

AN EXPLORATORY STUDY EXAMINING PERCEPTIONS OF MINDFULNESS AND MINDFUL PRACTICES AMONG FRESHMEN CHRISTIAN UNIVERSITY STUDENTS

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ABSTRACT

Mindfulness is an important metric of human functioning that has been a topic of cultural and academic attention over the past 30 years (Spijkerman et al., 2016) and can help to elevate one's awareness and internal psychological experience (Wielgosz et al., 2019). To date, there remains an absence of literature examining perceptions of mindfulness and mindful practices among college students, particularly among Christian students. The purpose of this mixed-methods, exploratory study was to better understand students' perception of mindfulness and assess current mindful practices. The participants (N = 107) were freshmen undergraduate college students enrolled in introductory psychology courses at a private, non-profit Christian university. Students completed a 9-question researcher-developed Mindfulness Awareness, Perception, and Practices questionnaire to assess perceptions and practices. Results of the thematic analysis revealed that approximately half of the students had a limited understanding of mindfulness, with several reporting disadvantages. Most students listed prayer as a consistent practice, with a much lesser percentage of students consistently engaging in other mindful activities. Implications for mindfulness education and the promotion of evidence-based methods, particularly among Christian communities, are discussed.

Keywords: *mindfulness, mindful practices, perception, thematic analysis, Christian university students, mental health, mixed-methods*

AN EXPLORATORY STUDY EXAMINING PERCEPTIONS OF MINDFULNESS AND MINDFUL PRACTICES AMONG FRESHMEN CHRISTIAN UNIVERSITY STUDENTS

Mindfulness is an important metric of human functioning that has been a topic of cultural and academic attention over the past 30 years (Spijkerman et al., 2016), particularly in terms of its positive connections with health and well-being. While there are varying definitions, mindfulness is a family of practices that have been reconstructed from various introspective traditions—religious and secular—that center on minimizing distraction

and elevating one's level of awareness and internal psychological experience (Wielgosz et al., 2019). It is generally a mode of non-judgmental attention characterized by openness, acceptance, and an enhanced ability to respond to and be in the present moment (Kabat-Zinn, 1994). There are varying forms of mindfulness, including meditation, visualization, body scans, focused breathing, journaling, taking a nature walk, simply observing one's thoughts, and prayer. Ijaz et al. (2017) noted significantly better mental health outcomes when

mindfulness was integrated into a prayer practice.

BENEFITS OF MINDFULNESS

Mindfulness can enable one to understand how thoughts and emotions impact one's health and quality of life (Deci et al., 2017). There is ample research showing that mindful practices can assist with recognizing and overcoming psychological rumination, distraction, and resistance. Research highlights the mind's and body's inherent ability to rebalance and sustain well-being and help one discover positive new perspectives, behaviors, and solutions (Mental Health Foundation, 2021). For instance, meditation—one form of mindfulness—specifically brings brainwave patterns into an alpha state, allowing for psychological and physiological healing (Pathath, 2017). Physiological benefits of meditation include lowered heart rate, lower cortisol levels, reduction of unstable oxygen molecules that cause tissue damage, and decreased blood pressure (Pathath, 2017).

Psychological benefits of mindfulness include decreases in depression and anxiety, improvements in learning, higher levels of self-actualization (Pathath, 2017), reductions in psychiatric symptoms (Kumar et al., 2022), enhanced emotional regulation, and improved mood (Zhang et al., 2019). Evidence suggests that meditation is linked to improved levels of cognitive functioning. When compared to non-meditators, meditators exhibited higher-order cognitive processes, including improved attention, focus, working memory, cognitive flexibility (Fabio & Towery, 2018), and overall cognitive efficiency (Strickland & Selwyn, 2019). The connection between mindful practices and stress reduction is well documented (American Psychological Association, 2019). Mindfulness has been shown to increase personal awareness, decrease negative emotions and reactivity, and increase awareness of stress and coping skills (Rizer, 2016). Crowley and colleagues (2017) found that even a brief mindfulness training was associated with better psychological well-being, more compassion, and less focus on stressful events.

