can be challenging. Throughout history, people have used the practice of mindfulness to better themselves and find inner calm by focusing on the here and now rather than on the past or the future. However, in recent years, Artificial Intelligence has emerged from the technological revolution, radically altering the landscape of mental health and mindfulness. This conceptual review aims to revisit the prevailing literature on artificial intelligence and mindfulness and explore future research opportunities. A systematic literature review (SLR) with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) method was used to conduct the review. VOSviewer software has been used to perform keyword co-occurrence analysis to reveal the areas that need the attention of researchers. Articles have been downloaded from the Scopus database to ensure the quality of the input of this conceptual paper. Future research directions have been provided with respect to the research gaps identified in this effort. Some knowledge gaps, empirical gaps, contextual gaps and methodological gaps have been identified in this research.

Keywords: Artificial Intelligence, AI, Future Research Directions, Mindfulness, Systematic Literature Review

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Introduction

Artificial intelligence (AI) is an established scientific discipline that encompasses the development of computer programs with the objective of emulating human-like intellect. In order to accomplish this objective, it is imperative to provide computer programs with training in data utilisation to foster the development of reasoning capabilities. Artificial Intelligence (AI) facilitates the computational capacity to address intricate challenges and offer advisory capabilities. The functioning of Artificial Intelligence is designed to resemble the cognitive processes involved in human information processing, which include the stages of receiving, storing, processing, decoding, and modifying information. This sequence of stages is generally known as the intelligence cycle (Indrianti et al., 2020).

Mindfulness has been found to enhance an individual's creativity to a greater degree. Furthermore, it has been suggested that mindfulness may represent a novel phase in the progression of marketing strategies. The cultivation of entrepreneurial awareness serves as a crucial starting point for the advancement of indigenous knowledge and inventions, as well as the initiation of habitual entrepreneurship, ultimately leading to substantial outcomes over time (Indrianti et al., 2020).

Artificial intelligence could help teach mindfulness. Music, mathematics, and art may benefit from AI and machine learning. Human-technology relations and the blue-green deployment model can be used to maintain two independent infrastructures or duplicate feature stores. It is possible to cultivate mindfulness and an awareness of diversity and communal harmony through AI and machine learning, as AI and machine learning can infer the emotional and cognitive states of the people with whom they interact. By leveraging the entire process of visualisation, reading, and listening with AI, machine learning, and beyond, the digital future has the potential to incorporate real-time emotions and feelings. This would entail emotional responses on both ends and a variety of other technologies and users (Singha & Singha, 2023).

It is a timely requirement to study the relationship between artificial intelligence and mindfulness. Different approaches are used in the literature to study the relationship.

The research problem of this study is "What is the interaction between mindfulness and artificial intelligence as AI, as a new technological shift, has some significant impacts on mindfulness according to the literature?". Concerning the above-mentioned research problem, this conceptual paper focuses on the research objectives below.

1. To review the prevailing literature related to AI and Mindfulness
2. To investigate the contextual, knowledge, methodological, and empirical research gaps related to Artificial Intelligence and Mindfulness.

Literature Review
Artificial Intelligence
The Turing test defines Artificial Intelligence as the capacity of computers to converse with people (using electronic output devices) without disclosing that they are not humans when the essential criteria for judgment are binary. (Duch & Mańdziuk, 2004)

According to Breda & WRJ, recent advancements in mobile technology, sensor devices, and artificial intelligence have offered new possibilities for the study of mental health research. Weisbrod et al. (2023) mentioned that, in recent years, global levels of stress, anxiety, depression, and rage have reached all-time highs, and occupational health has highlighted employee well-being as a crucial concern. The Meditation without Expectations 8-week course grew from theory to practice over six years at a huge multinational corporation. Computer software using artificial intelligence (AI) to analyse

the unstructured language from post-course feedback generated over a decade from tens of thousands of consumer comments and product reviews. A unique artificial intelligence technique is utilised to classify individuals' remarks after finishing the course, discovering extremely favourable outcomes with the possibility of forming new habits owing to a shift in the mental model.

During a stressful era, artificial intelligence and machine learning techniques such as linear regression neural networks, decision trees, and random forests can be used to predict an employee's mental health. (Sagar et al., 2022).

According to Huckvale et al. (2023), compared to standard RCTs, the AI-driven adaptive trial technique is a more effective way of assessing the efficacy of therapies. An economic analysis using a value of information (VoI) analysis will be part of the study to determine if the AI-adaptive trial design is more valuable than a normal four-arm RCT. AI techniques are employed to (A) update an underlying model of the efficacy of the therapies being evaluated and (B) modify the proportion of participants allocated to each intervention in the next mini-trial.

Also, according to Huckvale et al. (2023), fewer individuals are increasingly assigned to therapies with diminishing efficacy in subsequent mini-trials. In adaptive trials powered by artificial intelligence (AI), they conduct a series of "mini-trials" in which the outcomes of one inform the next.

