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Examining the Relationship Between Creativity and Mindfulness among Students

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Abstract

Creativity and Mindfulness have emerged as key areas of research across multiple disciplines, with growing interest in understanding their interconnection. This study explores the relationship between mindfulness, defined as a state of nonjudgmental, present-moment awareness, and creativity, characterized as the ability to generate novel and effective ideas. A sample of 80 adolescents (aged 12–17) participated in the study, and measures of mindfulness and creativity were assessed using established scales. Statistical analysis revealed a moderate positive correlation ($r = 0.423$, $p < 0.01$) between the two variables, suggesting that higher mindfulness levels are associated with increased creativity. The scatterplot analysis confirmed a positive linear relationship, with 17.9% of the variance in mindfulness explained by creativity. These findings align with previous research, which emphasizes mindfulness as a facilitator of cognitive flexibility, emotional regulation, and divergent thinking. The study underscores the potential of mindfulness interventions to enhance creativity in educational and workplace settings. However, further research is needed to examine mediating and moderating factors that influence this relationship.

Keywords: Creativity, Mindfulness, Correlation and Students

Introduction

The word "creativity" is used in pertinent discourse in three different contexts: it refers to a group of actions (like "creative" thinking), a set of characteristics (like "creative" personalities), and the results (like "creative" products). According to Piirto (2004), the words "create" and "creativity," which essentially mean "to bring forth or construct," have historical roots. According to academics, creativity is the ability to come up with novel, worthwhile, or advantageous concepts or goods. Although the concept of creativity is well understood by both specialists and the general public, it can be difficult to define precisely. This challenge might result from the way it intersects with conventional categories of individual characteristics (Dörnyei 2005). One common definition of creativity is the capacity to produce original and useful concepts, products, or solutions (Runco, 2014). However, this "standard definition" does not fully capture the diversity of perspectives on creativity, which range from cognitive processes to cultural, artistic, and practical expressions (Henriksen, Creely, & Henderson, 2019).

Mindfulness has recently garnered significant attention across scholarly and popular discourse (King & Badham, 2018). Defined as a state of "nonjudgmental, moment-to-moment awareness" (Kabat-Zinn, 1990, p. 2), it has been widely studied across disciplines such as psychology, healthcare, neuroscience, and education. Most mindfulness research highlights its role in regulating stress and improving cognitive, emotional, and interpersonal functioning (Sedlmeier et al., 2012). Recent studies have expanded this understanding by examining how mindfulness can positively influence other abilities, such as creativity (Carson & Langer, 2006).

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A growing body of research explores the relationship between mindfulness and creativity. Kudesia (2015) proposed that mindfulness enhances creativity by improving cognitive flexibility and fostering divergent thinking. Similarly, Ding, Tang, and Tang (2022) found that mindfulness training led to significant improvements in creative problem-solving, with these effects mediated by reductions in stress and enhanced emotional regulation. These findings align with the work of Lebuda and Karwowski (2018), who emphasized that mindfulness enhances creativity by encouraging an open, non-judgmental awareness of experiences, thereby facilitating idea generation.

Further studies support the notion that mindfulness-based practices improve creative performance across diverse fields. For example, Colzato et al. (2012) demonstrated that open-monitoring meditation, a mindfulness technique, improved divergent thinking, a critical component of creativity. Additionally, Bui and Wilkins (2021) showed that mindfulness interventions in educational contexts enhanced students' ability to think creatively, particularly in tasks requiring originality and adaptive thinking.

Moreover, mindfulness's impact on creativity has been studied in organizational settings. A study by Dane and Brummel (2020) highlighted that employees with higher mindfulness levels were more likely to engage in creative workplace behaviors, driven by enhanced focus and reduced stress. Similarly, Tang, Ho, and Lee (2023) observed that mindfulness training programs for professionals improved their ability to innovate and approach challenges creatively, with long-term effects evident six months post-training.

In educational contexts, mindfulness and creativity are increasingly emphasized as critical skills for learners navigating a rapidly changing world. According to research by Schonert-Reichl and Lawlor (2019), the integration of mindfulness practices in classrooms improved not only the focus and emotional regulation of students but also their creative expression and problem-solving skills. According to Zhou et al. (2021), mindfulness training in schools improves the level of performance both in school work and creative abilities by adolescents, especially in the ability to collaborate.

