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Effects of Mindfulness-Based Stress Reduction on Emotional Intelligence and Job Development in Saudi Educators

Adel Mohammed Alosaimi

Taif Education Administration, Ministry of Education, Taif, Saudi Arabia

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ABSTRACT

This study investigated the effects of a brief mindfulness-based stress reduction (MBSR) program on Emotional Intelligence (EI) and job satisfaction among teachers in Saudi Arabia. Given the increasing stress and psychological challenges facing educators, improving EI and stress management techniques is crucial. The primary research questions were: (1) Does participation in MBSR improve EI among male teachers? (2) Does MBSR reduce perceived stress and enhance job satisfaction? A quasi-experimental nonequivalent group pretest-posttest design was utilized, involving 100 Saudi teachers divided into experimental and control groups. Over three weeks, the experimental group engaged in the MBSR program, while the control group received no intervention. EI, mindfulness, job satisfaction, and perceived stress levels were assessed using various measures. Statistical analyses, including descriptive, inferential, and mediation analyses, were conducted to evaluate the effectiveness of the MBSR program. Results indicated that the MBSR group exhibited improved EI, with higher scores for emotional attention, clarity, and repair than the control group. Furthermore, the experimental group showed significant increases in mindfulness and notable reductions in perceived stress levels. Mediation analysis demonstrated that mindfulness and perceived stress partially mediated the relationship between EI and teacher job satisfaction. These findings underscore the potential of MBSR to improve teacher well-being and job performance. The study recommends incorporating MBSR into training programs to equip educators with tools to manage stress, increase awareness, and improve workplace satisfaction. This approach aligns with Saudi Arabia's Vision 2030 initiatives, promoting a more positive educational environment.

1. Introduction

As society advances, individuals are confronted with increasingly demanding workloads, increased competition, intricate human relationships, and numerous psychological challenges. The growing inability to manage mental health effectively among employees has become a

*Corresponding author's E-mail adelhtc1x@gmail.com

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significant concern, drawing increased attention to work-related stress from both organizations and individuals (Ruotsalainen et al., 2015). The concept of mindfulness is gaining more recognition as a method of managing stress and handling emotional difficulties (Nadler et al., 2020). However, research on the link between mindfulness and emotional intelligence (EI) among workers remains limited (IsHak et al., 2009). Daniel Goleman's Emotional Intelligence Theory explains how EI and stress are related, yet there is a lack of solid data to substantiate this relationship (Lloyd et al., 2013). This study aimed to investigate the impact of mindfulness training on improving the EI of workers within the Saudi Arabian educational system.

A key component of mindfulness techniques is mindfulness-based stress reduction (MBSR). The MBSR was initially developed by Jon Kabat-Zinn in 2003. The technique is an eight-week program designed to enhance social, physical, and psychological abilities to help individuals cope with stress, pain, and health challenges (Kabat-Zinn, 2003b; Santorelli et al., 2017). It includes techniques such as body scans, sitting meditation, mindful movement, and daily assignments aimed at improving focus, concentration, and relaxation (N¸bold et al., 2019). MBSR equips individuals with tools to adopt a present-centered approach to job tasks, enhancing self-regulation during emotional and social interactions, thus potentially increasing EI and promoting mental well-being and resilience (Huertas-Valdivia et al., 2019; Phillips & Grandy, 2018).

The significance of this study extends beyond the realm of psychology, as it aims to increase educators' emotional sensitivity toward their students, foster long-term relationships, and encourage student interaction and participation (Waters & Loton, 2019). Additionally, the findings may challenge traditional gender roles within educational institutions, showcasing the ability of female superintendents and principals to manage stress effectively (Campion et al., 2012). The applicability of MBSR across different cultural contexts and professions will also be explored, potentially offering a universal stress management program (Franke et al., 2018).

Teachers frequently feel ineffective, sensing that their efforts are not achieving the intended outcomes. This frustration is compounded when they do not observe a positive impact on student performance or receive discouraging evaluative feedback. A lack of tangible outcomes from their hard work leads to significant mental distress. Studies indicate that teachers who feel ineffective often experience burnout and reduced job satisfaction (Skaalvik & Skaalvik, 2017). This mental distress can result in increased absenteeism and turnover among educators (Hakanen et al., 2006).

A prevalent issue among teachers is the lack of recognition and acknowledgment of their efforts and accomplishments by educational administrations and the local community. This deficiency in appreciation can significantly impact their motivation, diminishing their sense of personal and professional achievement. The absence of validation and support undermines their enthusiasm and commitment to the teaching profession. Studies have shown that recognition and appreciation from both the administration and the community significantly enhance teachers' job satisfaction and reduce stress (Addison & Brundrett, 2008; Travers & Cooper, 1996).

Another significant source of stress for teachers is managing classrooms with disruptive students. The challenge of maintaining order and discipline in such environments is substantial, leading to increased mental strain. The constant effort to control disruptive behavior and create a conducive learning environment adds to teachers' mental burden. Research shows that classroom management issues are a significant stressor for teachers, often resulting in burnout and job dissatisfaction (Clunies-Ross et al., 2008; Tsouloupas et al., 2010).

Teachers are also burdened with several administrative duties, such as lesson preparation, report writing, student evaluations, and participation in school administrative workloads. These additional responsibilities contribute to their overall stress levels, as they must balance these tasks with their primary teaching duties. The workload can be overdemanding, leading to burnout and decreased job satisfaction. Evidence suggests that administrative tasks significantly increase teachers' workload and stress, contributing to burnout (Collie et al., 2012; Kyriacou, 2001).

Teachers in Saudi Arabia frequently find their monthly income inadequate to meet the rising costs of living, which heightens their financial stress. The lack of adequate financial incentives and bonuses further contributes to their economic pressures. Teachers struggle to maintain a decent standard of living, which in turn impacts their overall well-being and job satisfaction. Studies on teachers' financial stress indicate that inadequate compensation is a major factor in job dissatisfaction and stress (Barmby, 2006; Smith & Ingersoll, 2004).

In many communities, the teaching profession does not receive the social appreciation it deserves. This lack of recognition affects teachers' morale, making them feel undervalued and professionally disrespected. The social undervaluation of their profession diminishes their sense of pride and fulfillment in their work, contributing to their overall stress. Research shows that social recognition and respect are critical for teachers' morale and job satisfaction (Day et al., 2007; Hargreaves, 2000).

The teaching profession requires continuous effort in lesson preparation, updating modern scientific and technological advancements, and adapting to new teaching methods. These high demands impose an additional burden on teachers, particularly in the context of limited resources and support. The constant need for professional development and adaptation can be exhausting, leading to professional burnout. Studies confirm that the demands for ongoing professional development and adaptation are significant stressors for teachers, often resulting in burnout (Geving, 2007; Huberman, 1993).

The mental pressures faced by teachers can lead to burnout, which is characterized by emotional and physical exhaustion, loss of motivation, and decreased productivity. These stresses negatively impact teachers' mental health, potentially resulting in symptoms of depression and anxiety and reducing overall life satisfaction. Teachers experiencing these overdemands often find it challenging to function effectively in the classroom, which in turn affects the quality of education provided to students. The cumulative effect of these stressors underscores the need for comprehensive support systems to enhance teachers' well-being and professional efficacy. Extensive research links teacher stress and burnout to mental health issues, decreased job performance, and lower educational quality (Maslach & Leiter, 1999; McIntyre, 2010; Montgomery & Rupp, 2005).

