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Uncovering The Impact Of Mindfulness-Based Interventions On Digital Distractions In The Learning Environment

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Abstract

Undergraduates in Jordan and Saudi Arabia participated in a large-scale research designed to examine the benefits of mindfulness-based therapies on the impacts of digital distractions experienced within the setting of a classroom. The present study utilized a quantitative research methodology to gather data from a sample of 300 individuals, which was representative of the target population. Descriptive statistics, correlation analysis, and multiple regression analysis were only some of the methods used to dissect the data. An interesting inverse association between mindfulness and digital interruptions was uncovered by the research, with the results indicating that those who engaged in mindfulness activities more often showed less susceptibility to digital interruptions. After accounting for demographic factors such as age, gender, and academic discipline, a strong correlation was observed between mindfulness and individuals' patterns of mobile phone usage. The present study's results make a valuable contribution to the existing body of knowledge by highlighting the significance of mindfulness in addressing the negative consequences of technological distractions within educational environments. The findings of this study underscore the imperative of incorporating mindfulness-based interventions into current pedagogical methodologies and creating an

environment conducive to sustained attention within the realm of education.

Keywords: mindfulness, digital distractions, learning environment, undergraduate students.

Introduction

Technology's pervasiveness in today's digital age has had a major effect on how lessons are taught and learned. According to studies by Pekrun et al. (2019) and Junco (2012), implementing technology into classrooms has a negative impact on students' academic performance and learning outcomes. Technology offers many opportunities for enhancing education, but it also brings countless distractions that might have a negative impact on students' ability to focus on their studies. Social media sites, instant messaging programs, and other forms of online entertainment are just a few of the many digital distractions that are making it harder for today's students to focus on and fully engage in their studies. Some examples of digital diversions include the many social networking sites, IM programs, and online entertainment options that are available to users nowadays.

To lessen the impact of digital distractions on students' ability to learn, researchers and educators have been actively investigating a wide range of potential solutions. Research on the efficacy of mindfulness-based treatments in the classroom has gained momentum in recent years. Mindfulness, according to Kabat-Zinn (2003), has its roots in ancient meditative practices. Mindfulness refers to a mental attitude of acceptance and nonjudgment in which one pays close attention to the current moment without letting thoughts wander. Multiple beneficial effects have been linked to the technique, as shown by studies such as those done by Keng et al. (2011) and Tang et al. (2015). These advantages consist of less stress, increased concentration and control over emotions, and enhanced general health. According to Keng, Li, Yu, and Ma (2011)

The effects of implementing mindfulness-based therapies in classroom settings have been promising, according on the available research data. These classroom reforms help kids get better at focusing their attention, which in turn makes it less appealing for them to be sidetracked by technology and its potential drawbacks. In order to help students become more attuned to their own experiences as well as the world around them, researchers like Dvoáková et al. (2017) and Zelazo and Lyons (2012) have proposed incorporating mindfulness exercises into the classroom setting. The promise of this intervention lies in its ability to improve students'

self-control in the face of distractions and hence their academic performance.

Not enough is known about the effects of mindfulness-based therapies in the Middle East, especially in countries like Jordan and Saudi Arabia. Given this finding, it's clear that there's a lot of room for investigation in this area. There has been some research on the possibility of mindfulness-based therapies reducing the harmful effects of digital distractions in classrooms. The scope of these studies, however, remains inadequate. In these nations, there has been a meteoric rise in the use of cutting-edge equipment in classrooms, and with it, a similar increase in the frequency with which pupils are distracted by their smartphones. To add to the expanding body of studies in this area and provide insights for educational practices, it is crucial to investigate the effect of mindfulness-based therapies on digital interruptions in these nations.

The results of this study have far-reaching consequences for educators, policymakers, and researchers throughout the Middle East. Evidence-based treatments to promote focused and effective learning in the midst of technology influences might be greatly aided by a better knowledge of the impact of mindfulness-based therapies on digital distractions. Given the intricacies of Jordan's and Saudi Arabia's cultural, social, and educational systems, it is essential that educators in both nations have an in-depth understanding of local characteristics before attempting to implement any new approaches.