Tang, Ho, and Lee (2023) undertook a longitudinal study, demonstrating that mindfulness training significantly affected divergent thinking and creative problem-solving over time. The researchers established the manner in which constant mindfulness practices allowed the students to reduce their levels of stress and practice novel thinking. Moreover, Colzato, Ozturk, and Hommel (2012) reported the influence of open-monitoring meditation, the central component of mindfulness on divergent thinking, a strong determinant of creativity.

Ding, Tang, and Tang (2022), further evidence was given through meta-analysis stated mindfulness interventions were found to constantly improve cognitive flexibility and originality, two fundamental elements of creativity. This was highly significant when mindfulness was paired with reflection-based exercises and enhanced self-awareness as well as emotional insight.

Bui and Wilkins (2021) extended this line of research by showing that mindfulness training improved intrinsic motivation, a critical driver of creative exploration, particularly among students engaged in art, design, and problem-based learning environments. Their study highlighted that mindfulness fosters a "flow state" where learners become fully immersed in creative tasks. Lebuda and Karwowski (2018) also found that mindfulness was a mediator between openness to experience, a personality trait related to creativity, and actual creative achievements. Their work highlights the role of mindfulness in bridging personality tendencies with productive creative outcomes.

Kudesia (2015) discussed the application of mindfulness in education, and indicated that mindfulness improves attentional control, emotional regulation, and cognitive flexibility abilities important to learning and creative performance. The research by Kudesia confirms the findings of Dane and Brummel (2020), who considered mindfulness as a predictor of creativity in the workplace, which also could be applied to education in terms of innovation and adaptation. It actually shows that the

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growth in number of research on these exercises can help develop creativity through mindfulness. Mindfulness thus increases emotional regulation, enhances one's attention, and offers self-awareness skills with which students can be accustomed in adapting to complex and dynamically changing learning environments. With this, the current work contributes to the emergent field by exploring the relationships between mindfulness and creativity across learners, furthering understanding toward such constructs and how they are developed to enhance educational outcomes and personal development.

2. Method

2.1 Participants and Procedure:

A total of 80 students, aged 12 to 17, participated in this study, with male (n = 42) and female (n = 38). The researcher directly engaged with the participants in a classroom setting, providing printed copies of the research survey after explaining the voluntary nature of participation and the study's objectives. Participants were assured of their right to withdraw at any point. Consent from facility directors was obtained before the study, confirming participants' willingness to take part. The sequence involved completing a resilience scale, a mental health inventory scale, and a mind-wandering scale, with each participant signing a written release.

2.2 Measures:

Before random assignment to conditions, a quantitative method involved surveying demographic traits such as gender, and age background. Established standardized questionnaires were utilized to assess mindfulness, and creativity.

2.2.1 Mindfulness Scale

The Five Facet Mindfulness Questionnaire (FFMQ), developed by Baer et al. (2006), measures mindfulness across five domains: observing, describing, acting with awareness, non-judging of inner experiences, and non-reactivity to inner experiences. Items are rated on a 5-point Likert scale (1 = never true to 5 = always true), with higher scores reflecting greater mindfulness.

2.2.2 Creativity Scale

The Gough Personality Creativity Scale evaluates creativity using 30 dichotomous (yes/no) items. The total score (0–30) is derived from responses, with higher scores indicating greater creativity. Traits such as originality and curiosity are assessed, and the scale has demonstrated good reliability (Cronbach's $\alpha = 0.71$).

3. Statistical analysis

SPPS 16 version was used for statistical analysis. The data is shown as the mean±s.e.m. Unless otherwise specified, two-tailed Student's t-tests, Correlation analyses were performed. Data are assumed to be following gaussian distribution and Pearson correlation co-efficient were calculated using SPSS. Statistical significance is indicated as $P<0.001$, and ns nonsignificant.