Mindful interventions are especially important for college students who are vulnerable to mental health issues. According to the American College Health Association (2020), 49.2% of college students reported moderate stress, while 33.1% reported high stress. Despite these elevated levels

of stress, very few of them seek help. Only 37.5% of female and 16% of male college students report seeking help for stress and mental health issues (Hubbard et al., 2018). Dawson et al. (2019) support the mental health benefits of mindful interventions in college populations, showing significant reductions in anxiety and depression. Today's students are flooded with distractions and multiple cognitive demands that can augment these stressors. Mindful practices can be a feasible way for students to cope with stress prior to, and possibly as an adjunct to, seeking professional help.

PERCEPTION OF MINDFULNESS

While mindful practices have evidence-based benefits, there is often a misunderstanding as to the true meaning of mindfulness, what constitutes a mindful intervention, and other inaccurate myths (Hendriksen, 2018; Landau et al., 2022). For instance, there are several forms of meditation, which is simply one type of mindful practice. Additionally, some believe mindfulness must be thoughtless, that it must be practiced at all times, or that it leads to euphoria. Clinical psychologist Ellen Hendriksen (2018) addressed some of these beliefs, stating, "As the mindfulness movement gets bigger and more unwieldy, misconceptions sprout like mushrooms after the rain" (p. 1). Perceptions of and attitudes about mindfulness are important to understand since they affect practice habits and state of mind. Research shows a positive relationship between the perceived benefits of mindfulness and the intentions to practice mindfulness (Rizer et al., 2016). Individuals may not practice mindfulness techniques if there exist negative perceptions about them or if they are perceived as futile. For instance, in one study, students reported that meditation was too time-consuming, there were no actual benefits, a general frustration over a lack of results, and a fear of peer rejection (Lederer & Middlestadt, 2014).

This perception-to-behavior link corresponds with the Health Belief Model (HBM), which theorizes that individuals are more likely to partake in a health-related behavior if they determine that the subjective benefits outweigh the costs (Rizer et al., 2016). Specifically, behavior is dependent on perceived susceptibility, severity, benefits, cues to action, and self-efficacy (Champion & Skinner, 2008). This model is also supported by the

Reasoned Reaction Approach (RAA), which purports that behavior is determined by three major constructs: attitude toward the action, the perceived norm, and self-efficacy (Lederer & Middlestadt, 2014). According to these two models, the likelihood of college students practicing mindfulness depends greatly on their general attitudes and perception of mindfulness. Bamber and Schneider's (2020) examination of college students' perception of mindfulness concurs with this model, as their findings indicate that mindful interventions should be expressly developed for college students. The researchers recommended a closer exploration of the specific elements of the interventions that are perceived to be the most beneficial among this population (Bamber & Schneider, 2020). The present study attempted to partially fill this perceptual gap.

Mindfulness practices have a rich history rooted in both secular and religious traditions. In the Western hemisphere, mindfulness concepts originate from the Christian tradition, which places a focus on spiritual contemplation of biblical passages and exchanges with God. Meditation, as a biblical concept, centers on personal salvation through Jesus Christ (Lawrence, 2015). However, it is unknown how strongly this perception persists in today's younger population, particularly among self-identifying Christian students. To date, there remains an absence of literature examining perceptions of mindfulness and mindful practices among college students. The purpose of this study was to explore the perception of mindfulness among undergraduate college students, focusing on students identifying as Christian, to gather a more comprehensive understanding of their perceptions and how those beliefs relate to current mindful practices.

METHOD

Participants

Table 1 shows the demographic data of the sample. The participants were selected by convenience sampling from five large introductory psychology (PSY-102) ground sections at a private, non-profit Christian university located in the American Southwest. The sample ($N = 107$) included 86 females and 21 males. PSY-102 is a general education course, so most participants were freshmen (84%) with varying majors. The sample was drawn from a Christian university, so most