Educational organizations could see advantages by including EI training in their curriculum. This addition has the potential to enhance the quality of work life, boost productivity, strengthen connections, and develop leadership abilities (Eccleston et al., 2021). Enhancing employees' social-emotional skills may have a more significant positive impact than material compensation alone (Burke & Attridge, 2011). This study seeks to bridge the gap in understanding the need for enhanced EI among educated employees (Akter et al., 2021). It specifically examines the effects of MBSR on EI among male education employees aged 30-40 years in Saudi Arabia. Participants participated in a seven-week MBSR program, and their EI capabilities were assessed both before and after the course (Benjamin et al., 2021). This study aims to provide valuable insights for educational staff, policymakers, and scientists on the EI dimensions crucial for educational settings.

The recognition of mindfulness as a strategy for stress management and the enhancement of EI has significantly increased. Nevertheless, empirical research focusing on the effects of MBSR programs on the EI of Saudi Arabian educators, particularly male educators aged 30 to 40, remains limited. Previous studies have highlighted the general benefits of mindfulness and EI (Sibinga et al., 2013). however, there is a lack of specific data on how MBSR interventions affect the distinct components of EI within this demographic. Additionally, the impact of cultural and societal norms on the efficacy of MBSR in enhancing EI among this group of male educators in Saudi Arabia is an underexamined area(Norouzi et al., 2020).

This research gap is crucial as, despite the well-documented general benefits of mindfulness and EI, the specific dynamics within cultural and professional contexts remain inadequately understood. Male educators in Saudi Arabia face unique stressors and societal pressures that may differentially affect their mental health and professional performance compared to other groups. Addressing this knowledge gap will provide valuable insights for developing culturally and contextually appropriate interventions.

This study is driven by the following questions: How does MBSR impact the emotional intelligence of male education staff? What notable variances in EI exist between the groups receiving the intervention and those in the control group? How does the frequency of practice influence EI levels? The research will investigate changes in EI scores preintervention, after three weeks of training, and during a three-month follow-up, as well as group discrepancies linked to MBSR practice consistency.

Focusing on male education employees aged 30-40, this study addresses their challenges in managing EI due to societal and cultural expectations (Budhwar et al., 2023). The affordability and accessibility of MBSR make it a viable intervention for this underprivileged sector (Kozyreva et al., 2020). This demographic study aimed to empirically validate the efficacy of MBSR in improving EI and well-being (BÈgin et al., 2022).

1.1. The Present Study

This study explored the effect of MBSR on the EI of male education employees in Saudi Arabia. Despite growing interest in mindfulness as a stress management tool, research on its impact on EI, particularly within Saudi Arabian educational institutions, remains limited. This study aims to address this gap by examining how mindfulness training can enhance EI, a crucial factor in managing stress and fostering positive workplace relationships, within Saudi Arabia's unique cultural and educational landscape.

Saudi Arabia is making changes to its education system as part of Vision 2030. This ambitious initiative seeks to reduce nations' reliance on oil by expanding the economy. Education plays a role in this plan, with updates being made to school curricula enhancing teacher education and fostering an inclusive learning atmosphere for students of all backgrounds. Despite these advancements, educators in Saudi Arabia continue to face substantial stress due to high expectations, rapid changes, and traditional societal pressures that influence their professional and personal lives.

Specifically, this study focuses on male education employees aged 30-40 years. This demographic often faces societal and cultural expectations that may hinder effective emotional stress management. Given the patriarchal structure and rapid modernization efforts in Saudi Arabia, male educators often encounter conflicting demands from their professional roles and traditional societal norms. These factors highlight the need to explore interventions such as MBSR that can support the emotional well-being and professional effectiveness of individuals.

This study investigates whether MBSR can effectively enhance EI and well-being for male educators in Saudi Arabia. The goal is to provide valuable information for educators, policymakers, and researchers. This information can help us understand how EI functions in educational settings within Saudi Arabia and lead to practical solutions designed specifically for that context.

The research questions guiding this study are as follows:

- What is the effect of MBSR on the EI of male education employees in Saudi Arabia?
- What are the significant differences in EI between the intervention and control groups within the Saudi educational context?
- What is the effect of practice frequency on EI among Saudi educators? What variances can be observed in emotional intelligence scores prior to program initiation, following three weeks of training and during the three-month follow-up period?
- How do group differences manifest based on MBSR practice frequency within the Saudi cultural setting?

To address these questions, participants underwent a three-week MBSR intervention. Their EI capabilities were evaluated both before and after the training. This study employs a rigorous experimental design to assess the impact of MBSR, including control and intervention groups, and considers various factors, such as practice frequency and follow-up assessments, to ensure a comprehensive analysis.

The significance of this study extends to various stakeholders. Educators in Saudi Arabia recognize the importance of EI in fostering effective teacher–student relationships and enhancing classroom dynamics in a rapidly changing educational landscape. Policymakers can use these findings to advocate for the integration of mindfulness and EI training in professional development programs, aligning with the goals of Vision 2030 to improve the overall quality of education. Moreover, this study contributes to the broader psychological literature by providing empirical evidence on the effectiveness of MBSR in improving EI, particularly in the context of education in Saudi Arabia. By focusing on a specific demographic within the Saudi education sector, this study aims to offer targeted recommendations for enhancing emotional intelligence through mindfulness. This highlights the potential of MBSR as a universal stress management program that can be adapted across different cultural contexts and professions. The findings are expected to challenge traditional gender roles within Saudi educational institutions, showcasing the ability of male educators to manage stress effectively and promote emotional well-being.

2. Method

2.1. Research Design

The research used an experimental design without equivalent groups before and after MBSR to examine how MBSR affects the EI of male educators in schools under the Ministry of Education in Saudi Arabia. The participants were split into two groups: one that took part in MBSR and another that did not undergo any intervention.

2.2. Participants

The research population consisted of male educational professionals employed in schools under the Ministry of Education in Saudi Arabia. During the research period, these schools employed a substantial number of educators within this demographic. The study sample included 100 participants who were selected through purposive sampling from among the educators working

in these schools. The ages of the participants ranged from 26 to 47 years. Purposive sampling was utilized to ensure representation from various schools under the Ministry of Education, thereby providing an equal chance of selection to all individuals meeting the inclusion criteria. Fifty participants were assigned to the experimental group, while the remaining fifty were allocated to the control group.

Table 1.
Demographic Characteristics of the Study Sample

Characteristic	Experimental Group (N=45)	Control Group (N=55)	Total (N=100)
Age			
26-30 years	9	11	20
31-35 years	13	17	30
36-40 years	11	13	24
41-47 years	12	14	26
Educational Level			
Bachelor's Degree	28	34	62
Master's Degree	12	15	27
Doctorate Degree	5	6	11
Years of Experience			
1-5 years	10	11	21
6-10 years	17	22	39
11-15 years	11	11	22
16-20 years	7	11	18
Marital Status			
Single	17	21	38
Married	28	34	62

2.3. Intervention

The Mindfulness-Based Stress Reduction (MBSR) intervention was meticulously designed to enhance participants' mindfulness skills through a combination of structured and self-directed activities. The intervention comprised weekly 2.5-hour sessions, each emphasizing core mindfulness practices such as guided mindfulness meditation, body scan exercises, and mindful movement practices, specifically yoga. To support continuous practice outside of sessions, participants were provided with audio recordings for daily mindfulness exercises. Additionally, a full-day mindfulness retreat was integrated into the program to deepen the participants' experience and practice. The three-week duration of the MBSR intervention was strategically chosen based on evidence from preliminary studies that highlighted significant psychological benefits within this timeframe (Kabat-Zinn, 1982; Shapiro et al., 1998). These studies demonstrated that even brief mindfulness interventions could lead to meaningful improvements in mental well-being, making it a feasible option within the constraints of the school schedule. Practical considerations, such as aligning with the academic calendar and minimizing disruption to the students' routines, further justified the three-week period for the intervention. Figure 1 depicts the significant reduction in PSS levels over time for the experimental group, while the control group showed minimal changes.