AI-driven adaptive trials promise to provide a faster and more efficient alternative to randomised controlled trials (RCTs), particularly when there are numerous potentially effective choices, and it is crucial to discover which treatment option is optimal for a certain population (Huckvale et al., 2023).

Some people say that adaptive trials should (1) use fewer participants to get a better idea of how well an intervention works; (2) come to a clear decision faster so that the best treatment can be given to everyone more quickly; (3) stop recruiting people for useless interventions early on; and (4) find out how different interventions affect different groups of patients. (Huckvale et al., 202)

This will lower trial participant recruiting expenses, although administration costs for AI-adaptive trials may differ from those of randomised controlled trials. It will also influence the confidence intervals surrounding each projected effect size in a variable manner. So, the economic evaluation will look at how the uncertainty of decisions changes when using the AI-adaptive trial method versus a standard four-arm RCT method. (Huckvale et al., 2023)

Young people may also prefer to obtain mental health assistance via websites and applications despite the efforts of health care practitioners. (Zhou et al., 2021)

Mindfulness
As Huckvale et al. (2023) stressed, mindfulness is "the awareness that arises from paying attention on purpose, in the present moment, and without judgment to the unfolding of experience in the present moment". Mindfulness meditation can be instructor-led or self-directed (e.g., learning mindfulness techniques utilising a series of guided audio meditations). Different from relaxation training, the processes of mindfulness meditation include changes in attention, emotion management, sensory awareness, and self-awareness.

The mindfulness practice and its effects have also reached the mainstream in the business sphere. Intel, Google, Adobe Systems, Goldman Sachs Group, Deutsche Bank, Apple, and Procter & Gamble are some of the leading firms in mindfulness. The results indicate that mindfulness meditation has good impacts on financial growth and advantages for the well-being of corporate personnel in an excited work atmosphere. (Sagar et al., 2022)

Karunananda et al. (2015) state that nature is filled with intricate systems. The mind and brain are outstanding examples of complicated systems. Although brain and mind are different concepts, they have been used interchangeably across a broad range of disciplines. Numerous brain simulators have been built to conduct experiments that cannot be performed with genuine brain tissues and cells. The mind is a conditioned flow of ideas characterised by mental elements such as perception, volition, attention, anger, attachments, mindfulness, etc. Thus, mental variables are the fundamental components of thought. These mental components can be combined to generate diverse concepts with features such as emotions, origins, functions, doorways, objects, and foundations.

Zhou et al. (2021) mentioned that the reported beginning age range for mood and anxiety disorders is 15–24 years. Adolescent-onset mental illnesses are related to persistent and severe adult mental disorders. Early treatments in kids are successful in reducing the development of chronic mental health issues, yet the cost of mental health services per youth in 2019 was anticipated to be $6460.

The effectiveness of synchronous web-based conversations between psychotherapists and participants Kramer et al. evaluated the efficacy of synchronous web-based conversations between mental health professionals and individuals. Individual real-time chat sessions with a psychotherapist utilising Solution-Focused Brief Therapy (SFBT) approaches constituted the intervention. Compared to the waiting list condition, the intervention group had considerably higher decreases in depressive symptoms. The employee retention rate was 51%. (Zhou et al., 2021)

According to Cai et al. (2023), because of their capacity to monitor their inner and exterior environments, aware people do not daydream, fantasise, or worry about the future. Mindfulness enables individuals to witness their experiences without analysing, assessing, reflecting, or judging them. It makes them less susceptible to the negative emotions associated with status, conflicts, rewards, failure, and others' views.

Consequently, aware people gain the ability to recognise the positive aspects of life. In addition, literature has discovered that high levels of mindfulness are favourably associated with positive affect, whereas low levels of mindfulness are adversely associated with negative affect. Moreover, conscious people are more likely to respond to cues from their fundamental needs and manage their behaviour accordingly. Therefore, they foster their intrinsic drive. There is a good association between mindfulness and intrinsic motivation evaluation, according to some preliminary research. (Cai et al., 2023)

Weisbrod et al. (2023) mentioned that the Meditation without Expectations™ (MWE) 8-week virtual course teaches eight meditation techniques in a specific order, incorporating health coaching, adult learning, and behaviour change principles. The program aims to help employees develop self-sufficiency by practising consistent meditation. The results show that individuals can feel better and be more productive due to less stress, more resilience, and mindfulness for a relatively short time investment. The increased empathy may also support company diversity and inclusion goals, encouraging individuals to feel safe to be themselves at work and be respected. The program was first offered via live stream in English across all time zones during the first year of the COVID-19 pandemic, as many employees switched to working from home. Significant improvements in stress management, mindfulness, empathy, and resiliency were found regardless of gender, employment region, tenure with the company, or whether the participant had a regular meditation practice.