Table 1
Demographics and Characteristics of the Sample Population

Participant Demographics		
	N	%
Sex/Gender		
Female	86	80.37%
Male	21	19.63%
Year		
Freshman	90	84.11%
Sophomore	14	13.08%
Junior	2	1.87%
No answer	1	0.93%
Age		
17	2	1.87%
18	59	55.14%
19	37	34.58%
20	8	7.48%
21	1	0.93%
Ethnicity		
White	51	47.66%
Hispanic	30	28.04%
African American	11	10.28%
Asian	8	7.48%
Mixed	6	5.61%
Indian	1	0.93%
Religious Affiliation		
Catholic/Christian	90	84.11%
No Answer	16	14.95%
Agnostic	1	0.93%

Note. N = number of participants in each category. The total number of participants is 107.

of the sample came from Christian or Catholic backgrounds (84%). The sample also consisted of multiple ethnicities; however, the most prevalent ethnicity indicated was White. (See Table 1 for a demographic breakdown of the sample.)

Procedures

Survey packets were distributed to five PSY-102 professors who administered the test during the 13th week of the 2021 spring semester. Students who agreed to participate in the study and who met the eligibility criteria were provided informed consent and asked to complete a packet of hard-copy questionnaires. The questionnaire included demographic questions and a *Mindfulness Awareness, Perception, and Practices Questionnaire*. The research opportunity was offered at the beginning of their regularly scheduled class period, in their physical classroom, and took approximately 15 minutes to complete.

Measures

The *Mindfulness Awareness, Perception, and Practices Questionnaire* is a 9-question assessment that was self-developed by the researchers. The mixed methods questionnaire contains both Likert ratings, noting the strength of opinion from 1-5, and open-ended questions intended to assess the students' feelings about, familiarity with, perceptions, and knowledge of mindfulness. The assessment also assessed the frequency with which the participants practiced different mindful activities, including meditation, prayer, walks, journaling, mindful apps, deep breathing, and other forms. A self-developed questionnaire was preferred over a standardized assessment since no validated measures for specific research questions existed. (Refer to Appendix 1 for the *Mindfulness Awareness, Perception, and Practices Questionnaire*.)

Data Analysis

Data obtained from the hard copies were coded and entered into a password-protected Excel document by the primary researcher. No identifying information was included. The quantitative answers from the first, second, and ninth Likert questions were organized by numerical value and averaged. For each section, it was determined how many participants marked each level (e.g., 1 through 5), and averages were tabulated. An extensive content analysis was performed on the responses to the six

open-ended questions. Responses to each question were analyzed and categorized by emergent themes. Finally, the results of the perception questionnaire were compared to the trends found in the mindful habits questionnaire to determine the relationship between perception and mindful practice habits. The data compiled from this questionnaire is broken down and analyzed by question below.

RESULTS

Awareness and Perception of Mindfulness

The purpose of the two quantitative questions (numbers 1 and 2) on the *Mindfulness Awareness, Perception, and Practices Questionnaire* was to assess the participants' familiarity with, knowledge of, and general feelings about mindful practices in an attempt to gauge perception. Tabulate results can be viewed in Table 2. Question 1 asked participants to rate their level of awareness of the concept of "mindfulness" from 1 to 5. The average response to this question was 3.47. The most common answer recorded for question 1 was 3 ($N = 45$, 42.06%), indicating these participants were somewhat familiar with mindfulness. The next most common answer was 4 ($N = 34$, 31.78%), followed by 5 ($N = 16$, 14.95%), then 2 ($N = 8$, 7.48%), and 1 ($N = 4$, 3.74%). Most participants listed an answer of 3 or higher ($N = 95$, 88.79%). This indicates that most participants believed they were somewhat or very familiar with the concept of mindfulness. These findings were expected, considering mindfulness has become a universal buzzword in and outside psychological disciplines. Additionally, there has been an influx of mindful-based applications such as Headspace Buddhify, Insight Timer, and more.

Question 2 asked the participants to rate how they feel when they hear the word "mindfulness," 1 being negative and 5 being extremely positive. The average recorded answer was 4.11, indicating that most participants (82%) had positive feelings when thinking of mindfulness. The most prevalent answer was 4 ($N = 56$), meaning over half of the students (52.34%) felt positive about this term. The next most common answer was 5 ($N = 32$), meaning almost 30% of the students felt extremely positive about the term. This was followed by a 3 ($N = 18$), conveying that 16.82% felt neutral about the term. Only one student (.93%) felt somewhat negative about the term, and no student reported

feeling negative about the term. Most participants (99%) marked 3, neutral, or higher ($N = 106$), conveying that the participants generally felt positive feelings toward mindfulness overall. These results are not surprising, considering the positive attention mindfulness has received in the media.