4. Results

4.1 Inverse relationship between Creativity and Mindfulness among adolescence.

The correlation analysis reveals a moderate positive relationship between creativity and mindfulness ($r = 0.423$, $p < 0.01$), indicating that as mindfulness increases, creativity also tends to increase. This relationship is statistically significant, with a p-value of 0.000, showing less than a 1% chance that the result occurred by random chance. The sample size of 80 participants ensures the

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reliability of the analysis. These findings suggest that individuals with higher mindfulness levels are likely to demonstrate higher creativity, providing meaningful evidence of their association.

Table-1 Inverse relationship between Creativity and Mindfulness

Correlations			
		Creativity	***Mindfulness***
Creativity	Pearson Correlation	1	.423**
	Sig. (2-tailed)		.000
	N	80	80
Mindfulness	Pearson Correlation	.423**	1
	Sig. (2-tailed)	.000	
	N	80	80
***. Correlation is significant at the 0.01 level (2-tailed).			

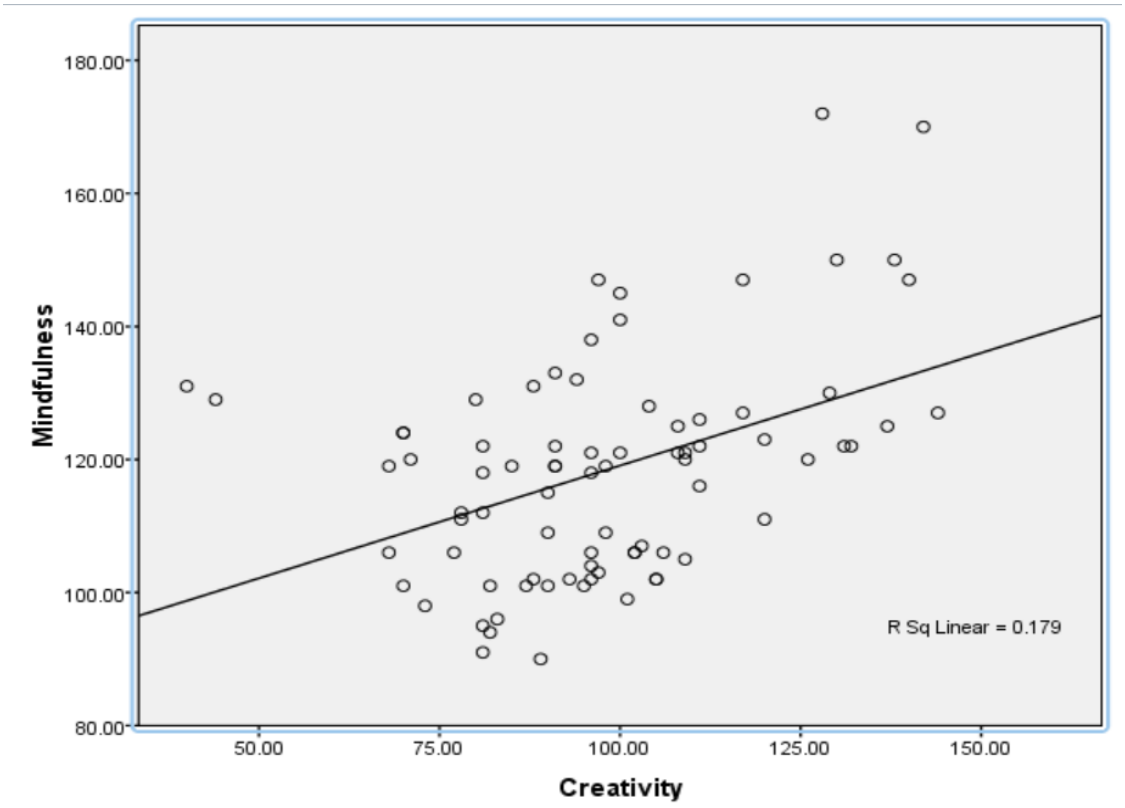

Figure 1 Analysis of the Relationship Between Creativity and Mindfulness

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The scatterplot shows a positive linear relationship between **Creativity** (X-axis) and **Mindfulness** (Y-axis), with the regression line and its confidence intervals highlighting the trend. The R2R^2R2 value of 0.179 indicates that about 17.9% of the variance in Mindfulness is explained by Creativity, suggesting a positive relationship. While the data points generally follow the upward trend of the regression line, there is noticeable variability, indicating other factors might also influence Mindfulness (Figure 1).