This research aimed to determine whether or not digital distractions may be reduced via the implementation of mindfulness-based treatments in Jordanian and Saudi Arabian classrooms. The primary purpose of this research was to analyze how different forms of mindfulness training affected the frequency with which new technologies were introduced into the classroom. The primary motivation for this study was to provide substantial new information that could be added to the current body of knowledge. The primary goal of this research is to provide a comprehensive understanding of key viewpoints that have the potential to improve current educational practices and policies. The focus of this research is on finding out whether there is a connection between being attentive and being distracted by technology. Overall, this will lead to better and more thorough use of technology in the classroom, leading to higher student accomplishment.

Research Objective

The goal of this research is to determine whether and how mindfulness-based interventions reduce digital technology-related disruptions in the

classrooms of students in Jordan and Saudi Arabia. The goal of this study is to provide empirical evidence on the effectiveness of mindfulness-based treatments in helping students reduce digital distractions, improve concentration, and become more actively involved in the learning process. To this end, studies will be conducted to determine how digital technology might help mitigate the negative effects of mindfulness practices. The purpose of the research is to establish the strength of the connection between the two factors. The research also hopes to unearth country-specific contextual factors that may influence the spread and success of mindfulness-based interventions in Jordan and Saudi Arabia. The investigation will include a comprehensive examination of both Jordan and Saudi Arabia.

Literature Review and Previous Study

The existing body of research suggests that easy access to digital media might divert students' attention away from their coursework (Junco, 2012; Pekrun et al., 2019). Scientists have concluded the following. As a direct consequence of the pervasive usage of technology in educational settings and its pervasive inclusion within those settings, students are exposed on a daily basis to a broad array of digital distractions. Activities in this category include squandering time on various social networking sites, instant messaging applications, and other forms of online entertainment. Data from a number of studies (Junco, 2012; Kirschner & Karpinski, 2010), among others, reveal that students' academic performance, attention, and focus may suffer when interruptions are present. Studies have shown that pupils' academic performance, attention, and focus suffer when they are interrupted. There has been some research done on the efficacy of mindfulness-based treatments in mitigating the detrimental effects of technological diversions.

According to Kabat-Zinn (2003), mindfulness is a contemplative discipline that entails bringing one's attention to the here and now without judging or analyzing it. Accepting one's events as they are without attaching meaning to them is another hallmark of mindfulness. Both Keng et al. (2011) and Tang et al. (2015) revealed that mindfulness meditation was associated with enhancements in a wide range of mental and emotional functions. This was confirmed by contrasting people who practiced mindfulness with those who did not. Those who regularly engage in the practice of mindfulness report improved abilities to focus attention, manage negative emotions, and experience more happiness. Mindfulness-based therapies have showed promise as a means of improving functioning in educational environments. These strategies

have been shown to improve pupils' ability to concentrate and pique their interest in learning.

The present research by Schutte and Malouff (2014) aimed to determine whether or not a mindfulness training program was successful in lowering the prevalence of electronic distractions among college students. The intervention included a broad range of educational activities, including but not limited to body scanning procedures and exercises including deep breathing. According to the results of the study, implementing the mindfulness program had a beneficial influence on the students' capacity to focus on their coursework. There was clear evidence of this improvement in the form of reduced levels of self-reported digital distraction and enhanced levels of focus. The findings suggest that therapies based on an awareness of the present moment might help counteract the unfavorable outcomes associated with the widespread use of technological distractions in educational settings.

Cresswell et al. (2013) did a research that was quite comparable to the current one. This study aimed to investigate the effects of mindfulness instruction on the memory, attention, and processing speed of middle school students. The eight-week long intervention program was intended to provide comprehensive training in all facets of mindfulness. those who participated in the mindfulness training exhibited considerable improvements in their attentional capabilities and cognitive function when compared to those who did not. Conclusions Mindfulness-based treatments may help reduce the negative effects of technology on students' mental health.

Moreover, Dvoáková and coworkers (2017) conducted research on the correlation between college students' levels of mindfulness and the time they spend using digital media. The findings suggest a statistically significant correlation between greater levels of dispositional mindfulness and reduced levels of digital distraction. The results suggest that those with higher levels of mindfulness have a greater capability to resist the temptations of digital distractions, which in turn aids their ability to keep attention and engagement in academic endeavours. This is due to the fact that people have become better at avoiding being sidetracked by electronic devices.

There is a clear lack of scholarly investigation on the efficacy of mindfulness-based treatments for reducing digital distractions in Middle Eastern classrooms. The lack of research is a serious constraint. Since there has been a visible rise in the number of individuals utilizing technology and there has been a meteoric rise in the number of digital

diversions among student populations, further study of nations like Jordan and Saudi Arabia is warranted.

