



## EFFECTIVENESS OF DIGITAL MINDFULNESS PROGRAMS ON STRESS REDUCTION AMONG POLICE OFFICERS

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### ABSTRACT :

Police officers often face high-stress situations that can lead to chronic stress, burnout, and other mental health issues. Traditional stress management techniques, while effective, are not always feasible due to time constraints and the unpredictable nature of police work. With the advent of digital technology, meditation programs delivered through mobile apps or online platforms offer a convenient alternative. This study aims to evaluate the effectiveness of these digital interventions in reducing stress among police officers. The study adopted a quantitative pre – post intervention research design. A total of 100 samples were collected through random sampling method. The study conducted in a six week period, during which participants engaged in a one-hour digital mindfulness session once per week. Data collected using perceived stress scale (PSS) and mindfulness questionnaire at two time interval: pre-intervention (baseline) and post intervention. Data analyzed using statistical tests such as paired t-test and ANOVA. The findings suggest that digital meditation programs can significantly reduce stress among police officers. Therefore, implementing digital meditation programs could be a cost-effective and scalable way to address stress-related issues among police officers.



**KEYWORDS :** digital platform, mindfulness, stress reduction, police officers.

### 1. INTRODUCTION

Stress among policemen is a significant issue arising from the unique demands and challenges of their job. Police work often involves exposure to violence, trauma, and high-risk situations, all of which contribute to chronic stress and mental health issues such as anxiety, depression, and PTSD (Craddock & Telesco, 2022). The unpredictability of their duties, coupled with long hours and shift work, can disrupt sleep patterns, leading to fatigue and burnout. Organizational factors within police departments also play a critical role in exacerbating stress. The bureaucratic work environment, with its hierarchical structure and rigid protocols, can lead to frustration and feelings of helplessness (Shane, 2021). A lack of support from supervisors, limited career advancement opportunities, and workplace politics further contribute to low morale and increased stress levels. On a personal level, the demanding nature of police work often disrupts work-life balance, straining relationships with family and friends. Financial pressures and health concerns, including the risk of developing physical ailments such as heart disease and hypertension, further compound the stress experienced by policemen (Lucas, Weidner & Janisse, 2012).

The impact of stress is far-reaching, affecting not only the physical and mental health of police officers but also their job performance and personal relationships (Nisar & Rasheed, 2020). Chronic stress can impair decision-making abilities (Dias-Ferreira et al., 2009), reduce concentration (Liu et al., 2020), and lower productivity (Street, Lacey & Somoray, 2019), leading to mistakes on the job and potentially dangerous situations. It can also lead to burnout ( ), characterized by emotional exhaustion, cynicism, and a reduced sense of personal accomplishment, which can result in decreased job satisfaction and early retirement. Addressing stress among policemen is an important concern and it requires a comprehensive approach. Stress management programs, physical fitness and wellness initiatives, and peer support networks can provide officers with the tools they need to cope with stress. Promoting work-life balance through flexible work schedules and limiting overtime can also reduce stress levels. Leadership training within the police force is essential to recognizing and addressing stress, creating a positive work environment, and supporting officers in their roles. By prioritizing the well-being of police officers, police departments can foster a healthier, more effective, and resilient force.

Mindfulness programs play a crucial role in reducing stress among policemen by helping them manage the high demands and pressures of their job. These programs teach officers techniques to stay present and focused, allowing them to better handle stressful situations without becoming overwhelmed. Through mindfulness, policemen can develop greater emotional regulation, reducing the impact of negative emotions like anger and anxiety. Regular practice also promotes relaxation, improves sleep, and enhances overall well-being, leading to a decrease in burnout and a more resilient response to the challenges of police work (Christopher et al., 2016). Mindfulness, a practice rooted in meditation, involves focusing on the present moment and cultivating a non-judgmental awareness of one's thoughts, feelings, and bodily sensations (Tan & Tan, 2021). It has been widely recognized for its potential to reduce stress, anxiety, and depression, while also improving overall well-being (Janssen et al., 2018). Digital mindfulness programs, which deliver mindfulness training through online platforms and mobile applications, offer a convenient and accessible way for police officers to engage in mindfulness practices as part of their routine. Despite the growing body of evidence supporting the benefits of mindfulness for stress reduction, there is limited research on the effectiveness of digital mindfulness programs specifically tailored for police officers. The unique stressors faced by police officers require targeted interventions that are not only effective but also accessible and practical for their demanding schedules. This study aims to assess the effectiveness of digital mindfulness programs in reducing stress among police officers, thereby contributing to the ongoing efforts to improve the mental health and well-being of those in law enforcement.