5. Discussion

The results of the current study showed a large and positive correlation between mindfulness and creativity ($r = 0.423$, $p < 0.01$). It indicates that there is a tendency for the increase of creativity with the rise of mindfulness. This correlation supports the previous studies based on the interconnectedness of mindfulness and creativity (Kudesia, 2015). Mindfulness is described as a state of present-focused, nonjudgmental awareness (Kabat-Zinn, 1990). It could improve cognitive flexibility, emotional regulation, and attentional control, which are critical for creative problem-solving and ideation.

Mindfulness might influence creativity through its effect on the psychological mechanisms in question. For example, by promoting a calm and focused mental state, mindfulness may reduce stress and cognitive overload, thus allowing individuals to think more freely and divergently (Sedlmeier et al., 2012). Additionally, mindfulness enhances metacognition and self-awareness, helping individuals explore novel ideas and alternative perspectives, which are central to creative thinking (Baas, Nevicka, & Ten Velden, 2014). These attributes align with the need for flexible and innovative thinking, especially in educational settings where students face dynamic challenges. The observed correlation suggests that the interventions designed to develop mindfulness skills could also promote creative potential. Mindfulness meditation or similar practices can be inducted into educational curricula to improve students' emotional well-being as well as their creative skills. Again, the findings support promoting mindfulness in environments that cultivate creativity, such as workplaces or artistic fields. The study also contributed to the increasing literature on mindfulness and creativity, which might be further investigated in a variety of situations. Although the correlation is moderate, it demonstrates that there is a link. However, it also implies that different elements, such as personality traits, motivation, and contextual effects, may mediate and mitigate this association. Future study might go further into these factors to have a better grasp of the relationship between mindfulness and creativity. This study emphasizes the importance of mindfulness as a possible promoter of creativity. Given the increased emphasis on creativity as a critical ability in education and innovation-driven contexts, the findings might be useful for devising treatments and promoting environments that encourage both mindfulness and creativity.

6. Conclusion

These findings suggest that those with higher levels of creativity are more inclined to practise mindfulness. This association demonstrates mindfulness's ability to promote creative thinking, especially through processes such as emotional control, attentional concentration, and cognitive flexibility. While the findings are encouraging, the data's substantial variability indicates that other factors, such as personality traits or environmental effects, may also play a role in defining this association. These findings highlight the importance of bringing mindfulness techniques into educational and professional contexts to improve creativity and general well-being, while also emphasising the need for more study to investigate other mediators and moderators of this association.

7. Limitations

This study has certain drawbacks, which should be noted. A sample size of 80 people may be enough for some statistical analyses, but it limits the capacity to generalise results to larger, more varied groups. Because the study is based on self-report measures, it may be susceptible to response bias when evaluating its findings. The cross-sectional design made research unable to demonstrate a causal association between mindfulness and creativity. Other contextual factors such as socioeconomic status,

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environmental effects, and past experience to mindfulness techniques were not included, which might have impacted the results. These limitations recommend care when interpreting and implementing the findings generally.

8. Future Directions:

Longitudinal designs should be used in future studies to evaluate the long-term benefits of mindfulness therapies and investigate the causal relationships between mindfulness and creativity across time. Examining the functions of mediating and moderating elements including character attributes, intrinsic drive, and contextual circumstances may help us comprehend the relationship between creativity and mindfulness on a deeper level. To improve the findings' generalisability, the study should be expanded to include people from a wider range of age groups, cultural contexts, and socioeconomic backgrounds. Future research should also assess how well certain mindfulness interventions, like open-monitoring meditation, improve different aspects of creativity and look into the systematic integration of mindfulness training programs into workplace settings and educational curricula to promote wellbeing and creativity.

9. Conflict of Interest

The authors declare no conflict of interest concerning the publication of this paper.