The purpose of the six open-ended questions on the *Mindfulness Awareness, Perception, and Practices Questionnaire* was to obtain a deeper view of students' perceptions about mindfulness, asking questions about feelings, advantages, disadvantages, current mindful practices, frequency of practice, and where they learned about the concept.

Question 3: Feelings, Thoughts, Words, or Images

Question 3 asked students to describe what feelings, thoughts, words, or images come to mind when they hear the word *mindfulness*. Emergent themes with representative student quotes are noted in Table 3. Six major themes emerged from these responses. The most prevalent theme was *Relaxing/Peace* ($N = 48$, 44.9%). Examples of responses that represent this theme are "peace, calm environment" and "relaxed." This finding was expected, considering many people lean on mindful practices during stressful times (Hubbard et al., 2018).

Question 4: Where Mindfulness Was Learned

Question 4 asked participants if they considered

themselves to be a "mindful" person and, if yes, to explain where it originated. Emergent themes with representative student quotes are noted in Table 4. Six major themes emerged from the responses. The most prominent theme was *Family* ($N = 35$, 32.7%). Many participants noted answers such as, "I think it came from my parents." This result was expected since the family is a primary socializing institution and a setting where much social activity occurs. Children learn from their caregivers, both through teaching and modeling behaviors. Parents who partake in and positively regard mindful activities will likely influence their children to follow suit.

The second most common theme was *Personal Experience* ($N = 10$, 9.35%). Example responses to highlight this theme were, "I think this came from things I've experienced in my life" or "They came from stress and how to cope with it." The fact that almost 10% of the students reported learning about mindfulness by *experiencing* mindfulness suggests they have witnessed beneficial changes over time. Based on the responses, it appears some associate the concept of mindfulness with stress reduction or navigating successfully through challenges. However, it is unknown if these students truly grasped the concept of mindfulness. This suspicion was confirmed by responses that did not neatly fit into a theme ($N = 9$, 8.40%). For instance, some respondents stated, "I think [my mindful

Table 2 Data for Questions 1-2

Rating	Question 1 Are you aware of the concept of "mindfulness?"		Question 2 When you hear the word mindfulness, how do you feel about it?	
	N	%	N	%
1 (negative)	4	3.74%	0	0.00%
2 (somewhat negative)	8	7.48%	1	0.93%
3 (neutral)	45	42.06%	18	16.82%
4 (somewhat positive)	34	31.78%	56	52.34%
5 (extremely positive)	16	14.95%	32	29.91%
No Answer	0	0.00%	0	0.00%
Average	3.47		4.11	

Note. N = frequency of participant answers.

Table 3
Qualitative Data for Question 3

Question 3: When you hear the word “mindfulness,” what feelings, thoughts, words, or images come to mind?			
Theme	N	%	Examples
Relaxing/Peace	48	44.9%	“Being calm or peaceful...” “Relaxed...”
Other People/Being thoughtful of others	21	19.6%	“Family and friends” “Caring for others...”
Awareness of Self	20	18.7%	“In line with your emotions and other’s emotions” “Being aware of one’s emotions and mental state”
Mental Clarity	14	13.1%	“Clear thinking” “Feeling focused”
Nature	14	13.1%	“I think of soft rain in a jungle” “Oceans/mountains...” “The beach/water”
Other	11	10.3%	“Balance” “Putting technology away and talking to other people”
Thinking/Brain/Knowledge	9	8.4%	“Ideas, brain, thinking” “Smart decisions”
Open Mind	8	7.5%	“An open mind” “I think mindfulness is being open”
Happiness	7	6.5%	“...feelings of happiness”
Meditation	5	4.7%	“Meditation...”
No Answer	5	4.7%	

Note. N = frequency of participant answers.

practices] came from genetics...” and “From an early age I just analyzed things.” It is also important to note that many participants either provided no answer ($N = 34$, 31.8%) or the answer given was irrelevant to the question asked ($N = 10$, 9.35%). Taken together, the results of the thematic analysis of this question reveal that approximately 50% of the participants were unaware of or had an inaccurate perception of mindfulness.