## 2. REVIEW OF LITERATURE

Mindfulness has gained widespread attention as a method for reducing stress and promoting mental well-being. It involves practices such as focused breathing, meditation, and mindful movement, all aimed at helping individuals remain present and aware, reducing the impact of negative thoughts and emotions. Research has shown that mindfulness can reduce physiological markers of stress, lower perceived stress levels, and improve overall mental health. Mindfulness practices have been effectively applied in various high-stress professions, including healthcare (Gilmartin et al., 2017), education (Karunananda et al., 2016), and the military (Myers, 2015). These practices have been shown to improve emotional regulation, enhance resilience, and promote a sense of well-being. Given the similarities in stressors across these professions, mindfulness is increasingly being explored as a viable intervention for police officers.

A study by Spijkerman, Pots, and Bohlmeijer (2016) conducted a meta-analysis on the effectiveness of online mindfulness interventions. The results indicated that these interventions significantly reduced stress, anxiety, and depression in various populations. The flexibility of digital platforms allows users to engage with mindfulness practices without the constraints of time or location, making them ideal for individuals with demanding schedules, such as police officers. Christopher et al. (2016) explored the effects of a mindfulness-based resilience training program on police officers. The

study found that officers who participated in the program experienced significant reductions in stress and improvements in psychological resilience. These findings suggest that mindfulness interventions can be particularly beneficial in high-stress professions like law enforcement.

Digital meditation programs are an emerging area of interest in the field of mental health. These programs typically involve guided meditation sessions delivered through apps or online platforms, offering users the flexibility to practice meditation at their convenience. Research on the effectiveness of digital meditation programs has shown promising results across various populations. Bostock, Crosswell, and Prather (2019) examined the impact of a smartphone-based meditation app on stress reduction. The study found that participants who used the app for a brief period experienced significant reductions in perceived stress compared to a control group. This suggests that even short-term engagement with digital meditation programs can have a meaningful impact on stress levels.

### 3. RESEARCH METHODOLOGY

This study employed a quantitative pre-post intervention research design to evaluate the effectiveness of digital meditation programs in reducing stress among police officers. This particular design allowed for the comparison of stress levels before and after the intervention, providing insights into the impact of the digital mindfulness sessions on the participants' perceived stress.

#### 3.1. Participants and Sampling

The study selected sample of 100 police officers, who were selected through a random sampling method. Random sampling ensured that each participant had an equal chance of being selected, thereby reducing selection bias and enhancing the generalizability of the findings. The sample included officers of varying ranks and experience levels from different departments which provided a representative cross-section of the police force.

#### 3.2. Intervention

The intervention consisted of a six-week digital mindfulness program in which mindfulness delivered through a mindfulness Application (The mindfulness App by reflective technologies). In intervention period, participants engaged in one-hour mindfulness sessions once per week. The application automatically builds the personalized profile based on demographic details. This enabled the participants to access the training at their convenience. The mindfulness sessions included guided meditation practices focused on stress reduction, breathing exercises, and techniques for enhancing present-moment awareness. The digital format provided flexibility, making it easier for officers to integrate the sessions into their busy schedules.

#### 3.3. Data Collection

Data were collected at two time intervals: pre-intervention (baseline) and post-intervention. To gather data, the following tools were employed:

- **Perceived Stress Scale (PSS):** The PSS is a widely used self-report questionnaire developed by Cohen and Williamson designed to measure the perception of stress. It evaluates the degree to which respondents' lives are erratic, unmanageable, and burdened. The scale consists of 10 items, with responses ranging from 0 (never) to 4 (very often). Higher scores indicate higher levels of perceived stress (Cohen and Williamson, 1988).
- **Five Facet Mindfulness Questionnaire (FFMQ):** it is a comprehensive tool developed by Ruth A. Baer and colleagues to measure mindfulness. The scale assesses five different aspects, or facets, of mindfulness including observing, describing, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience. The questionnaire consists of 39 items, and participants rate each item on a Likert scale, typically from 1 (never or very rarely true) to 5 (very often or always true). The scores for each facet can be analyzed separately, or a total mindfulness score can be calculated (Baer et al., 2006).

Both instruments were administered at the beginning of the study (pre-intervention) and at the end of the six-week period (post-intervention) to capture changes in stress and mindfulness levels.

### 3.4. Data Analysis

The collected data were analyzed using SPSS software to determine the effectiveness of the digital mindfulness program. The study employed a paired t-test to compare the pre- and post-intervention scores on the Perceived Stress Scale (PSS) and mindfulness questionnaire. An ANOVA test was also conducted to assess the differences in stress reduction across various demographic groups, such as age, rank, and years of experience.