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Appendix

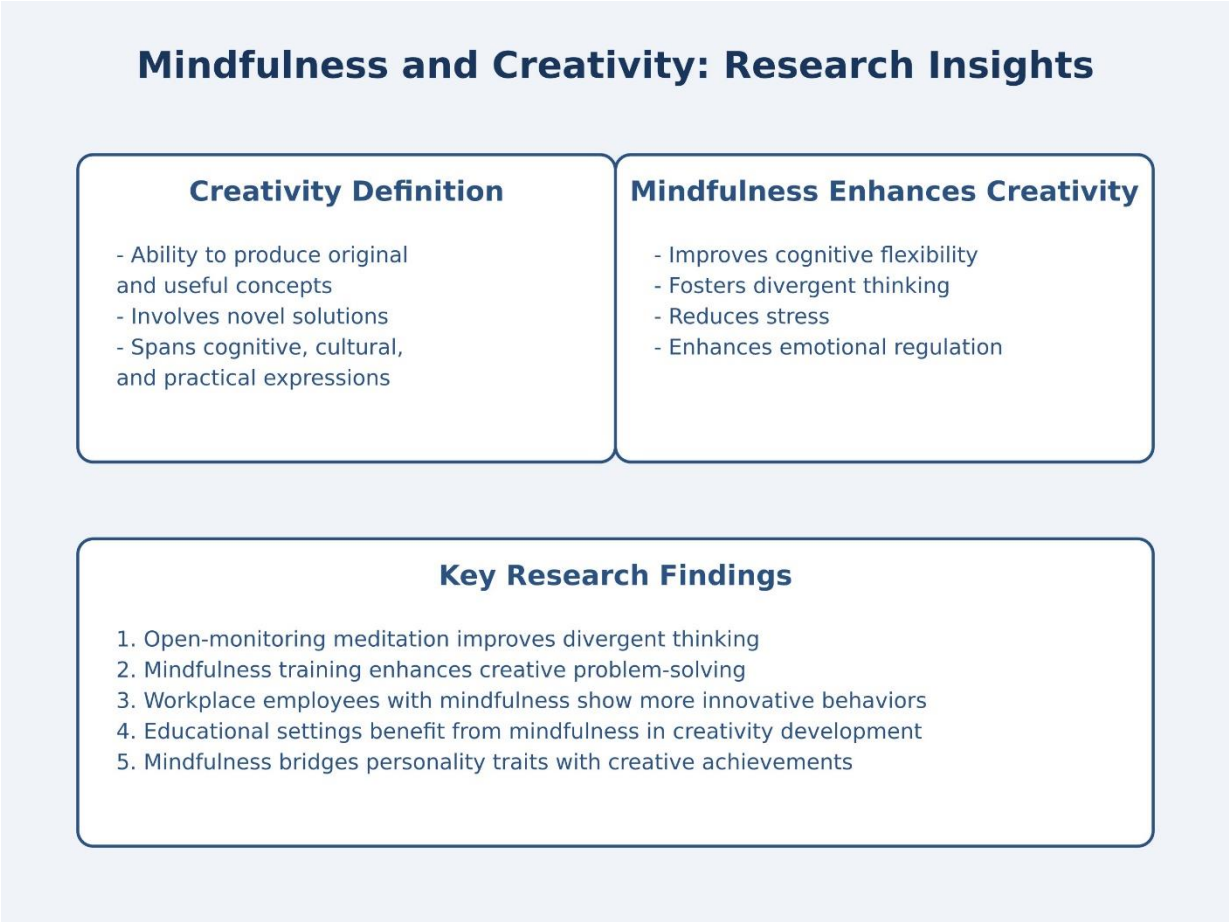

Figure 2 Mindfulness and Creativity: Research Insights