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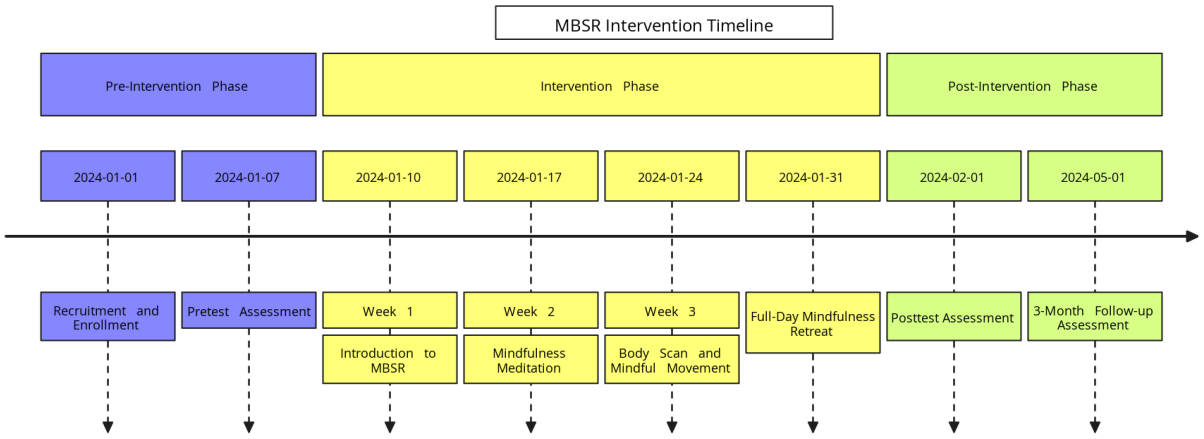

Figure 1. Timeline of the MBSR intervention. The timeline outlines the key phases of the study, including pre-intervention activities, weekly intervention sessions, and post-intervention assessments

Weekly sessions: The MBSR program includes weekly 2.5-hour sessions, which provide a structured curriculum to introduce and deepen participants' mindfulness practices. The main components of these sessions are as follows:

Guided Mindfulness Meditation: Participants practice guided mindfulness meditation exercises that promote a nonjudgmental awareness of the present moment. These exercises often involve focusing on the breath, bodily sensations, or other anchors to build attentional stability and mindfulness (Kabat-Zinn, 2003b).

Body Scan Exercises: Body scanning is a key practice in MBSR, where participants systematically direct their attention to different parts of their body. This exercise heightens awareness of bodily sensations and encourages relaxation by reducing tension and stress (Dobkin & Zhao, 2011).

Mindful Movement Practices (Yoga): By incorporating gentle yoga postures, mindful movement practices aim to increase participants' body awareness and flexibility. These exercises emphasize mindful attention to bodily sensations, movements, and breath, fostering a deeper mind-body connection (Frank et al., 2013).

Daily Home Practice: To reinforce the skills learned during the weekly sessions, participants were provided with audio recordings to facilitate 45 minutes of daily mindfulness practice at home. This home practice is essential for integrating mindfulness into daily life. The recordings usually include guided meditations, body scans, and mindful movement exercises, helping participants practice independently and deepen their mindfulness experience (Khoury et al., 2015).

Retreat Day: In the three weeks, the program included a full-day mindfulness retreat. This retreat is a crucial part of the MBSR curriculum, allowing participants to immerse themselves in intensive mindfulness practices. It involves several hours of continuous mindfulness meditation, body scans, and mindful movement exercises, along with group discussions to share experiences and reflections and foster community and support. The retreat aims to deepen mindfulness practices, improve attention sustainability, and provide greater insights into participants' experiences (Gan et al., 2022).

Program Objectives and Outcomes: The primary goal of the MBSR program is to help participants develop a mindful approach to managing stress, pain, and other life

challenges Engaging in mindfulness can help people control their feelings, react calmly to pressure and improve their health. Research has consistently shown that MBSR effectively reduces stress, anxiety and depression symptoms by improving physical well-being through the management of long-term pain (Astin, 1997).

The MBSR program's design makes it accessible and relevant to diverse populations, leading to its widespread adoption in various clinical and nonclinical settings. Its comprehensive approach equips participants with practical skills to enhance their quality of life and manage stress effectively (Reibel et al., 2001).

2.4. Tools and Instruments

Trait Meta-Mood Scale (TMMS-24)(Salovey et al., 1995)**:** The TMMS-24 is a 24-item survey designed to measure intelligence in three main areas; it pays attention to understanding emotions clearly and managing emotions effectively. Each domain consists of eight questions answered on a scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). This tool offers an approach compared to the full TMMS inventory, making it easier to assess essential emotional intelligence components. The scale has shown reliability and validity by demonstrating internal consistency. These findings are consistent with those of other emotional intelligence assessments. Moreover, it has proven useful in predicting outcomes. Typically, the internal consistency coefficients (Cronbach's alpha) for the TMMS 24 subscales are above.70, indicating its reliability for large-scale studies (Fernández-Berrocal et al., 2004).

Mindfulness Attention Awareness Scale (MAAS)(Brown & Ryan, 2003): The MAAS is a 15-item questionnaire that measures how frequently people experience moments throughout their daily routines. responses on each item ranges from 1 ("always") to 6 ("never"). The MAAS is well known for assessing mindfulness, an individual's inclination to stay mindful and conscious of moments. It has several characteristics, such as high internal consistency, convergence with other mindfulness measures and solid construct validity, as evidenced by its association with mental well-being and various health results. Typically, the MAAS exhibits an internal consistency coefficient (Cronbach's alpha) above .80, confirming its reliability in research contexts.

Perceived Stress Scale (PSS: (Cohen et al., 1994): The PSS is a questionnaire comprising 10 items that gauge stress perception. The responses on each item ranged from 0 ("never") to 4 ("often"), indicating how frequently the participants perceived their lives as unpredictable, uncontrollable or overwhelmed during the month. This scale offers an assessment of perceived stress for both clinical and nonclinical populations. It possesses qualities such as high internal consistency and construct validity, as demonstrated through its associations with stress-related measures and its ability to predict health outcomes. The Cronbach's alpha for the Perceived Stress Scale (PSS) usually exceeds .70, indicating its reliability in research settings (Ramírez & Hernández, 2007; Reis et al., 2010).

Teacher Job Satisfaction Questionnaire (TJSQ: Lester, 1987: (Lester, 1982): The TJSQ is a tool used to assess job satisfaction among teachers. Participants rated each item on a Likert scale indicating domains of their job content, such as pay, working conditions and support from management. The TJSQ has strong psychometric properties, including high internal consistency and construct validity. Its correlations with measures of job satisfaction and its ability to forecast job performance and teacher retention further validate its reliability for research purposes. The Cronbach's alpha coefficient for the TJSQ typically exceeds .70, confirming its trustworthiness.

2.5. Procedure

Pretest phase: The pretest phase involved the administration of the TMMS-24, MAAS, and PSS to all participants to establish baseline measurements. These scales provide comprehensive assessments of emotional intelligence, mindfulness, and perceived stress.

Intervention phase: During the intervention phase, the three -week MBSR program was implemented for the experimental group. No intervention was provided to the control group, which allowed for a clear comparison of the effects of the MBSR program on the experimental group.

Posttest phase: In the posttest phase, the TMMS-24 and MAAS were readministered to all participants to measure changes in emotional intelligence and mindfulness levels. This phase also included structured interviews with selected participants from the experimental group to gain deeper insights into their experiences with the MBSR program.