Artificial Intelligence and Mindfulness
The need for mental health services among youth is increasing, but accessibility, affordability, and stigma often prevent them from seeking professional help. (Zhou et al., 2021)

According to Huckvale et al. (2023), meta-analytical evidence supports different interventions, such as mindfulness, physical activity, and good sleep hygiene, in reducing psychological distress in college students. However, it is still unclear how well these interventions work, and AI-driven adaptive trials may be an excellent way to find out.

The most frequently assessed mental health outcomes include depression or depressive symptoms (84%), anxiety-related symptoms (73%), and psychological stress levels (40%). Several studies also investigated mental health outcomes related to well-being, quality of life, life satisfaction, psychological distress, insomnia, and sleep quality. (Zhou et al., 2021)

Zhou et al. (2021) also stated that telehealth has been increasingly used to manage youth mental health, with programs like E-CYMHS providing mental health care to rural Australian adolescents. In addition to videoconferencing, various technologies have been integrated into youth mental health care, showing accessibility, effectiveness, and cost-effectiveness. Web-based self-help platforms were the most frequently used online format (35 studies), with 24 effectively managing mental health issues. Mindfulness was tested in four studies, with three showing efficacy in reducing perceived stress, anxiety, and depression and improving quality of life.

AI-based conversational agents (chatbots) were tested in three studies, with MYLO training participants with problem-solving strategies and ELIZA as a control condition. Both intervention and control groups demonstrated significant reductions in depression and anxiety, but MYLO was not found to be more effective than ELIZA. Chatbots were found to be effective in reducing depression and anxiety, with retention rates ranging from 83% to 100% (Zhou et al., 2021).

Acosta et al. (2021) stated that artificial intelligence has been used to analyse a questionnaire on mindfulness therapy to develop future strategic plans. During the first lockdown in Spain from March to June 2020, information and communications technologies were implemented to support healthcare workers with mental health issues. A mindfulness course was organised using the Zoom videoconferencing platform and disseminated via www.massaludmental.es. The course aimed to help healthcare professionals in Castile and Leon cope with stress, anxiety, and emotional disorders caused by the pandemic, focusing on managing thoughts and emotions that may lead to suicide contemplation or pursuit.

Mindfulness training gives hints regarding this reorientation since they each describe in their own manner how intermittent moments of relaxation are to be utilised to enhance our cognitive capacities and battle the effects of stress and information overload. Typically, mindfulness training and applications are intended to facilitate the maintenance of emotional relationships (Bruder, 2021).

Bruder (2021) also mentioned that mindfulness practitioners with experience appear capable of "changing the relationship with the resting state and experiencing the flow of stimulus-independent mental material in an adaptable manner" (Vago & Zeidan, 2016). Experimenters can begin monitoring the interactions of large-scale brain systems when mind wandering is intentional and goal-directed based on the participants' ability to recognise when their mind is wandering. Google's SIY, Telenor's Workfulness, and other business initiatives present mindfulness as an intermittent style of rest, which varies from typical conceptions of rest as the cessation of work or inactivity.

Bruder (2021) further mentioned that they stress intellectual adaptability and emotional resiliency in digital and analogue work environments (Cook, 2016; Ferguson, 2016; Parviainen & Kortelainen, 2019). Instead of completely disconnecting, cognitive workers are required to go offline and rejuvenate their cognitive skills in order to rejoin the outside world. What was formerly a meditation practice requiring years of training is now frequently used to promote "fitness for work" (Hull & Pasquale, 2018) and, as a result, has taken on "athletic accomplishments" (Gregg, 2018).

According to Hansen & Scheier (2019), the examination of the types of smartphone-based intervention applications sponsored by Research funds from the National Institutes of Health (NIH) resulted in the following results: Mindfulness Training is an alternative cognitive technique that fosters introspection, moment-to-moment awareness, and listening to one's inner voice. The purpose of mindfulness training via smartphone applications is to heighten users' awareness, encourage them to live in the present now and be attentive to their surroundings while in a calmer and more reflective frame of mind. Meditation is a significant component of mindfulness training, incorporating deep relaxation and breathing exercises alongside abilities and techniques to overcome negative thoughts and minimise the inclination to respond to irrelevant stimuli.

Hansen and Scheier (2019) further stated that these specific applications include mHealth technology in care delivery and chronic illness management. Monitoring stress reduction by utilising mindfulness practices involves biofeedback. mHealth technology, described as "mobile communications for health information and services," is distinguished from electronic health (eHealth), which utilises the Internet to deliver behavioural and health-related treatments. Synthetic Intelligence

In the context of smartphone applications, artificial intelligence refers to incorporating computer algorithms that assist the user in making optimal or maximally gratifying decisions. The user gives input by describing circumstances, selecting app-provided alternatives, or providing data from wearable devices.