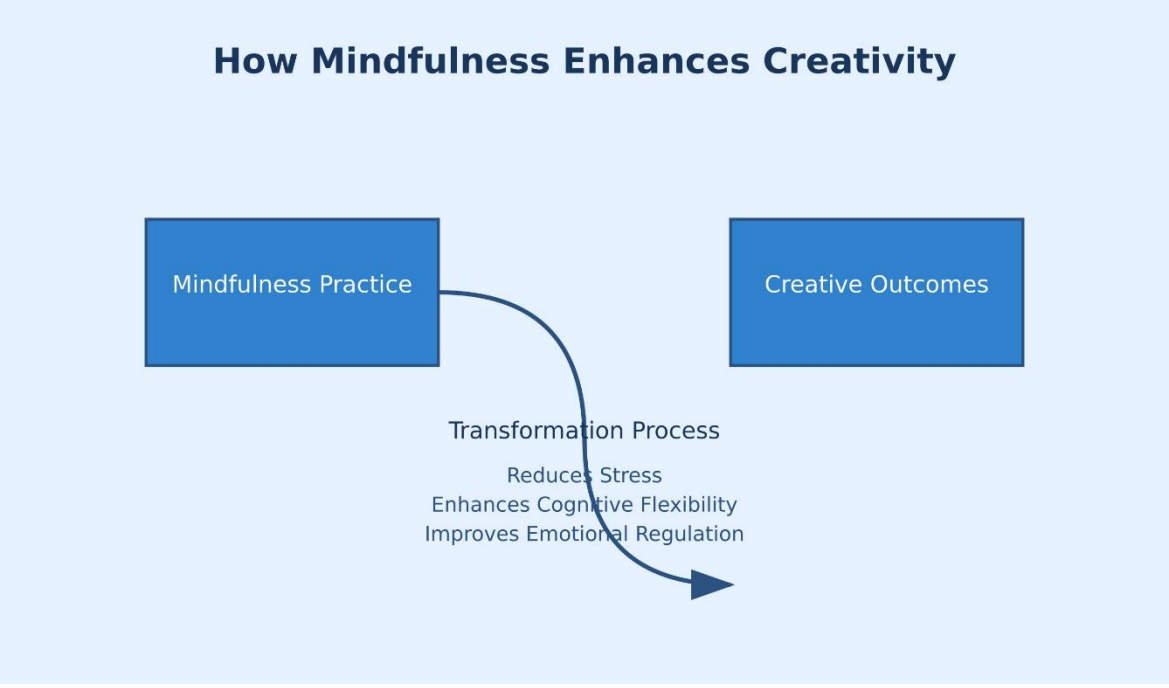

Figure 3 How Mindfulness Enhances Creativity

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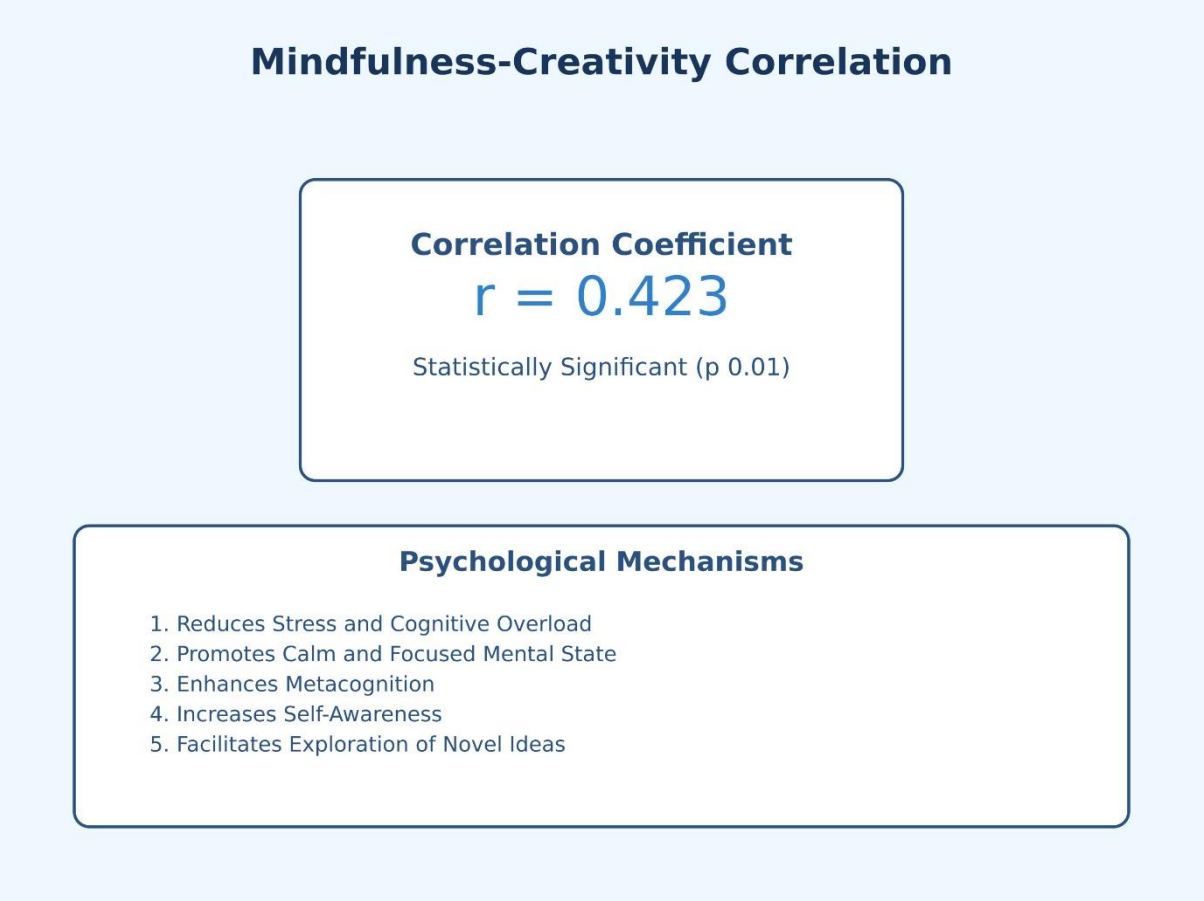

