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Imagery as Alternative Therapy of Depression: A Systematic Literature Review (SLR)

Nurwina Anuar[1], Ahmad Hakiim Jamaluddin[2], Abu Yazid Abu Bakar[1*], Muhammad Saleem[3], Febriani Fajar Ekawati[4]

[1]Faculty of Education, Universiti Kebangsaan Malaysia, Bangi, Selangor, MALAYSIA
[2]Department of Mathematics, Universiti Putra Malaysia, Serdang, Selangor, MALAYSIA
[3]School of Management, Universiti Sains Malaysia
[4]Faculty of Sports, Universitas Sebelas Maret, Surakarta, Indonesia

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Abstract

The main objective of this research is to thoroughly investigate how imagery therapy impacts the severity of depression. The systematic literature review (SLR) analyzed all relevant publications available up until January 2023 from two reputable databases: Web of Science (WoS) and Scopus. The screening process followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. This review highlighted that imagery therapy significantly reduces the overall depression level of the participants. By significantly reducing the level of depression based on objective tests analysed using meta-analysis, imagery therapy was evidenced to influence the level of depression. This SLR exercise gives specific focus that could benefit two areas of psychology, the clinical psychology and sports psychology.

Keywords: imagery, depression, psychology, systematic literature review

Introduction

Depression, also known as major depressive disorder or clinical depression, is a prevalent and serious psychiatric ailment characterized by a pervasive low mood and reduced ability to function. Globally, over 264 million individuals are affected by this condition. (WHO, 2020). Depression can result in challenges with sleep, diminished focus, and even precipitate grave outcomes like self-harm and suicide. The primary indicators include persistent feelings of melancholy and despair, along with a loss of enthusiasm for previously cherished activities. (WHO, 2020).

Depressive disorders contributed to 35% of the total disability-adjusted life years attributed to psychiatric conditions (Kyu et al., 2018), Based on the findings of the Global Burden of Disease Study 2017, the number of new cases increased from 172 million in 1990 to 258 million in 2017. (Liu et al., 2020). Certainly, a link has been established between the higher occurrence of depression among middle-aged and older adults and a heightened susceptibility to various chronic conditions. These conditions encompass a range of diseases such as cardiovascular disease (CVD), diabetes, Alzheimer's dementia, rheumatoid arthritis, and Parkinson's disease. (Barlinn et al., 2014; Dickens et al., 2002; Green et al., 2003; Van der Kooy et al., 2007). The origins of imagery can be traced back to the realm of athletic psychology. This technique has proven instrumental in empowering athletes to amplify their skills, facilitate healing from injuries, sustain motivation, manage their emotional responses, and formulate effective success strategies (Anuar, 2017; Morris et al., 2005). Interestingly, in recent times, there has been a growing inclination towards harnessing the potential of imagery as a therapeutic tool for addressing mental health challenges.

Research Background

Newly conducted research indicates that focusing on a mental image and cultivating positive thoughts can lead to favorable impacts on an individual's mood (Apóstolo & Kolcaba, 2009).

Guided imagery represents a technique involving the integration of mind and body, fostering relaxation and a sense of wellness through the power of mental imagery. Grounded in the belief that the relationship between the mind and body is interconnected, it spans a spectrum from guided visualization and explicit image-centered suggestions to the use of metaphors and narratives. (Jallo et al., 2014). In the practice of guided imagery, the brain is prompted to create a positive and forward-looking visualization of a situation before the individual actually faces it. Put simply, the person is led to construct a favorable mental scenario and focus their imagination on fully immersing themselves in the sensory aspects—seeing, hearing, and even smelling the event as if it were unfolding in reality. (Bedford, 2012).

With numerous recent studies illustrating the substantial impact of imagery therapy on an individual's level of depression, there arises a pressing need for a comprehensive analysis that consolidates the findings from these studies. This analysis is essential to provide clarity regarding the collective outcomes of prior relevant research. Additionally, it holds significance to evaluate the relative importance of each pertinent study within the broader body of literature. This evaluation aids in gaining insights into the optimal environment or context for implementing imagery therapy, thereby maximizing its potential to effectively reduce depression levels. By employing diverse assessment tools to gauge the extent of depression, one can deduce the array of studies conducted across different settings. A methodical investigation is warranted to comprehensively grasp the impacts of imagery therapy on depression levels, encompassing a variety of measurement instruments.