Horesh et al. (2022) mentioned that Breast cancer patients often experience emotional and physical difficulties, including stress, insomnia, depression, anxiety, pain, and blood pressure regulation. A new AI-VR intervention, Bubble, aims to address hot flashes in female breast or ovarian cancer patients. Bubble is a virtual reality mobile application that uses elements from cognitive behavioural therapy and mindfulness-based stress reduction. The intervention occurs in a winter wonderland setting called Frosty, providing a virtual reality winter experience and guided meditation. This innovative approach combines the benefits of integrative therapies and psychotherapeutic interventions for breast cancer patients. The (virtual reality) VR design was designed to provide a safe and tranquil space for patients to fully engage with the VR experience, allowing Luna, the helper, to use cognitive behavioural therapy and mindfulness techniques. The VR environment was considered a critical element in the therapeutic effect.

Weisbrod et al. (2023) stated through their study that they collect qualitative data by utilising Natural Language Processing (NLP), which recognises increased emotional involvement levels prompted by a product experience, also known as a mental model change, in order to collect qualitative data (MMC). The company's consumer product developers realised that not all 5-star ratings were created equal, so they collaborated with an expert vendor to develop an artificial intelligence NLP-based model to gain more insight and classify consumer comments into six levels of reaction to a new product: negative, neutral, good, significant, wow, and most likely to purchase (MMC).

The MindLAMP Platform is a data-driven tool that uses patient and clinician feedback to develop various applications. Its customisable components, including survey-based research, international consortiums, and mindfulness delivery, are flexible and adaptable. The Cortex data analysis and machine learning toolkit supports artificial intelligence, behavioural feature extraction, interactive visualisations, and high-performance data processing. The platform was designed with feedback from patients with serious mental illnesses and clinicians and has been continuously updated through patient advisory panels, focus groups, clinical use, and user feedback. The platform is available in multiple languages and designed to ensure easy addition of more features (Vaidyam et al., 2022).

Methodology

The PRISMA framework was used to conduct the Systematic Literature Review (SLR), as cited in Dogra & Priyashantha (2023). A total of 9 papers were downloaded from the Scopus database using the keywords "Artificial Intelligence" and "Mindfulness". The review protocol has been developed according to the PRISMA guidelines. Keyword co-occurrence analysis has been performed using VOSviewer software (Version 1.6.19).

Article selection method: PRISMA guidelines

Search strings: Artificial Intelligence, Mindfulness

Inclusion criteria   :

      1.   Year range: All

      2.   Subject area: All

      3.   Language of article: English

      4.   Keywords: Artificial Intelligence, Mindfulness

      5.   Source type: All

      6.   Type of Study: Literature Review

      7.   Methodological quality: Articles that followed the quantitative/qualitative methodology

Databases: Scopus

Analysis Method: Keyword Co-occurrence Analysis

Reporting structure: PRISMA guidelines

Search strategies   : *Artificial Intelligence* AND *Mindfulness *
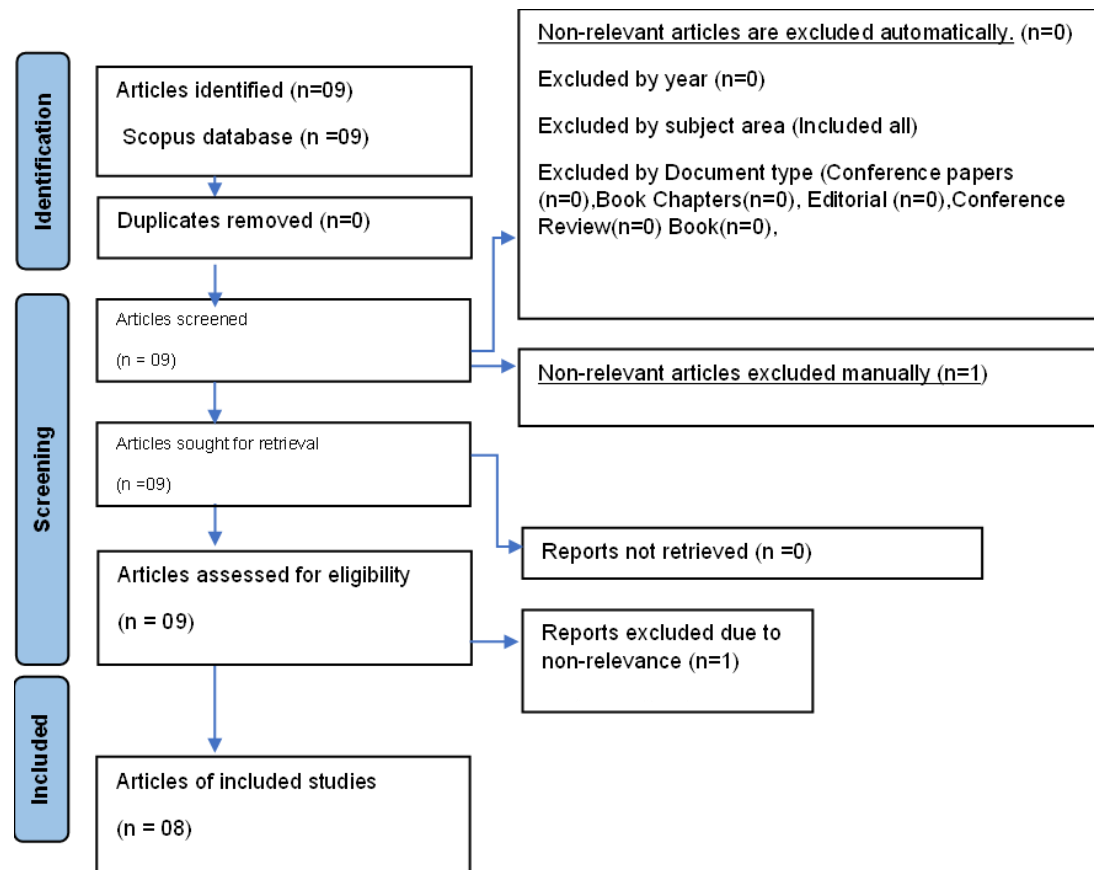
Figure 1. PRISMA Article Selection Flow Diagram