Figure 4 Mindfulness-Creativity Correlation

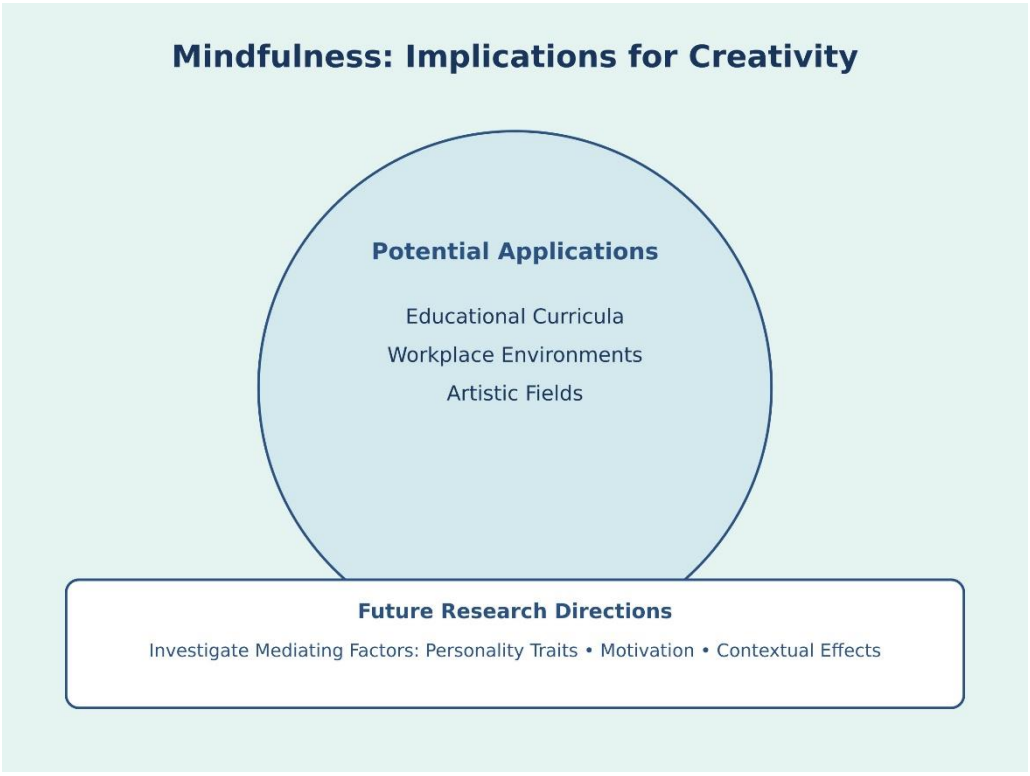

Figure 5 Mindfulness: Implications for Creativity