The primary goal of this study is to investigate how mindfulness-based interventions affect the prevalence of digital distractions within educational environments in Jordan and Saudi Arabia. To do so, we shall seek to address a gap in the existing corpus of scholarly literature. The primary goal of this research is to shed light on important questions about the educational practices and policies of different nations. This will be achieved by doing in-depth research on the relationship between mindfulness practices and the disruptions generated by modern technology.

The results of this study will contribute significantly to the growing body of evidence supporting the use of mindfulness-based treatments for coping with the negative impacts of digital disruptions. Also, this study hopes to provide information on how cultural, social, and educational characteristics in the Middle East may influence the success of mindfulness-based treatments there.

Methods

The present study included the participation of 300 freshmen at a single university. These students were enrolled in a wide range of Jordanian and Saudi Arabian universities. Convenience sampling was used to identify the present study's participants since those individuals were both easily accessible and willing to take part in the study at their own free choice. A diverse group of undergraduates from a variety of disciplines participated in this research, and a consistent gender balance between male and female participants was maintained.

The researchers used a self-report questionnaire based on Junco's (2012) Digital Distraction Scale to ascertain the extent to which digital devices were a cause of distraction. A questionnaire consisting of twenty items was employed in the present study. The primary goal of this study was to examine the prevalence and significance of various digital distractions encountered by students while completing academic work. The participants were instructed to rate each item on a 5-point Likert scale ranging from 1 (meaning never or seldom) to 5 (indicating often or always). On a scale from 1 to 5, participants were asked to score each item.

To accomplish the job of assessing the meditative states that people were in, the Mindful Attention Awareness Scale (MAAS), a measuring instrument created by Brown and Ryan (2003), was employed. The MAAS

is a validated instrument consisting of 15 questions designed to assess one's ability to pay close attention and be fully present in the moment. Experts at the University of California, Davis created the scale. Participants rated how often they experienced each phenomenon from 1 (showing a very high frequency) to 6 (representing a very low frequency) on a six-point Likert scale. Institutional Review Boards have to provide their stamp of approval before any data collecting could commence. The researchers were able to successfully communicate with university administration and academics to get the necessary clearance to contact potential volunteers. The study goals and the fact that participation was optional were communicated clearly and accurately to the participants. It is crucial to ensure that all participants have given their informed consent in a suitable manner before conducting the surveys.

Respondents were given access to the questionnaires using a reputable and protected online survey platform. The participants were encouraged to provide answers that were the most representative of who they really were. The responses were saved in a secure location, making it impossible for anybody to access them.

SPSS, a statistical package, was used for the aim of doing analysis on the numerical data. Descriptive statistics were used to examine the variables of interest, and these statistics comprised means, standard deviations, frequencies, and percentages. The research was conducted to learn more about the factors at play. This study set out to answer the question, "Is there a connection between mindfulness and digital distractions?" while also taking into account potential confounding variables like gender and field of study. To get there, we employed inferential statistical methods including correlation and multiple regression analysis.

The data were analyzed using a significance level of 0.05 to determine their statistical significance. The relationship between mindful awareness and technological distractions was the subject of a study. A comprehensive multiple regression analysis was conducted to investigate the projected efficacy of mindfulness in relation to digital distractions. This was accomplished while taking into account and adjusting for a wide range of potential confounding variables.

Results

Table 1: Descriptive Statistics for Digital Distractions

	Mean	**Std. dev**	**Min**	**Max**
Digital Distractions	3.75	0.92	1	5

The tabular display provides an exhaustive and thorough study of data related to the variable labeled "Digital Distractions." The participants' mean score of 3.75 indicates a moderate degree of involvement with digital distractions. A standard deviation of 0.92 indicates some degree of dispersion in the data. Some respondents, as shown by the minimal score of 1, reported only seldom experiencing digital distractions. However, if a responder were to get the highest score of 5, it would indicate that they regularly experience digital distractions.

Table 2: Descriptive Statistics for Mindfulness

	Mean	**Std. dev**	**Min**	**Max**
Mindfulness	4.20	0.78	2	6

The descriptive statistics for the "Mindfulness" variable are shown in the table below. Participants' average score on the mindfulness component was 4.20, suggesting a high degree of self-awareness. There seems to be some dispersion in the mindfulness scores, as shown by the existence of a standard deviation of 0.78. Some participants have claimed very high levels of mindfulness, as indicated by a score of six, while others have reported relatively low levels of mindfulness, as indicated by a score of two.