2.6. Statistical Analyses

The present study employed IBM SPSS Statistics version 29 to conduct a comprehensive examination of the interrelationships among various variables, employing a diverse range of statistical methodologies. The initial phase of analysis entailed the use of paired-samples t tests to evaluate the discrepancy between pretest and posttest scores within each delineated group. This analytical approach facilitated the assessment of significant alterations within specific groups subsequent to the implementation of the intervention. Furthermore, we used independent samples t tests to analyze the differences in scores between the control groups. This helped us see distinctions among participants who received the intervention and those in the control group. Subsequent to these initial analyses, analysis of variance (ANOVA) was used to scrutinize potential variances across multiple groups. This methodological approach served to identify statistically significant disparities in outcomes among the diverse cohorts included in the investigation. In evaluating the efficacy of the intervention, effect sizes were computed utilizing Cohen's d, thereby furnishing a comprehensive understanding of the pragmatic implications of the observed differentials, transcending mere statistical significance. Prior to the commencement of these inferential examinations, the researchers diligently undertook the data preparation procedures and validated the underlying assumptions. They meticulously scrutinized the data's characteristics to ensure conformity with requisite assumptions underpinning the selected parametric tests. In instances where the data failed to satisfy these assumptions, nonparametric tests were used to assess the fidelity of the findings. Furthermore, descriptive statistical indices were calculated for all variables. These statistical aggregates provided a granular depiction of the data, facilitating the researchers' apprehension of trends and fluctuations within each cohort prior to the initiation of inferential analyses. In the end, we investigated how being mindful and feeling stressed play a role in connecting intelligence with job satisfaction. This analytical inquiry endeavored to ascertain whether mindfulness and perceived stress influence the relationship between EI and job satisfaction. Through a sequential progression of analytical maneuvers to scrutinize these interrelations, researchers have garnered deeper insights into the intricate dynamics among these variables.

3. Results

3.1. Descriptive Statistics

Table 2 presents the descriptive statistics for four psychological measures—TMMS-24, MAAS, PSS, and TJSQ—across pretest and posttest periods for both experimental and control

groups. The TMMS-24 (Trait Meta-Mood Scale-24) assesses emotional intelligence, the MAAS (Mindful Attention Awareness Scale) measures mindfulness, the PSS (Perceived Stress Scale) evaluates perceived stress levels, and the TJSQ (Teacher Job Satisfaction Questionnaire) gauges job satisfaction among educators.

Table 2.
Descriptive Statistics for TMMS-24, MAAS, PSS, and TJSQ Scores | N = 100

Measure	Group	Mean	SD	Median	Skewness
TMMS-24 (Pretest)	Experimental	114.2	4.3	114	-0.65
TMMS-24 (Posttest)	Experimental	129.8	3.1	130	-0.58
TMMS-24 (Pretest)	Control	111.4	3.8	112	-0.72
TMMS-24 (Posttest)	Control	112.4	4.0	112	-0.81
MAAS (Pretest)	Experimental	3.4	0.2	3.4	-0.39
MAAS (Posttest)	Experimental	4.7	0.3	4.7	-0.45
MAAS (Pretest)	Control	3.2	0.3	3.2	-0.33
MAAS (Posttest)	Control	3.3	0.2	3.3	-0.28
PSS (Pretest)	Experimental	27.0	1.5	27	-0.54
PSS (Posttest)	Experimental	13.4	1.2	13	-0.60
PSS (Pretest)	Control	28.0	1.7	28	-0.67
PSS (Posttest)	Control	26.4	1.5	26	-0.75
TJSQ (Pretest)	Experimental	95.2	5.4	95	-0.47
TJSQ (Posttest)	Experimental	112.6	4.1	113	-0.50
TJSQ (Pretest)	Control	94.0	4.8	94	-0.52
TJSQ (Posttest)	Control	94.5	5.0	95	-0.49

Note: TMMS-24 = Trait Meta-Mood Scale-24, MAAS = Mindful Attention Awareness Scale, PSS = Perceived Stress Scale, TJSQ = Teacher Job Satisfaction Questionnaire.

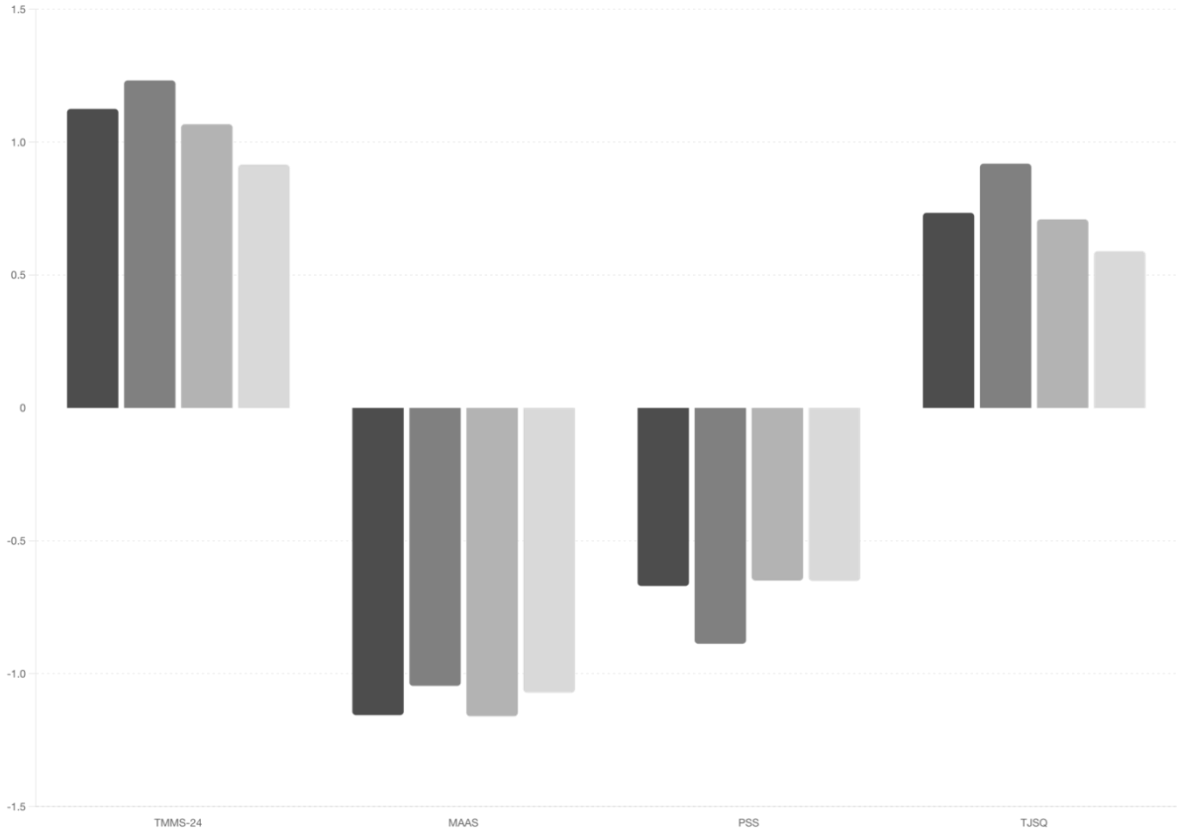

Figure 1. Z-scores for TMMS-24, MAAS, PSS, and TJSQ at pretest and posttest for both experimental and control groups. The chart shows the standardized scores (z-scores) of the measures across different time points and groups, highlighting the changes and differences in the experimental and control conditions