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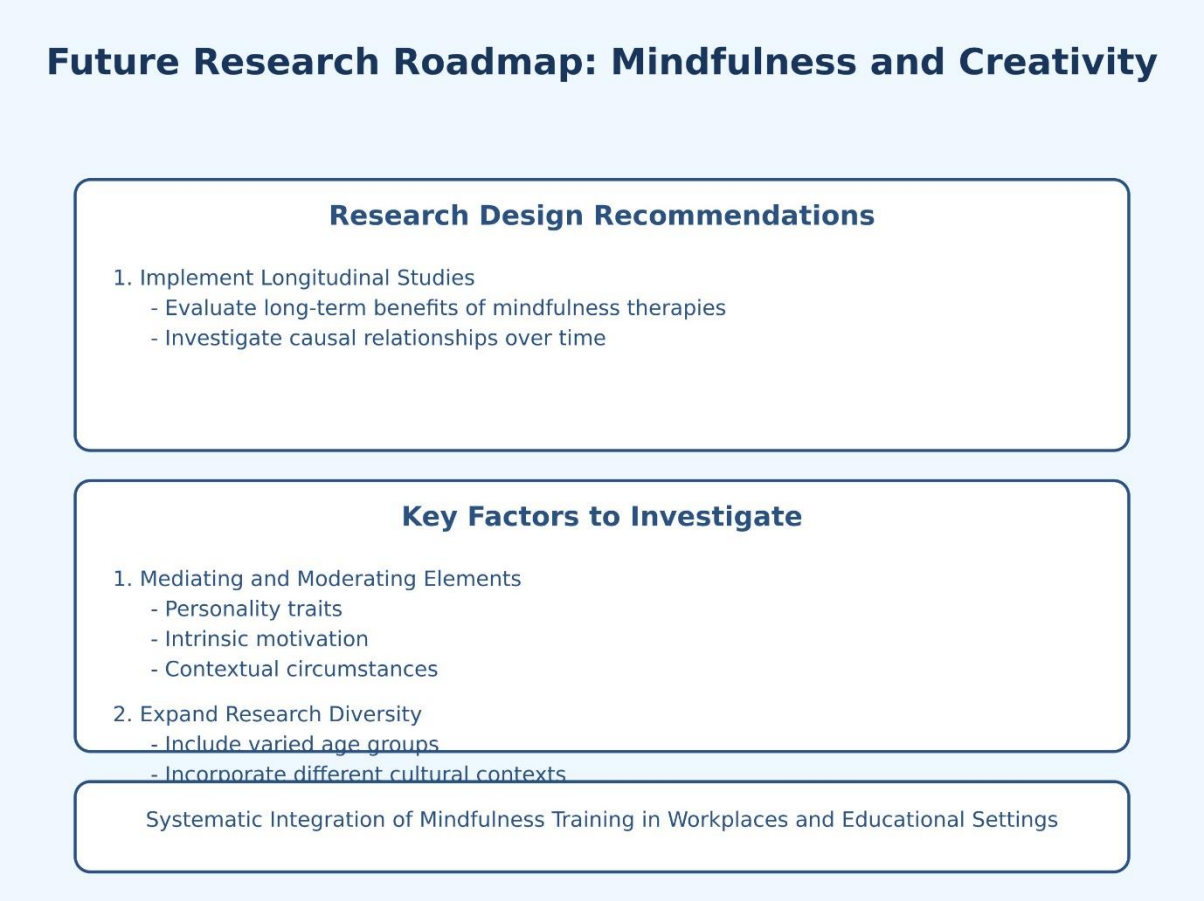

Figure 6 Future Research Roadmap: Mindfulness and Creativity