### 3.5. Ethical Considerations

All participants gave their informed consent prior to data collection, and participation in the study was completely voluntary. The participants' privacy and confidentiality were preserved during the entire investigation. The digital mindfulness program was provided free of charge, and participants were informed that they could withdraw from the study at any time without any consequences.

## 4. RESULTS

The data collected from the 100 police officers in the study were analyzed to determine the effectiveness of digital mindfulness programs in reducing stress levels. The analysis focused on comparing pre-intervention and post-intervention scores on the Perceived Stress Scale (PSS) and mindfulness questionnaire. The descriptive statistics provided an overview of the participants' stress levels and mindfulness scores before and after the intervention. The mean pre-intervention PSS score was 28.5 (SD = 6.4), indicating a moderate level of perceived stress among the participants. After the six-week digital mindfulness program, the mean post-intervention PSS score dropped to 22.1 (SD = 5.2), suggesting a significant reduction in stress levels. Similarly, the mindfulness questionnaire showed an increase in mindfulness levels following the intervention. The mean pre-intervention mindfulness score was 34.7 (SD = 5.8), while the mean post-intervention score increased to 42.9 (SD = 4.9), indicating improved mindfulness among the participants (table.1).

	N	PRE-INTERVENTION		POST-INTERVENTION	
		MEAN	SD	MEAN	SD
<b>PSS</b>	100	28.5	6.4	22.1	5.2
<b>FFMQ</b>	100	34.7	5.8	42.9	4.9

**TABLE.1. DESCRIPTIVE STATISTICS**

To assess the statistical significance of the changes in stress and mindfulness levels, a paired t-test was conducted. The results of the paired t-test showed a statistically significant reduction in stress levels after the intervention ( $t = 8.35, p < 0.01$ ). This indicates that the digital mindfulness program had a significant impact on reducing perceived stress among the police officers. In addition, the paired t-test revealed a statistically significant increase in mindfulness levels ( $t = -9.27, p < 0.01$ ) after the intervention. This suggests that the digital mindfulness program was effective in enhancing mindfulness practices among the participants. An analysis of variance (ANOVA) was performed to examine whether the effectiveness of the digital mindfulness program varied across different demographic groups, such as age, rank, and years of experience. The results indicated no significant differences in stress reduction

across these demographic variables ( $F = 1.47$ ,  $p > 0.05$ ), suggesting that the program was equally effective for participants regardless of their age, rank, or years of experience.

## 5. DISCUSSION

The present study tries to understand the effect of digital mindfulness programs on stress reduction among police officers. Findings of this study provide valuable insights into the effectiveness of digital mindfulness programs in reducing stress among police officers. The significant reduction in stress levels, as indicated by the decrease in Perceived Stress Scale (PSS) scores, demonstrates the potential of digital interventions as a viable alternative to traditional stress management techniques. The results of the paired t-test, which showed a statistically significant reduction in stress levels post-intervention, support the hypothesis that digital mindfulness programs can effectively alleviate stress among police officers. This finding aligns with previous research that highlights the benefits of mindfulness in reducing stress, improving mental health, and enhancing well-being (Bostock et al., 2019; Christopher et al., 2016; Spijkerman, Pots, and Bohlmeijer, 2016). The ability of these programs to be delivered through digital platforms makes them particularly suitable for police officers, who often have unpredictable and demanding work schedules that may not allow time for traditional in-person stress management sessions. The increase in mindfulness scores after the intervention further reinforces the effectiveness of the program. Mindfulness practices, which emphasize present-moment awareness and acceptance, can help police officers better manage the high-stress situations they encounter regularly. By integrating mindfulness techniques into their daily routines, officers may be better equipped to handle stress, reducing the risk of burnout and other mental health issues.

### 5.1 Limitation of the study

The study's duration was limited to six weeks, which may not capture the long-term effects of the digital mindfulness program. While the short-term benefits are evident, further research is needed to explore whether these effects are sustained over time and whether ongoing participation in mindfulness practices is necessary to maintain reduced stress levels.

## 6. CONCLUSION

In conclusion, this study demonstrates that digital mindfulness programs can significantly reduce stress among police officers, offering a flexible and accessible solution that can be integrated into their demanding schedules. The findings suggest that law enforcement agencies should consider incorporating digital interventions into their wellness programs to address the mental health challenges faced by officers. Future research should focus on exploring the long-term effects of these interventions and investigating additional ways to enhance their effectiveness, such as combining digital mindfulness with other forms of support.

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