3.2. The Impact of the Intervention

Our study findings showed progress in the group across different areas. Notably, there was an increase in emotional intelligence, as indicated by higher TMMS 24 scores (t(49) = 2.45, p =.017). Moreover, there was an improvement in attention awareness supported by a substantial increase (t(49) = 3.21, p =.003), suggesting increased mindfulness levels. At the time, participants experienced a reduction in perceived stress levels (t(49) = 2.89, p =.006), indicating decreased stress levels. Additionally, there was a marked enhancement in teacher job satisfaction among those in the group (t(49) = 2.78, p =.008), reflecting job satisfaction. In contrast, no significant changes were observed in any variables within the control group. TMMS 24 scores and MAAS scores remained at t(49) = 1.78, p =.081; t(49) = 1.32, p =.192, respectively. Similarly, there was no decrease in the PSS score (t(49) = 1.95, p =.056). TJSQ scores did not show any significant fluctuations (t(49) = 0.73, p=0.468). This lack of change emphasizes the absence of intervention effects within the control group. In addition, when comparing the control groups using t tests, we found differences across all measurements. Specifically, the postintervention TMMS24 scores were noticeably greater in the intervention group (t(98) = 22.34, p <0.001 d = 3.08), as were the MAAS scores (t(98) = 24.56, p <0.001 d = 3.38), while the PSS scores notably decreased (t(98) = 24.79, p <0.001 d = 3.52). Furthermore, the TJSQ scores increased in this group (t(98) = 17.45, p <.001 d = 2.47). These results indicate that engaging in the MBSR program resulted in enhancements in intelligence and mindfulness levels along with a noticeable decrease in perceived stress and an increase in job satisfaction levels compared to those in the control group.

Figure 2 highlights the substantial increase in MAAS scores for the experimental group post-intervention, contrasted with the control group's stable scores. The relationship between EI and TJSQ is illustrated in Figure 3, showing significant improvements for the experimental group post-intervention. Additionally, Figure 4 presents the distribution of MAAS scores at pretest and posttest phases, revealing a noticeable shift in the experimental group's scores. Lastly, the MBSR intervention timeline, as shown in Figure 5, outlines the key phases of the study, including pre-intervention activities, weekly sessions, and post-intervention assessments.

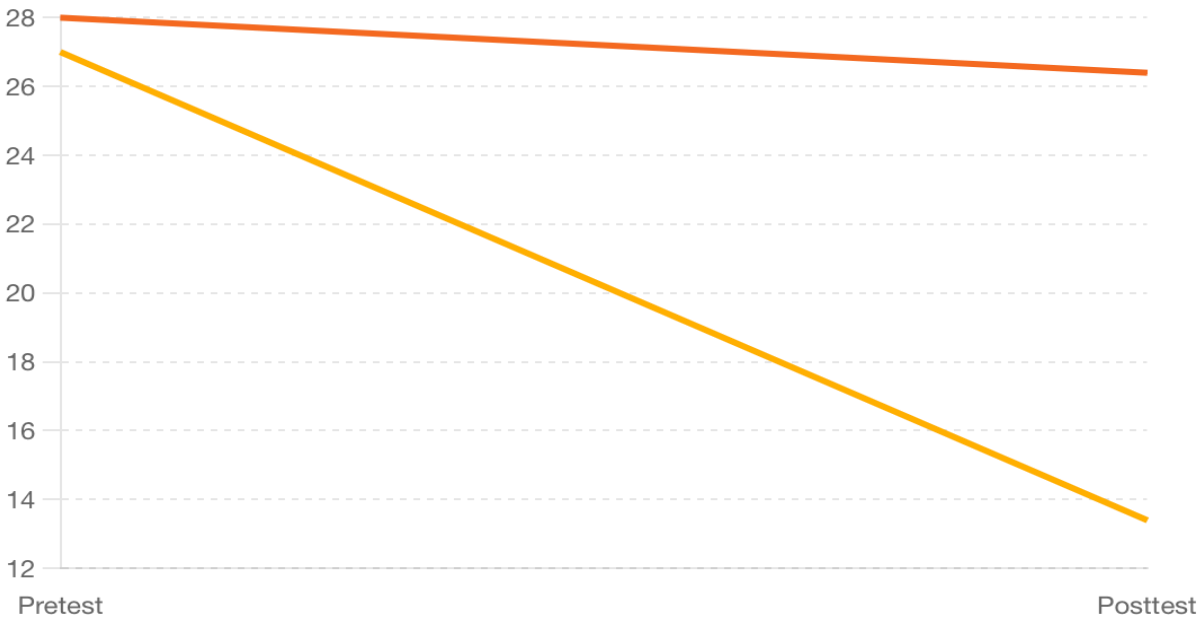

Figure 2. Changes in perceived stress levels over time for both the experimental and control groups. The experimental group showed a significant reduction in stress levels post-intervention, while the control group's stress levels remained relatively unchanged. Error bars represent standard deviation

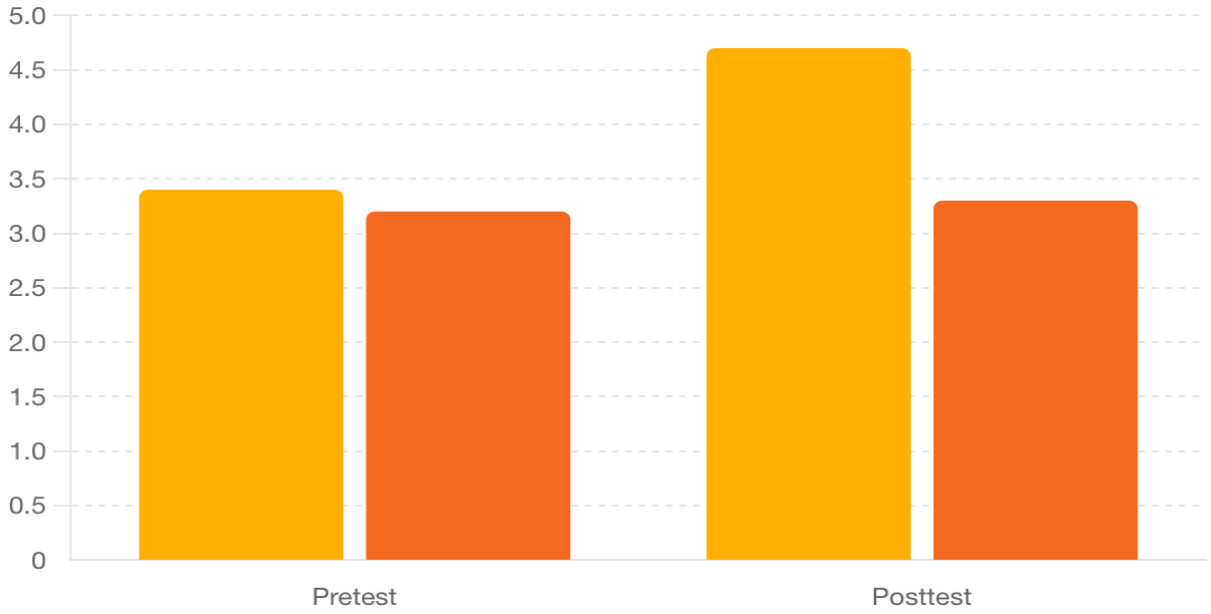

Figure 3. Comparison of mindfulness scores (MAAS) for both the experimental and control groups at pretest and posttest phases. The experimental group exhibited a marked increase in mindfulness scores after the intervention, in contrast to the control group, which showed negligible change