While imagery therapy has been rigorously demonstrated as an alternative to treating depression, a thorough collective systematic review that enables the quantification of the results i.e., the use of a meta-analysis, has yet been performed. The emphasis of this current article is primarily on quantifying the effect of imagery therapy on the degree of depression. This article aims to:

a. measure the overall effect of imagery therapy on depression level
b. determine the individual effect size of individual study on the effect of imagery therapy on depression level
c. determine the effects of imagery therapy on depression measured using different instruments

This particular systematic literature review (SLR) has been organized into distinct sections. It begins by detailing the criteria employed for selecting research, outlining the steps taken to assess outcomes, explaining the approach used for conducting searches, and discussing the process of screening and choosing relevant articles. Following this, the subsequent section elucidates the materials and methodologies adopted for the study. The subsequent segment presents the findings, encompassing a condensed overview of the studies incorporated, the comprehensive aggregated outcomes, a sensitivity analysis, and an examination of subgroups. Ultimately, the results underwent thorough deliberation, culminating in the eventual formulation of a conclusive summary.

Methodology

This section provides an overview of the steps involved in conducting a systematic literature review (SLR). The processes are detailed, encompassing literature retrieval and analysis. The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) methodology was employed, encompassing literature retrieval, stages of review such as detection, screening, and eligibility assessment, as well as data abstraction and analysis.

PRISMA outlines the eligibility conditions and the criterion for exclusion. For the review method, only manuscripts with certain requirements were approved namely, (i) journal papers and case studies only because they include more mature and competing research reports (Bar-Ilan, 2010; Montesi & Mackenzie, 2008), (ii) English-language manuscripts only to ease data extraction and synthesis, (iii) imagery therapy and depression-related manuscripts only, and (iv) manuscripts from the recent five years of publication. Guided by these four requirements, the eligibility and exclusion criteria of manuscripts for this SLR exercise are drawn as illustrated in Table 1.

Table 1. Eligibility and exclusion criteria of SLR exercise

Criterion	Eligibility	Exclusion
Literature Type	Journal articles, case study	Review articles, chapter in book, conference proceeding
Language	English	Non-English
Discipline	All	None
Focus of Study	Imagery therapy and/or depression	Non-imagery therapy and/or non-depression
Publication Year	2019 to 2023 (The recent five years)	2019 before

Results and Discussion

The shift in the degree of depression depending on the basic measurement instrument by numerous meta-analysis studies was measured. Moreover, the search strategy adopted is to include manuscripts with quantitative and mixed approaches, integrated systematic analysis was used. This systematic literature review method is preferred because it offers a detailed manuscript analysis of different research methods (Jackson et al., 2019). The inclusion of the studies using either approach is to ensure that statistical data could be extracted for the use of a meta-analysis. An integrative systematic analysis was conducted in March 2023, mainly using WoS and Scopus databases. Four (4) steps comprise the systematic review employed. Firstly, according to prior research, thesaurus and suggested keywords from Scopus, relevant keywords related to imagery therapy and depression were identified. Within search sections such as title, abstract and keyword, the extensive features of the databases allowed the customization and prioritisation of certain terms over the rest. The search strings for the databases are shown in Table 2.

Table 2. The search strings used for systematic review

Journal Database	Search String	Frequency of Hits
WoS	TOPIC: ("imagery") AND TOPIC: (depression* OR depressive), Refined by: PUBLICATION YEARS: (2019 OR 2020 OR 2021 OR 2022 OR 2023)	90
Scopus	TITLE-ABS-KEY (“imagery”) AND TITLE-ABS-KEY (depression* OR depressive) AND LIMIT-TO (PUBYEAR, 2019) OR LIMIT-TO (PUBYEAR, 2020) OR LIMIT-TO (PUBYEAR, 2021) OR LIMIT-TO (PUBYEAR, 2022) OR LIMIT-TO (PUBYEAR, 2023)	419

The search strings from both databases corresponded with 509 subsequently collected manuscripts. 1 duplicated manuscripts were excluded at the identification stage. 378 more manuscripts were omitted during the screening stage, and another 126 manuscripts were withdrawn during the eligibility process. Finally, only four

quality manuscripts that specifically concentrate on both imagery therapy and depression were retained. The process is illustrated in Figure 1.