A small emergent theme was learning mindfulness from *Faith or Spirituality* ($N = 5$, 4.7%). Considering the number of students who listed prayer as a mindful practice (question 9), it was interesting that less than 5% reported learning about these practices through faith-based institutions or spiritual practices. Another curious result was the small percentage ($N = 4$, 3.70%) of students who listed *School* as the place they learned about mindfulness. While this number may not be

shocking for students enrolled in STEM courses, all students were enrolled in the 13th week of a psychology course where mindfulness tends to be a topic of discussion.

Question 5: Perceived Benefits or Advantages of Mindfulness

Question 5 solicited information about the perceived benefits of mindfulness. Emergent themes with representative student quotes are noted in Table 5. Many participants believed mindful practices were beneficial ($N = 93$, 86.9%). The strongest theme that emerged was *Relaxing and Peaceful* ($N = 27$, 25.2%). For instance, participants stated, “They help clear your mind and make you relax,” and “They bring more peace.” Similarly, the second most common theme was *Stress Relief* ($N = 19$, 17.8%). Several participants commented, “It helps with stress” or “It reduces anxiety.” It is

Table 4
Qualitative Data for Question 4

Question 4: If you DO consider yourself a mindful person, where do you think this came from?			
Theme	N	%	Examples
Family or Upbringing	35	32.70%	"My parents" "I think it came from my parents"
No answer	34	31.80%	
Personal Experience	10	9.35%	"I think this came from things I've experienced in my life" "came from stress and how to cope with it"
Irrelevant Answers	10	9.35%	"I love music" "Compassion is important"
Other	9	8.40%	"...I think it comes partially from genetics and I am always watching and thinking about what I should do or say..." "From an early age I just analyze things"
Faith/Spirituality	5	4.70%	"...getting closer to God"
School	4	3.70%	"School" "From other psychology courses..."

Note. N = frequency of participant answers.

important to note the strong relationship between these themes, which, when combined, convey that a little under half of the students view mindfulness as peace-producing and an effective health tool for stress reduction.

The next emergent theme for this question about mindfulness benefits is *Taking Time for Self* ($N = 14$, 13.1%). One student wrote, "It's easy to go from thing to thing without taking time for yourself to think." The next theme was closely related to this. The same number of students mentioned something related to *Self-improvement* ($N = 14$, 13.1%). Examples of these themes include "[Mindfulness] helps you process how you feel which gives mental benefits" and "They help to better a person." These responses reflect how mindfulness can be an effective self-care tool to enhance well-being.

A lesser but strong theme that emerged regarding the benefits of mindfulness was that it can promote *Selflessness or Helping Others* ($N = 9$, 8.40%). For instance, one student wrote, "It takes the focus off of yourself and helps you to become more selfless." Another student wrote, "I tune more into others and focus on their needs versus mine." These findings aligned with responses to question 3, where almost 20% of the students associated mindfulness with *Being Thoughtful and*

Aware of Others. Responses reflect research showing that mindful practices can modify the brain to induce selflessness (Dor-Ziderman et al., 2013) and promote altruistic behaviors (Iwamoto et al., 2020). However, the researchers questioned whether the "helping others" aspect of mindfulness was related to the students' Christian tradition or religion. Thus, researchers conducted a single sample t-test to examine any correlations between students who listed a religious affiliation in their demographic questionnaire and those who did not. Results of the statistical analysis showed a small but significant correlation between religious students ($M = 90$, $SD = 3$) and those who mentioned helping or selflessness in their response ($M = 17$, $SD = 1$) conditions; $t(8) = 2.89$, $p = 0.049$. While this may suggest that religion is connected to helping behavior and selflessness, the data did not follow the normal probability distribution, and the sample size of secular students was too small to generalize. Therefore, these results should be taken lightly.