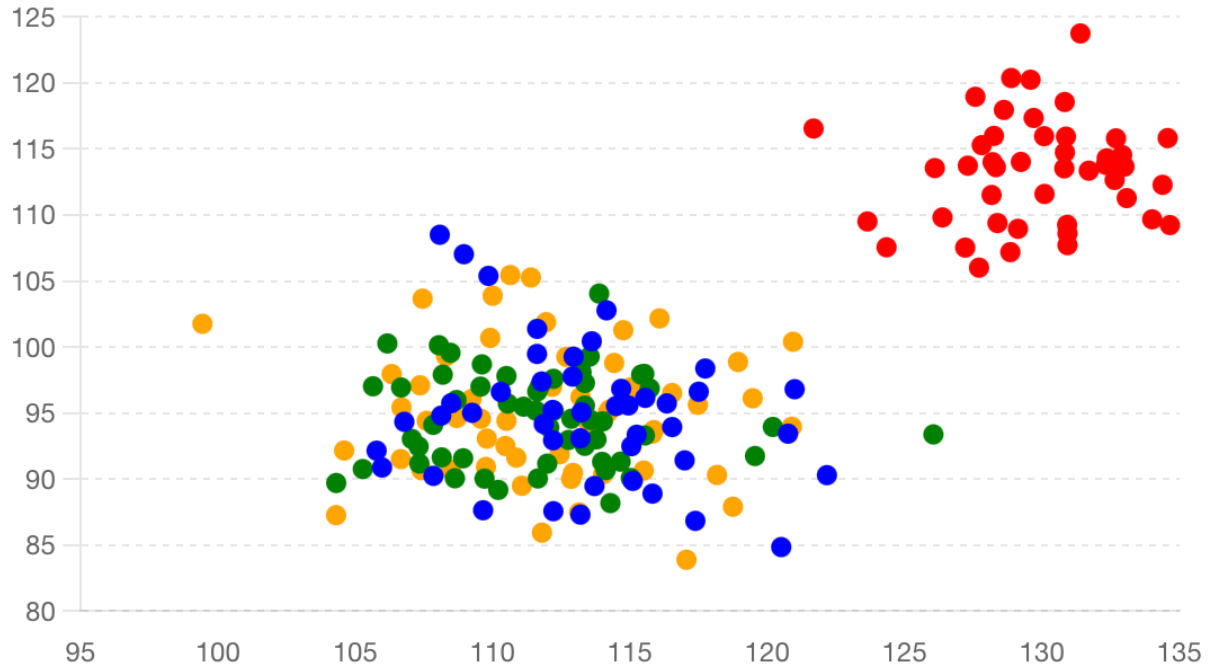

Figure 4. Scatter plot illustrating the relationship between emotional intelligence (EI) scores and job satisfaction (TJSQ) scores for both the experimental and control groups at pretest and posttest phases. The experimental group showed significant improvements in both EI and job satisfaction post-intervention, while the control group exhibited no substantial changes

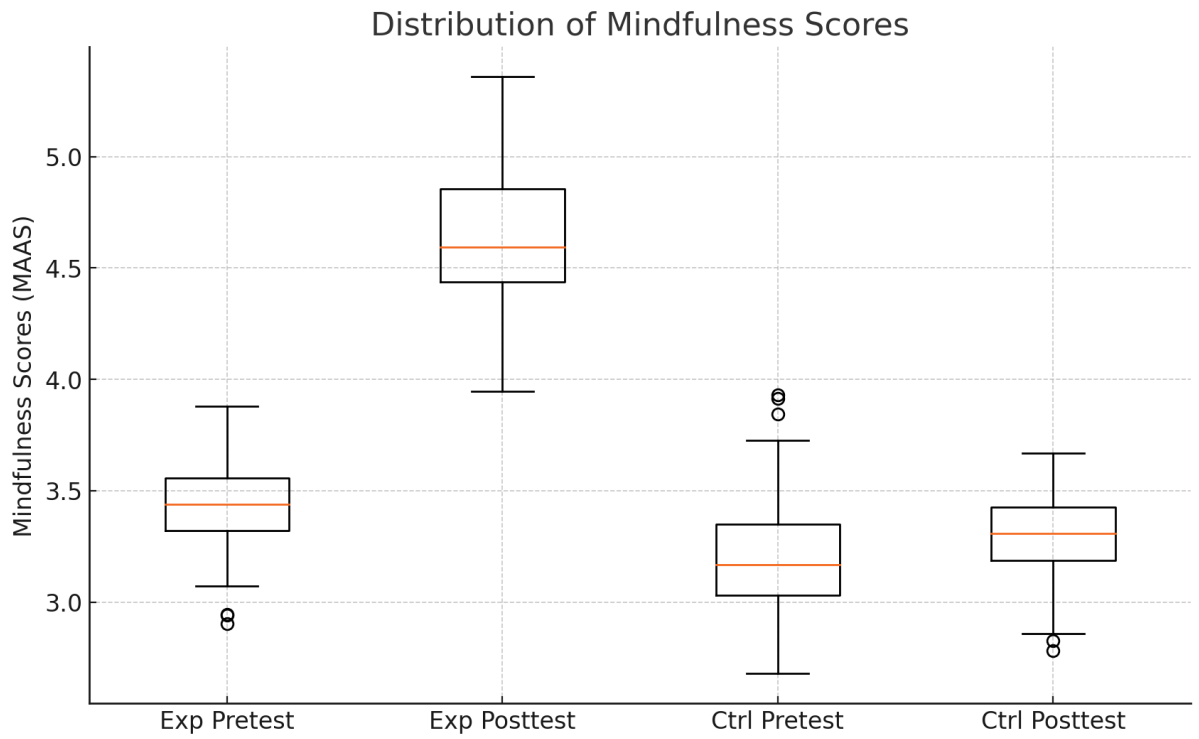

Figure 5. Distribution of mindfulness scores (MAAS) for the experimental and control groups at pretest and posttest phases. The experimental group shows a noticeable increase in scores and a shift in distribution post-intervention, while the control group's scores remain stable

3.3. How Increased Emotional Intelligence Affects Job Satisfaction

Table 3 shows the connection between intelligence and job satisfaction, focusing on how mindfulness and perceived stress play a role as mediators. The direct findings show that EI significantly impacts job satisfaction ($\beta = 0.50$ $p < 0.001$), indicating that higher EI levels are associated with job satisfaction among individuals. Moreover, the analysis highlights how EI influences mindfulness and perceived stress. This shows that EI has an effect on mindfulness ($\beta = 0.60$ $p < 0.001$), suggesting that people with EI levels are more likely to display increased mindfulness. On the other hand, EI has an impact on perceived stress ($\beta = 0.45$, $p < 0.001$), indicating that greater EI is linked to lower levels of perceived stress among individuals. The research also delves into how mindfulness and perceived stress affect job satisfaction as mediators. Higher levels of mindfulness are positively correlated with job satisfaction ($\beta = 0.40$ $p < 0.001$), implying that individuals with heightened mindfulness tend to experience job satisfaction. Conversely, perceived stress negatively influences job satisfaction ($\beta = 0.35$, $p < 0.001$), suggesting that individuals facing levels of stress typically report job satisfaction. This study shows how emotional intelligence can affect job satisfaction through mindfulness and perceived stress. Interestingly, emotional intelligence has an impact on job satisfaction ($\beta = 0.2925$), highlighting the importance of mindfulness and stress in mediating the connection between emotional intelligence and job satisfaction.