Source: Authors developed based on PRISMA Guidelines

Data Analysis and Findings

As Dogra & Priyashantha (2023) explained, VOSviewer software (version 1.6.19) has been used with Keyword co-occurrence analysis to analyse the data obtained from the Scopus database. VOSviewer has grouped keywords into 3 clusters (Fig. 2) according to the association between keywords. Clusters are indicated in different colours, which indicates how keywords in a particular cluster are connected. Table 1 illustrates the articles selected for the study.

Table1: Selected articles for the study

Author / Authors	Title of the Article
Indrianti Y.; Sasmoko; Setiadi N.J.; Mohd Amin N.F.	Entrepreneurial Mindfulness Website: Entrepreneur Profile Survey through Artificial Intelligence
Singha R.; Singha S.	Economic Sustainability, Mindfulness, and Diversity in the Age of Artificial Intelligence and Machine Learning
Wang Y.-C.; Uysal M.	Artificial intelligence-assisted mindfulness in tourism, hospitality, and events

| Medvedev O.; Krägeloh C.	Harnessing Artificial Intelligence for Mindfulness Research and Dissemination: Guidelines for Authors
Oktavius A.K.; Manalu S.R.; Sasmoko; Indrianti Y.; Moniaga J.V.	Artificial Intelligence in Entrepreneurial Mindfulness Using CRISP-DM Method
Sasmoko G.N.; Indrianti Y.; Angeline G.N.	Artificial Intelligence Usability Evaluation of Entrepreneurial Mindfulness Application
Sturgill R.; Martinasek M.; Schmidt T.; Goyal R.	A novel artificial intelligence-powered emotional intelligence and mindfulness app (ajvar) for the college student population during the COVID-19 pandemic: Quantitative questionnaire study
Indrianti Y.; Sasmoko; Mohd Amin N.F.; Rabiha S.G.; Setiadi N.J.; Handrimurtjahjo A.D.; Waspodo M.	Entrepreneurial Mindfulness Based on Artificial Intelligence
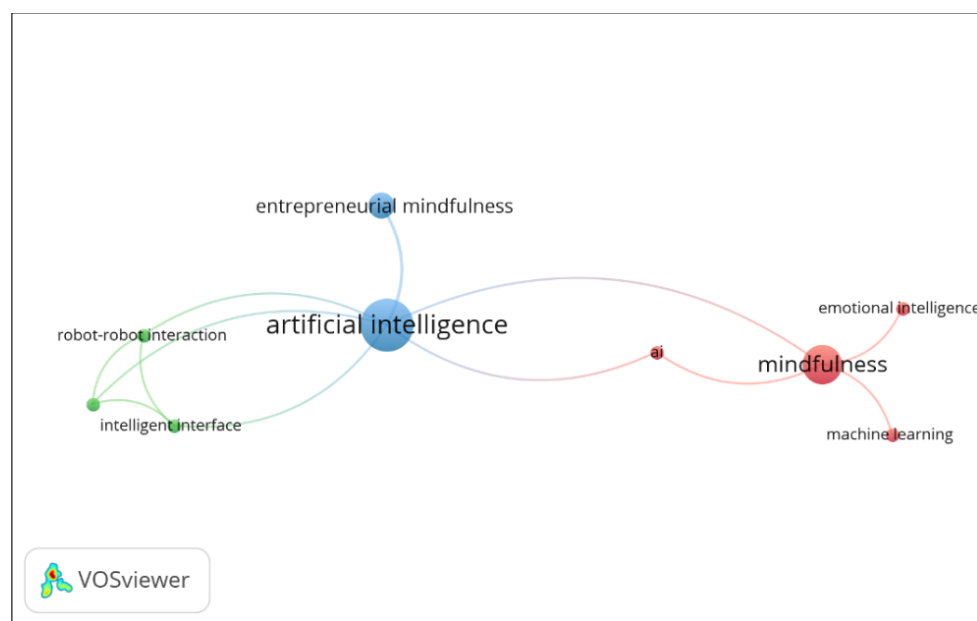
Figure 2: Keyword co-occurrence network visualisation
Source: VOSviewer output