Table 3: The association between attentive awareness and digital distractions

	Mindfulness	**Digital Distractions**
Mindfulness	1.00	-0.40**
Digital Distractions	-0.40**	1.00

Data from an examination of the association between attentive awareness and digital distractions are tabulated above. Mindfulness and digital distractions seem to have a negative relationship, as seen by the r=-0.40 between the two. According to the findings, there was an inverse relationship between how distracted people were by their digital devices and how attentive they were to what was going on around them.

Table 4: Mindfulness Predicting Digital Distractions

	B	**SE**	**β**	**t**	**p**
Constant	3.02	0.16		18.76*	<0.001
Mindfulness	-0.32	0.05	-0.34*	-6.32*	<0.001
Gender (Control)	0.10	0.08		1.25	0.213

Academic Discipline (Control)	-0.06	0.07		-0.86	0.392

The findings of the multiple regression analysis are displayed in the subsequent table. The current study utilized regression analysis to explore the influence of digital distractions on mindfulness, while accounting for the variables of gender and academic discipline. The findings of the research indicate that mindfulness significantly predicts digital distractions ($\beta = -0.34^*$, $p < 0.001$). This finding indicates that individuals who possess higher levels of mindfulness tend to experience reduced levels of digital distractions. The incorporation of gender and academic discipline as covariates does not result in a statistically significant impact on the prediction of digital distractions, as evidenced by a p-value exceeding 0.05.

Discussion

This research aimed to discover whether or not mindfulness-based treatments may help undergraduates in Jordanian and Saudi Arabian classrooms overcome the detrimental impacts of digital distractions on their performance. These findings contribute significantly to our understanding of the relationship between mindfulness and digital disruptions, which has implications for a wide range of disciplines.

The correlation analysis revealed a statistically significant inverse relationship ($r = -0.40$, p 0.01) between attentive awareness and the employment of digital distractions. Previous studies (Jha et al., 2015; Mrazek et al., 2019) have demonstrated that the more distractions there are, the less likely it is that someone would practice mindfulness. The studies cited previously in this paragraph are given even more weight by these results. Focusing on the effects of digital distractions in the context of the educational environment, with a focus on identifying the extent to which these distractions may have a negative impact on the practice of mindfulness, the current investigation contributes significantly and usefully to the existing body of research.

New evidence shows a strong inverse correlation between these variables, suggesting that those who practice more mindfulness are less likely to give in to digital device-induced distractions. This is what the research suggests as a result of its results. Academic studies by Lutz et al. (2008) and Xu et al. (2019) show that practicing mindfulness may help people focus on tasks at hand and lessen the negative effects of technological interruptions. It has been shown that training oneself in mindfulness may make one more attuned to the here and now and better able to control one's focus and energy. According to Roeser et al. (2013),

regular practice of mindfulness meditation may help students better manage their attention and focus on tasks at hand. This objective may be reached via the process of dampening the mental and emotional response to stimuli coming from the outside world. The results of this study provide credence to the idea that integrating mindfulness techniques into the classroom is an important strategy for reducing the negative impact of technological interruptions on instruction.

The present study used a multiple regression analysis to assess the connection between mindfulness and sustained digital distraction. This study also accounted for any differences in findings based on participants' gender and field of study. A striking correlation between mindfulness and digital distractions was found in the study's sample (= -0.34, p 0.001). This association persisted after controlling for a variety of demographic factors.

The above conclusion emphasizes the significance of including mindfulness as an independent component in the quest to recognize and overcome the effects of digital distractions. Researchers have shown that persons who practice mindfulness are less likely to be distracted by technology, regardless of their academic discipline or gender. This is true regardless of the gender of the people involved. Previous studies have indicated that mindfulness-based treatments may help patients improve their ability to focus and pay attention (Moore et al., 2012; Flett et al., 2016). The results of these studies support the use of mindfulness-based therapies. This study's previously published results are consistent with those of other research and provide credence to the claims stated.

The specific impact that mindfulness has may be better understood with the use of empirical study that includes demographic characteristics as covariates. Although the current study found no statistically significant correlation between gender and discipline and digital distractions, it is important to be mindful of the potential impact of these characteristics. More study may be needed to fully investigate the correlation between gender and chosen academic discipline. The goal of this investigation is to establish whether or not there are moderating factors or interactions.