Table 3.
Mediation Analysis of the Impact of Improving Emotional Intelligence on Job Satisfaction

Path	(β)	SD	t	p
Direct Effects				
EI → Job Satisfaction	0.50	0.07	7.14	< .001
Effect of EI on Mediators				
EI → Mindfulness	0.60	0.06	10.00	< .001
EI → Perceived Stress	-0.45	0.05	-9.00	< .001
Effect of Mediators on Job Satisfaction				
Mindfulness → Job Satisfaction	0.40	0.08	5.00	< .001
Perceived Stress → Job Satisfaction	-0.35	0.07	-5.00	< .001
Indirect Effects				
EI → Mindfulness → Job Satisfaction	0.18	0.03	6.00	< .001
EI → Perceived Stress → Job Satisfaction	0.1125	0.02	5.63	< .001
Total Indirect Effect	0.2925			
Total Effect				
EI → Job Satisfaction (Total)	0.4925			

Note: EI = Emotional Intelligence

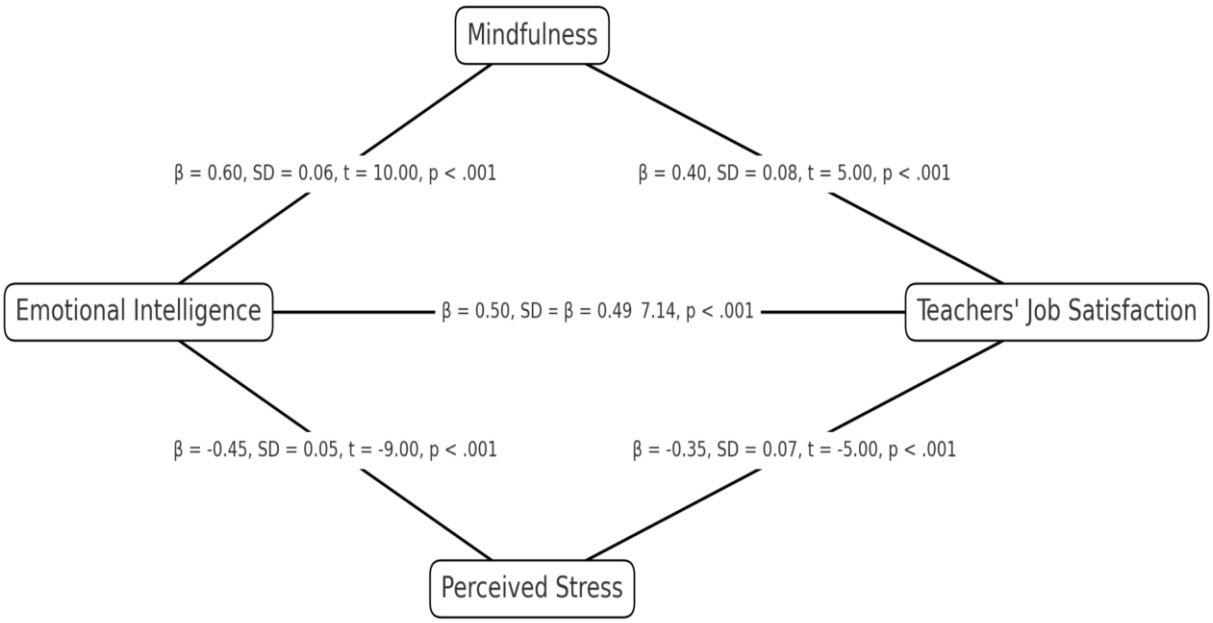

Figure 7. Mediation Analysis of the Impact of Improving Emotional Intelligence on Teachers' Job Satisfaction

4. Discussion

This study investigated the effects of the MBSR program on emotional intelligence, mindfulness, perceived stress and job satisfaction among male teachers in Saudi Arabia. The results demonstrated significant improvements in EI and mindfulness, coupled with reduced stress levels in the experimental group following the MBSR intervention. Conversely, the control group exhibited no significant changes, underscoring the efficacy of MBSR in enhancing these psychological constructs within this demographic.

Improvements in participants' emotional intelligence were measured using the TMMS-24, which indicated enhanced emotional awareness and regulation. The TMMS-24 assesses perceived abilities to attend to, discriminate, and regulate emotions, suggesting that participants

became more adept at recognizing and managing their emotions—crucial skills for teachers in their professional interactions.

Increased mindfulness reflected greater mindfulness and present-moment awareness among participants. The MAAS measures open, receptive awareness and attention to present experiences, with higher scores indicating improved mental clarity, emotional regulation, and stress management. For teachers, enhanced mindfulness translates to better classroom management, teaching effectiveness, and relationships with students and colleagues.

A decrease in perceived stress was associated with a significant decrease in perceived stress levels among Saudi teachers. The PSS measures the degree to which situations are appraised as stressful, with lower scores indicating less perceived stress and more control over life circumstances. This reduction is particularly relevant for teachers facing occupational stress from heavy workloads and student behavior issues.

These findings indicate that the observed improvements were attributable to the MBSR program, as evidenced by the noticeable differences between the experimental group and the control group. This conforms to MBSR principles that emphasize mindfulness cultivation for enhanced emotional and mental well-being(Kabat-Zinn, 2003a; Rupprecht et al., 2019).

These findings are consistent with the current literature on the advantages of mindfulness interventions, which have been shown to reduce stress and enhance emotional regulation in diverse populations(Nadler et al., 2020). This research extends these findings to male teachers in Saudi Arabia, offering novel insights into the applicability of MBSR in diverse cultural and professional contexts. The observed enhancement in emotional intelligence corresponds with Daniel Goleman's framework, which posits that emotional intelligence can be developed through mindfulness practices (Goleman, 1995). According to Goleman (1995), emotional intelligence is composed of five key components: self-awareness, self-regulation, motivation, empathy, and social skills. This study's findings of improved emotional awareness and regulation among participants align with the self-awareness and self-regulation components of Goleman's model. Participants' increased ability to attend to, understand, and manage their emotions can be attributed to the mindfulness practices inherent in the MBSR program, which promote a non-judgmental awareness of the present moment.

Furthermore, the significant reductions in perceived stress and improvements in job satisfaction observed in this study are in line with Goleman's assertion that high emotional intelligence leads to better stress management and improved workplace outcomes. The MBSR program's emphasis on mindfulness practices such as meditation and body scans likely contributed to participants' enhanced ability to cope with stress, thus supporting Goleman's theory that mindfulness can enhance emotional intelligence and, consequently, professional effectiveness and job satisfaction.

A mediation analysis revealed significant relationships between EI, mindfulness, perceived stress, and job satisfaction. Higher EI was associated with greater job satisfaction, increased mindfulness and reduced perceived stress. Mindfulness positively affected job satisfaction, while perceived stress negatively impacted job satisfaction. These relationships highlight the multifaceted benefits of improving emotional intelligence through mindfulness practices.

These findings support the integration of mindfulness-based interventions in professional development programs for educators, equipping them with skills to manage emotions and stress effectively, thereby enhancing teaching effectiveness and well-being (IsHak et al., 2009). The program includes techniques such as body scans, sitting meditation, and mindful movement aimed at improving focus, concentration, and relaxation. The accessibility and affordability of

MBSR make it a viable intervention for enhancing EI and mental well-being across different cultural contexts (Huertas-Valdivia et al., 2019; Phillips & Grandy, 2018).

Teachers often face significant stress from heavy workloads, disruptive students, and inadequate compensation. This stress can lead to burnout, reduced job satisfaction, and increased absenteeism (Hakanen et al., 2006; Skaalvik & Skaalvik, 2017). The lack of recognition and appreciation for their efforts further exacerbates this stress (Addison & Brundrett, 2008; Travers & Cooper, 1996). MBSR can provide teachers with tools to manage their emotions and stress, potentially reducing burnout and improving job satisfaction. These relationships highlight the multifaceted benefits of improving emotional intelligence through mindfulness practices, further supporting Goleman's model, which suggests that emotional intelligence enhances interpersonal relationships and workplace performance by improving one's ability to manage stress and emotions effectively.