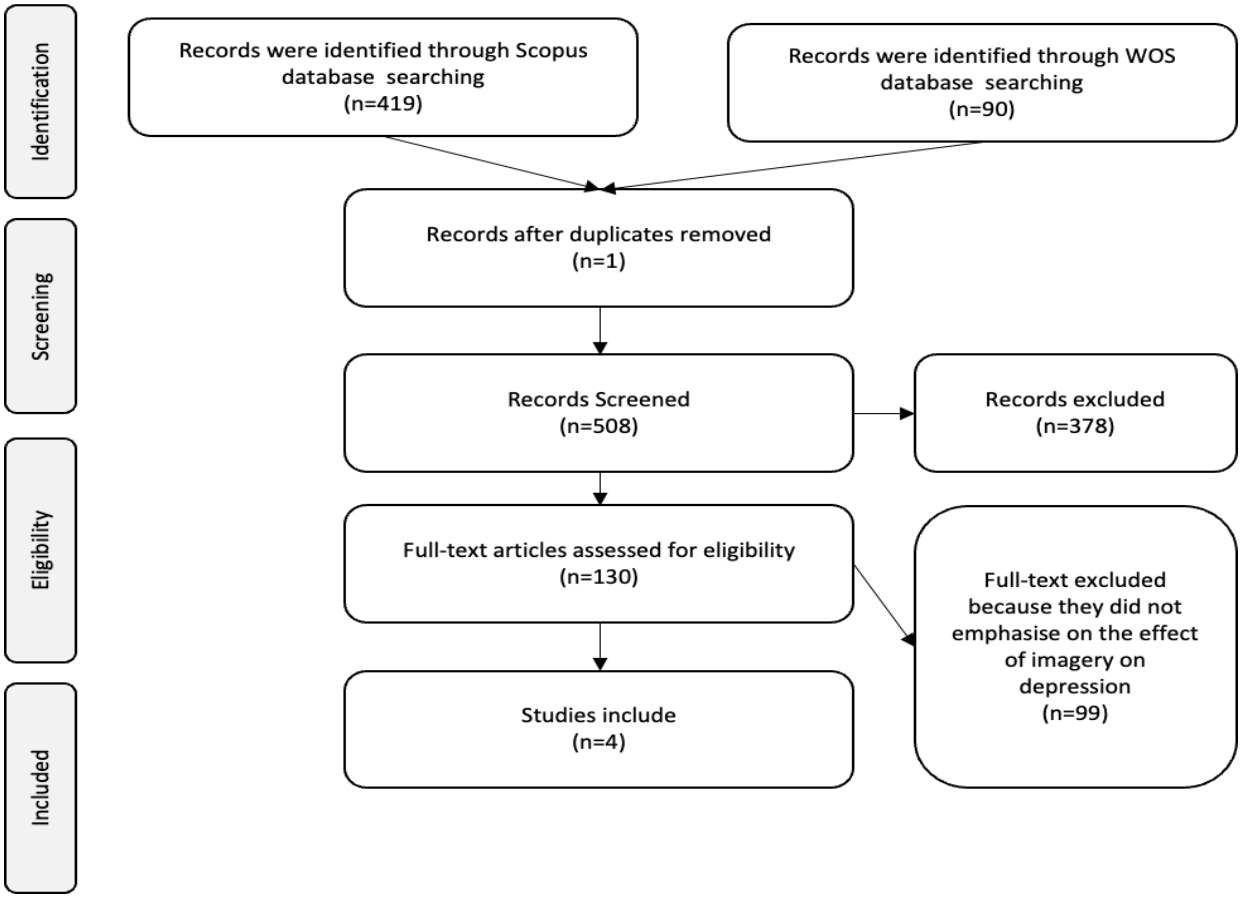

Figure 1. Illustration of the PRISMA process

The studies that were incorporated needed to meet the following criteria: (1) encompass populations in which at least one partner was vulnerable to a chronic physical ailment they hadn't previously encountered, (2) involve active engagement from both partners, (3) consist of adults aged 18 and above, and (4) incorporate a control group. Studies that didn't meet these criteria were excluded if (1) the participants weren't at risk of a chronic physical ailment, (2) a control group wasn't present, and (3) the intervention didn't specifically address both partners. Both authors collectively screened the identified articles, and any differences were resolved through discussion.

From each study, the following details were extracted: objectives, methodology, sample size, interventions administered to partners, interventions given to the control group (if applicable), duration of the follow-up period, metrics utilized, and outcomes. The specifics of the studies meeting the inclusion criteria are documented in Table 3. Randomized controlled trials (RCTs) and non-randomized intervention studies were evaluated using the Cochrane Collaboration Risk of Bias tool (Higgins et al., 2011) by both authors (EAC and NM), and any disparities were resolved through discussion.