The density visualisation map illustrates that the keywords within the yellow and green regions have undergone a relatively limited number of investigations and thus necessitate further exploration. Additionally, it signifies that understanding these specific keywords is considerably limited, thereby presenting ample opportunities for conducting research in this particular domain. Conversely, suppose the keywords are situated within a red-coloured region. In that case, extensive research has already been conducted in that area, and substantial knowledge is readily available (Dogra & Priyashantha, 2023).
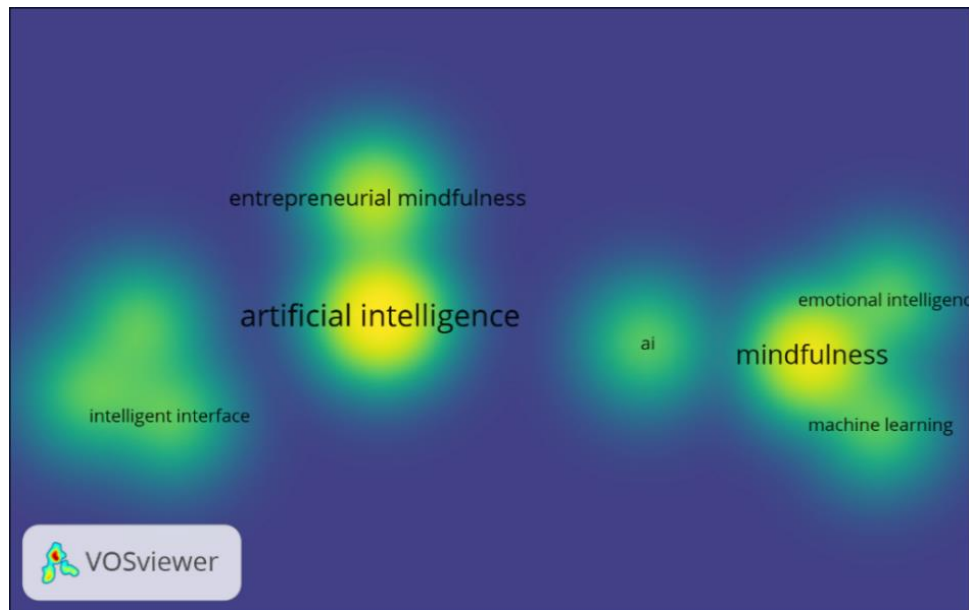
Figure 3: Density Visualisation Map of Keywords
Source: VOSviewer output

According to Figure 3, emotional intelligence, machine learning, entrepreneurial mindfulness, and intelligent interface are the least researched keywords related to artificial intelligence and mindfulness.

Further data analysis has been performed using the Scopus database, and Figure 4 illustrates that a few articles related to this area have been published.
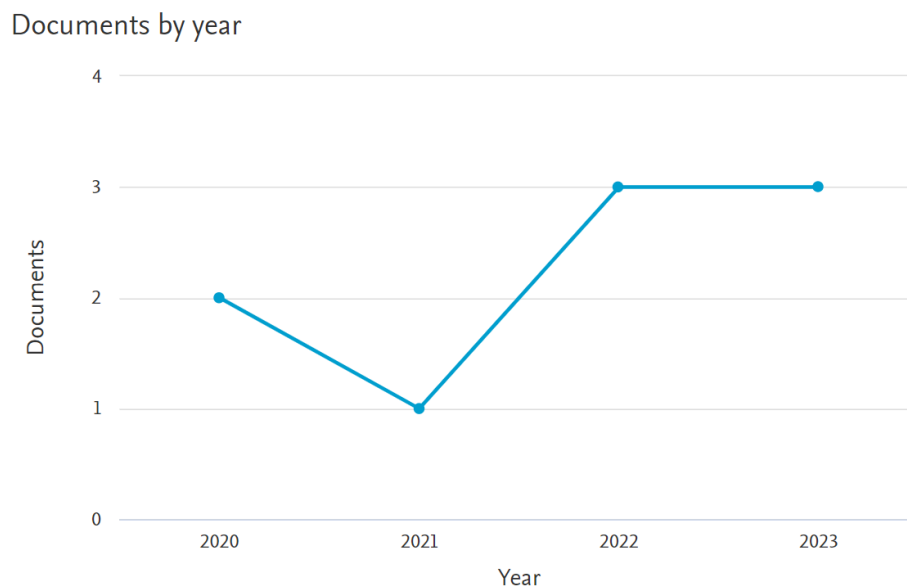