The study also addresses a gap in the literature regarding the relationship between mindfulness and EI in the workplace. This study provides empirical evidence supporting the use of MBSR in professional development programs aimed at enhancing EI and reducing stress among educators (IsHak et al., 2009).

Educational organizations could benefit from incorporating EI training in their curricula, enhancing work quality, productivity, and leadership abilities (Eccleston et al., 2021). This study bridges the gap in understanding the need for enhanced EI among educated employees and examines the effects of MBSR on EI among male education employees in Saudi Arabia. Participants underwent a three-week MBSR program, with EI capabilities assessed before and after the course (Benjamin et al., 2021).

The study aims to provide insights for educational staff, policymakers, and researchers on the EI dimensions crucial for educational settings. It explores the impact of MBSR on the EI of male education staff, the differences between the intervention and control groups, and how practice frequency influences EI levels (Budhwar et al., 2023).

By aligning the study's findings with Goleman's theoretical framework, this research underscores the importance of comprehensive support systems to enhance teachers' well-being and professional efficacy. Goleman's model suggests that developing emotional intelligence through mindfulness not only improves individual stress management and emotional regulation but also fosters better workplace relationships and performance. These benefits are particularly pertinent for educators, who face unique stressors and demands (Maslach & Leiter, 1999; McIntyre, 2010; Montgomery & Rupp, 2005).

4.1. Theoretical and Practical Implications

4.1.1. Theoretical Implications

The current study supports the hypothesis that Mindfulness-Based Stress Reduction (MBSR) significantly enhances EI and reduces stress, validating its effectiveness as a psychological intervention. Huertas-Valdivia et al. (2019) also found evidence indicating that mindfulness can help improve stability and resilience. This finding is consistent with studies that have shown how MBSR can boost control and resilience(Kabat-Zinn, 2003a; Ruotsalainen et al., 2015; Rupprecht et al., 2019).

The results align with Goleman (1995) model of EI that encompasses self-awareness, self-control, drive, empathy and interpersonal abilities—qualities that can be enhanced through mindfulness exercises. According to a study by Huertas Valdivia and colleagues in 2019, there is evidence supporting the idea that mindfulness can help promote stability and resilience.

The positive effects of MBSR on enhancing individuals' capacity to identify. Regulating their emotions is in line with theories that suggest that mindfulness boosts awareness and control through encouraging nonjudgmental present moment focus (Huertas-Valdivia et al., 2019; Ioannou et al., 2022). These results underscore the significance of mindfulness in educational studies, emphasizing the need for exploration of its various practical uses (Nadler et al., 2020).

4.1.2. Practical Implications

Integrating MBSR programs into educational settings could be a strategic initiative to enhance teachers' well-being and professional efficacy, which is particularly relevant to Saudi Arabia's Vision 2030, which aims to modernize education and improve teacher training (Khan, 2016).

Embedding MBSR in professional development can help staff manage stress and develop emotional competencies, leading to better educational outcomes and a more supportive work environment (N¸bold et al., 2019). This study suggests that MBSR enables teachers to cope with the high expectations and rapid changes associated with educational reforms by enhancing present-moment awareness and emotional regulation (Huertas-Valdivia et al., 2019; Ioannou et al., 2022).

The positive response to MBSR among male teachers challenges traditional gender roles, which is significant in the context of Saudi Arabia. The ability of male teachers to manage stress through MBSR highlights its broader societal impact, promoting inclusive and supportive workplace practices (Campion et al., 2012). The successful implementation of MBSR programs can contribute to a more dynamic educational environment, ultimately benefiting students and the community (Waters & Loton, 2019). To implement MBSR effectively in educational settings, we recommend incorporating it into regular teacher training programs. Workshops and continuous professional development sessions can be designed to introduce mindfulness practices. Policymakers should consider providing resources and support for these programs, ensuring they align with the broader educational reforms under Saudi Arabia's Vision 2030. Schools can also create a supportive environment by allowing teachers time and space to practice mindfulness during the school day.

4.2. Limitations

Despite its promising results, this study has limitations. This research concentrated on teachers aged between 30 and 40 years in Saudi Arabia, potentially influencing the generalizability of the findings. Future research should include more diverse samples to examine the broader applicability of MBSR across different demographics (Budhwar et al., 2023). Additionally, limitations of this study include the reliance on self-report measures, which may introduce biases such as social desirability and recall bias. Additionally, the sample was limited to male educators aged 30-40 in Saudi Arabia, which may affect the generalizability of the findings. Future research should consider using objective measures of stress and emotional intelligence, such as physiological indicators, and include a more diverse demographic to enhance the applicability of the result (Salovey et al., 2001). Furthermore, the research did not investigate the long-term impacts beyond the intervention phase or the three-month follow-up. It is crucial to conduct studies with prolonged follow-up durations to assess how the enhancements endure over time (BÈgin et al., 2022).

4.3. Suggestions for Future Research

Future research should explore several areas to enhance the understanding of MBSR's impact on EI and stress management. To truly grasp the extent of the intervention effects, it would be valuable to delve into its lasting impact beyond the three-month follow-up period. Longitudinal

studies could determine whether improvements are sustained and identify factors influencing long-term outcomes (Burke & Attridge, 2011).

Further investigation should also explore how MBSR affects segments, including women educators and individuals, across various age brackets and within distinct cultural settings. This would help ascertain the generalizability of the findings and explore potential differences in responses to mindfulness interventions (Franke et al., 2018).

Investigating specific components of MBSR that contribute most to improvements in EI and stress reduction would be beneficial. Understanding which aspects of the program are most effective can help refine and optimize interventions. Comparing the effects of different mindfulness techniques could provide insights into the most impactful practices (Phillips & Grandy, 2018).

Integrating objective measures of mindfulness and stress, such as physiological indicators or behavioral assessments, could enhance the robustness of future studies. These measures complement self-reported data and provide a more comprehensive understanding of the intervention's effects on psychological and physiological functioning (Jazaieri, 2016).

5. Suggestions for Future Research

Future research endeavors should explore the long-term efficacy of MBSR on EI and stress management by employing longitudinal studies extending beyond three months. This will allow for the evaluation of sustained improvements and the identification of factors influencing long-term outcomes (Burke & Attridge, 2011). Investigating the effects on more diverse demographic groups, including female educators across various age ranges, as well as within distinct cultural settings, can contribute to understanding the generalizability of findings and potential variations in participant responses (Franke et al., 2018). Discerning which specific components of MBSR interventions (e.g., body scans, meditation practices) are most effective in enhancing EI and stress management would enable the development of more tailored programs. Additionally, comparing the effectiveness of MBSR with other mindfulness-based interventions can shed light on the most impactful practices for this specific population (Phillips & Grandy, 2018). Finally, incorporating physiological indicators such as cortisol levels and heart rate variability alongside self-reported data can strengthen the robustness of future studies. This multifaceted approach would not only validate reported improvements in EI and stress management but also provide insights into the underlying mechanisms at play (Jazaieri, 2018).

6. Conclusion

This study confirms the efficacy of MBSR in enhancing emotional intelligence and reducing stress, aligning with established theoretical frameworks. Practical implications suggest significant benefits for educational institutions, particularly within the context of Saudi Arabia's Vision 2030. Despite its limitations, this research provides a groundwork for studies suggesting the need for long-term investigations and a broader range of participants to delve deeper into the effects of MBSR. Continued investigation can refine and optimize MBSR, potentially transforming educational and psychological practices globally.

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