Table 3. Characteristic of studies included

Study	Countries	Aim	Sample	Findings

Pile et al. (2021)	United Kingdom.	To delineate and assess within a case series, a concise intervention rooted in imagery, designed to address cognitive mechanisms associated with depressive symptoms.	The four-session intervention was completed by a group of 9 participants, focusing on principal components including imagery rescripting and memory specificity training.	Significant reductions in depression symptom scores were observed before and after the intervention (effect size d = 1.32), with 67% of participants demonstrating reliable improvement (RI). This positive change was sustained during the follow-up period (effect size d = 1.46), with a RI rate of 75%. Notable reductions in anxiety were also noted post-intervention (effect size d = 1.15, RI = 44%), and this improvement persisted at follow-up (effect size d = 1.67, RI = 63%). Furthermore, participants displayed improvements in self-esteem after the intervention (effect size d = -0.70, RI = 44%), and this positive effect continued during the follow-up (effect size d = -1.20, RI = 50%). Additionally, there were significant and noteworthy changes in memory specificity, with a decrease observed post-intervention (effect size d = -1.80, RI = 67%), and a different pattern observed during the follow-up (effect size d = -0.94, RI = 63%). In conclusion, this study marks the first instance of utilizing imagery rescripting and memory specificity training in adolescents. The findings offer preliminary evidence suggesting that the intervention is well-received and holds potential clinical value.

Tiba & Voss (2022)	Pakistan	To document the utilization of remote kinematics-based cognitive rehabilitation skills training as a therapeutic approach for addressing lingering depression. This approach aims to address deficiencies in the mental simulation of actions that contribute to the persistence of depressive symptoms.	An individual instance study involving the implementation of Kinect-based rehabilitation training led to...	Significant enhancements were demonstrated through substantial reductions in baseline difficulty for various factors. These included a 54% decrease in imagining positive actions, a 36.3% reduction in negative emotions, a 69.7% improvement in cognitive flexibility, an 80% decrease in depressive symptoms, and a 50% alleviation of physical retardation. Correspondingly, notable progress was observed with a 107% increase in positive affect and a 100% boost in the vividness of motor imagery for positive actions.
Pile et al. (2021)	Romania	To investigate images amenable to IR, presenting in the context of adolescent depression	37 participants completed imagery rescripting and provide a detailed case example for each theme	Imagery rescripting stands as a viable and potentially impactful technique for addressing depression during its early stages. Unfortunately, its utilization remains notably insufficient within the present therapeutic landscape.
Bibi et al. (2020)	United Kingdom	to identify whether positive imagery CBM successfully applied in the new setting.	55 participants had been randomized.	The imagery CBM intervention received favorable feedback; however, there were challenges encountered in implementing the study due to practical issues.

The overall effects of imagery therapy on the decrease of depression among participants were revealed. Different types of depression level measurement instruments were found to reveal distinct effects of imagery therapy on depression level. This indicates that it is important for researchers to select suitable instrument according to the needs of the study. Throughout the conduct of this research, there are some limitations encountered. The limitations include (i) the scarcity in suitable related studies; and (ii) the inadequacy in statistical data for meta-analysis provided in the quantitative studies. The limitation in the number of suitable studies led to the utilisation of only 10 manuscripts in the meta-analysis conducted. Some manuscripts do not provide sufficient statistics for comparing means, hence, restricting the utilisation of their findings for meta-analysis purposes. In our perspective, a challenge faced when the studies included utilised different depression level measurement instruments. Hence, the generalisation of the findings may be argued. However, this challenge has been successfully addressed through subgroup analyses.

Despite many limitations, through a systematic meta-analysis approach with adequate and solid statistical foundations, this research succeeds in clarifying the overall effects of imagery therapy on reducing the level of depression among participants. The results are expected to persuade imagery therapy practitioners and participants, as well as to facilitate further research on imagery therapy, especially in the treatment of depression.

Conclusion

In a nutshell, by significantly reducing the level of depression based on objective tests analysed using meta-analysis, imagery therapy was evidenced to influence the level of depression. Given the lack of comprehensive studies on the impact of imagery therapy on the level of depression, further research should be carried out to allow for a greater representation of all patient groups. Further empirical studies should be carried out, as experiments are available to include studies using the same depression assessment methods to draw a generalizable inference.

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