Figure 4: Article Publication Trend

Source: Scopus Database

Fig. 5 illustrates a significant contextual gap in the research conducted in this field since only six countries have contributed.
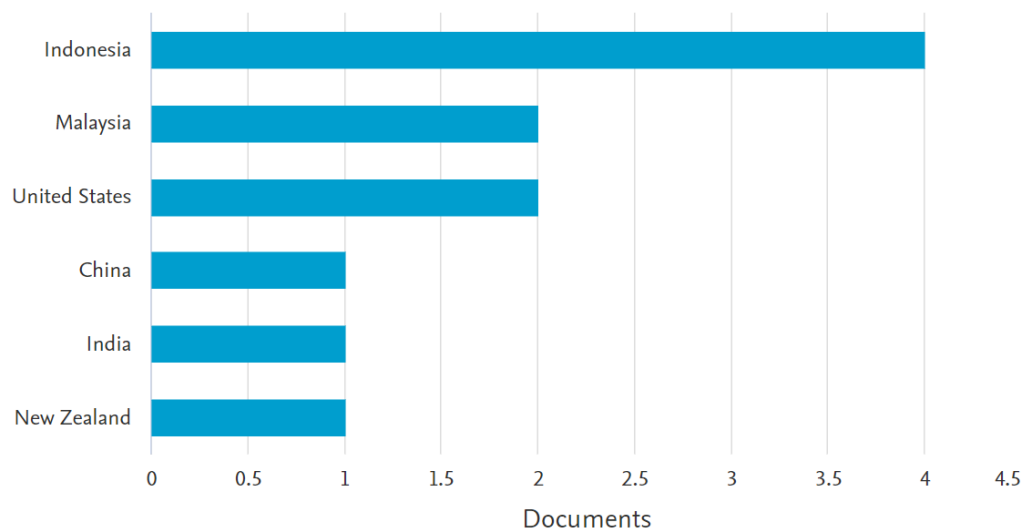

Figure 5: Country-wise article publication

Source: Scopus Database

Fig. 6 illustrates a lower percentage of journal articles related to Artificial Intelligence and Mindfulness than the percentage of conference papers published in this area.
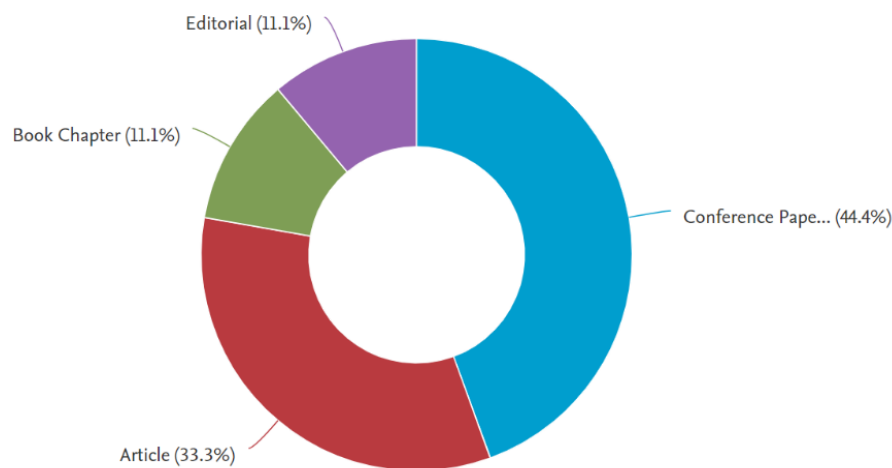

Figure 6: Article Publication by document type

Source: Scopus Database

Some Major Research Gaps and Future Research Directions
Contextual Gap
There is a research gap in the context of AI and mindfulness. As AI is a growing field of study, very few studies have been conducted, and global coverage of this topic is also minimal. Future research can be conducted to understand the issue in various demographic and geographical contexts, particularly in Sri Lanka.

When wellness, mindfulness, and meditation support are offered through nudges and chatbots, managers try to watch employees seem softer and sympathetic. This is one way that AI stops people from cyber-slacking. Bossware medicalisation efforts are often designed to extend beyond employees' working hours by inspiring particular mindfulness activities. "Workers should deploy these technologies of the self throughout their daily lives, even outside of work; this means that the subject specification apparatus of corporate mindfulness is not limited to the workplace but extends to the entire. However, further research should be conducted on how these corporate practices affect a worker's personal life.

Similarly, employees' preference for adopting this type of technology during non-work hours may vary. Consequently, how personal attitudes and perceptions influence this AI's applications should be investigated. Nonetheless, developing countries such as Sri Lanka lack well-established infrastructure. Consequently, how these repercussions affect various geographical contexts should be investigated further.