Findings from this study have significant bearing on educational policies and initiatives that seek to mitigate the impact of digital disruptions in the classroom. Bringing attention to the need of implementing mindfulness practices as a practical strategy to offset the harmful effects of digital distractions, this study contributes significantly to the fields of education, policymaking, and student well-being. Education, policymaking, and student welfare are all examples of these areas.

Applying mindfulness-based therapies in classrooms may help kids develop the self-regulation skills they need to deal with digital distractions. This approach has the potential to aid in the cultivation of the necessary abilities for negotiating the challenges posed by digital technology. Dunning et al. (2019) suggest that students' capacity to focus may be positively impacted by mindfulness practices such deep breathing exercises, body scans, and paying close attention to one's own thoughts and emotions. This, in turn, may make it less difficult for them to give in to the temptation of digital distractions. If mindfulness training is included into the curriculum or if professors provide mindfulness workshops, students may get the tools they need to effectively manage distractions and improve their academic performance.

In this age of continual connectivity, the capacity to self-regulate and a proficiency in digital literacy are recognized as crucial. It's critical that students be made aware of the potential negative effects that excessive use of digital distractions may have on their academic performance and their physical and mental health. Hobbs et al. (2018) argue that schools might better equip students to make thoughtful decisions and maintain focus in the face of digital distractions by encouraging an atmosphere of "digital mindfulness." One way to help kids achieve this goal is to teach them how to establish limits, take charge of their screen usage, and live in the present now. The approach to education emphasizes teaching students to establish limits, manage their time with electronic devices responsibly, and focus on the present now.

The findings also emphasize the need of creating a setting that is conducive to learning and devoid of distractions. Institutions of higher learning may establish standards and guidelines that facilitate the prudent use of technology. Implementing various policies and guidelines has regulated the usage of electronic devices in educational settings. Some schools prohibit the use of electronic devices in some areas and at certain times of the school day, while others provide quiet study areas where students may focus on their studies without distraction. Muller et al. (2018) argue that schools can do more to help students learn and retain material if they foster an environment that values concentration and actively works to limit the influence of electronic distractions.

Limitations and Future Directions

Despite the useful information gleaned from this investigation, it is important to note that several problems were found. Due to the cross-sectional nature of the research, it was not possible to determine cause and effect. Longitudinal and experimental studies conducted in the

future will give more convincing evidence of the causal relationship between mindfulness and the digital disruptions that are characteristic of modern life.

Self-report instruments were used, which may introduce response biases and may have simplified the complexity of digital distractions. Researchers were hampered in drawing firm conclusions due to the aforementioned limitation. Future research may make use of objective measurements like digital monitoring tools or eye-tracking equipment to provide a clearer picture of the participants' real digital habits and distractions.

The results of this study should be interpreted with caution, since they are based on a sample of undergraduates in Jordan and Saudi Arabia and may not be representative of the broader population. Mindfulness-based therapies for dealing with digital distractions need to be studied further to see whether they are universally applicable across cultures.

Conclusion

A substantial inverse association was found between mindfulness and digital distractions, suggesting that those with greater levels of mindfulness tend to encounter less digital distractions. This research expands upon the existing literature on distractions and mindfulness by focusing on the unique phenomena of digital distractions in the educational setting. Meditation and other forms of mindfulness training help people live in the here and now, allowing them to pay less attention to their phones and more attention to their work.

Mindfulness was revealed to be a significant predictor of digital distractions in a multiple regression analysis, even after accounting for sociodemographic factors including gender and field of study. This exemplifies the value of awareness in recognizing and overcoming digital disturbances on one's own. Students may benefit from and acquire the tools for overcoming digital distractions via the incorporation of mindfulness-based treatments into curricular activities.

Significant implications for educational interventions and policy are suggested by this research. Educators and politicians may find that incorporating mindfulness training into the curriculum or providing mindfulness seminars to students is an effective way to provide students with tools to handle distractions and improve attentional control. Educators may help students learn to self-regulate their internet use and create a distraction-free learning environment by fostering a culture of digital mindfulness.

It's crucial to be honest about the study's caveats. Limitations in drawing conclusions about causation stem from the inherently correlational nature of cross-sectional studies and the potential for response biases in self-report measures. Longitudinal or experimental studies in the future that use objective measurements of digital distractions might give more convincing evidence of a causal association between mindfulness and digital distractions.

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