The current prevalence of mindfulness training and apps suggests that North Americans and Europeans think of mindfulness and their lives in general in terms of algorithms (Brüder, 2021). Even so, this issue requires additional research and consideration of the perspectives of other nations and regions, particularly in the context of Sri Lanka.

Given the ability of smartphones and wearables to collect a multitude of continuous multimodal data relevant to care, such as heart rate, sleep, and steps, tools and systems to harness and utilise this massive amount of automatically generated Patient-generated health data (PGHD) are a top priority in health care. The lack of technical infrastructure and organisational capacity to process accurate and valid PGHD from patient-owned consumer devices remains a barrier to achieving this objective. This necessitates investigating the applicability of these AI initiatives towards mindfulness in countries and regions with limited technical infrastructure, organisational capabilities, and other constraints.

Knowledge Gap

There is a knowledge gap in AI and mindfulness-related research. A comprehensive framework is required to capture the issue's big picture.

Cyber slacking mitigation can become a complicated combination of strategies with AI-enabled bossware; for instance, machine learning output can determine the timing and length of work breaks and offer options for how to spend those breaks (Oravec, 2023). However, to what extent these timing and breaks are feasible in the real world can be studied in detail.

Spiritual intelligence (SI) enables individuals to view their work in a broader and more mindful context, thereby filling their efforts with intrinsic value. (Cai st al., 2023). This provides the opportunity to examine how AI facilitates mindfulness in multidisciplinary concepts such as green consumption, ethical practices, and social responsibilities.

Meditation without Expectations^{TM} (MWE) is an 8-week virtual course that teaches eight meditation techniques. It was first offered via live stream in English across all time zones in the first year of the COVID-19 pandemic when many employees began working from home. This could pose a problem for countries where languages other than English are spoken. How language barriers affect AI adoption and mindfulness-maintaining initiatives should be investigated in greater depth.

Patient-generated health data (PGHD) is being integrated into clinical care to improve shared decision-making, care coordination, patient safety, and clinical outcomes. PGHD is essential to this mission and is defined as patient-generated health data used to address health concerns (Zhou et al., 2021). There

may be patients who do not want to share their health information with others, which may raise privacy concerns. Therefore, it is essential to investigate how AI may affect the privacy of patients.

Similar to the analysis in the literature review, research should be conducted on smartphone-based intervention apps and interventions for other applications towards mindfulness that use artificial intelligence, such as vehicle applications and electronic exercise devices. This may be an area worthy of study.

Methodological Gap

There is a methodological gap in AI and mindfulness-related research. Exceptionally, few studies have utilised both qualitative and quantitative methods.

As a form of mindfulness, a multidisciplinary effort is required to determine how digital tools with AI function by examining their effects on various aspects of life. According to Acosta et al. (2021), as future research directions for their studies, new questionnaires with questions tailored to the findings of this paper are currently being developed. It is anticipated that a significantly more significant number of individuals will participate in the new questionnaire to collect sufficient data for developing training models suitable for the application being studied, in this case, mindfulness. However, there may be restrictions associated with the assignment of data collectors. This gives rise to a study that focuses on unstructured interviews to improve the quality of the information and findings.

According to Huckvale et al. (2023), there is no consensus in the mindfulness literature regarding the optimal outcome measures, which are frequently lengthy. This provides the opportunity to study different mindfulness-appropriate measures and evaluations.

Huckvale et al. (2023) stated in their study that participants will not be prohibited from receiving other treatments during the trial but will be discouraged from engaging in new psychological therapies during the four-week trial period. Some patients may not prefer or be amenable to this circumstance. Thus, how this type of AI implications affects the perceptions of participants should be thoroughly and qualitatively investigated.

Empirical Gap

There is a gap in the empirical research on AI and mindfulness. The effects of AI and mindfulness can be investigated and empirically examined. Also questionable is the extent to which individuals accept mindfulness recommendations and wellness-related prompts. Depending on the age of the employees, their responses to AI initiatives may vary. This provides an opportunity to investigate the relationship between the age of AI users and their preference for AI-based mindfulness practices.

Conclusion

Artificial intelligence has gained much traction nowadays, and humans are trying to get things done through artificial intelligence. Still, there is a debate on using artificial intelligence as an alternative to human brain power and mindfulness. More research is needed to investigate the relationship between artificial intelligence and mindfulness. A few research studies have been conducted in this area, and research gaps exist in the field, such as knowledge, contextual gas, empirical, and methodological gaps. There is a vast potential to conduct research in the Sri Lankan context since mindfulness is embedded in Sri Lankan culture with Buddhism, and it would be beneficial to study the relationship between artificial intelligence and mindfulness as the country strives towards digitalisation and economic recovery.

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