Some participants provided responses that did not fit into a theme ($N = 10$, 9.35%), with sample responses such as "Scientific studies prove so" and "It's important to be present." Others did not respond ($N = 4$, 3.7%) regarding mindfulness benefits. Furthermore, under 10% of the participants

Table 5
Qualitative Data for Question 5

Question 5: Do you believe mindfulness is beneficial? If so, explain your reasoning.			
Theme	N	%	Examples
Yes	93	86.90%	
Relaxing/Peaceful	27	25.20%	"They help clear your mind and make you relax" "Brings more peace"
Stress Relief	19	17.80%	"It helps with stress" "It reduces stress/anxiety"
Taking Time for Self	14	13.10%	"It's easy to go from thing to thing without taking time for yourself to think"
Self-improvement	14	13.10%	"They help better a person" "helps you process how you feel which gives mental benefits"
Other	10	9.35%	"Scientific studies prove so" "It's important to be present"
Selfless/Helping Others	9	8.40%	"It takes the focus off of yourself and helps you to become more selfless" "I tune more into others and focus on their needs versus mine"
No Explanation	4	3.70%	
Maybe/Unsure	9	8.40%	
Both beneficial and negative	2	1.90%	"You can relieve stress, but it can be a waste of time"
Depends on the person	5	4.70%	"They can be, depending on the person. Some need them to calm their mind while it does nothing for others"
Not sure	1	0.90%	
Other	1	0.90%	
No Answer	5	4.70%	

Note. N = frequency of participant answers.

were unsure if mindful practices were beneficial ($N = 9$, 8.4%). Taken together, these thematic analyses align with previous themes indicating a lack of knowledge or misinformed perception of mindfulness.

Question 6: Reasons for Practicing Mindfulness

Question 6 asked participants why they chose to engage in mindful activities or practices. Emergent themes with representative student quotes are noted in Table 6. The most prevalent theme was that mindfulness was *Calming, Stress Relieving, and/or Peaceful* ($N = 37$, 34.6%). Example responses to this theme include "leaves me peace" and "to help relieve stress." These responses highlight previous themes showing that students associate mindfulness with relaxation and stress reduction.

Other minor themes that emerged were

Self-Improvement and Growth ($N = 9$, 8.4%), *Refresh and Reset* ($N = 8$, 7.50%), and *Awareness* ($N = 5$, 4.7%). Example responses to these themes include "reminds me of who I'm trying to become," "It helps me regenerate and refresh the mind," and "They help me stay aware of my mental state." The results of the thematic analysis align with previous question responses, further indicating an understanding of mindfulness' mental health benefits.

A little over 10% of the students shared unique responses that deviated from other themes ($N = 13$, 12.1%), such as "I pray because I am religious," "volunteering time," and "gives oxygen to my brain so it will keep focusing." Once again, these responses indicate a misunderstanding and lack of knowledge of mindfulness. Interestingly, a third of participants either did not answer or marked that they do not participate in mindful activities (N

Table 6
Qualitative Data for Question 6

Question 6: If you do practice mindfulness, explain your reasoning			
Theme	N	%	Examples
Calming/Stress Relief/Peace	37	34.60%	"Leaves me peace" "To help relieve stress"
No answer/ Do not partake	35	32.70%	
Other	13	12.10%	"I pray because I am religious" "Volunteering time" "...give oxygen to my brain so it will keep focusing"
Self-Improvement/Growth	9	8.40%	"Reminds me of who I'm trying to become (a better version of myself)"
Refresh/Reset	8	7.50%	"It helps me regenerate and refresh the mind"
Awareness	5	4.70%	"They help me stay aware of my mental state" "To help myself become more aware"

Note. N = frequency of participant answers.

= 35, 32.7%). This finding, like previous ones, is quite significant and suggests a lack of mindfulness knowledge.

Question 7: Reasons for not Practicing Mindfulness

Question 7 asked participants who did not practice mindfulness to list reasons why. Emergent themes with representative student quotes are noted in Table 7. The majority of the participants did not answer ($N = 73$, 68.2%) this question. Results provide little insight, meaning

that most participants either practice mindful behavior, are not opposed to it, or simply do not understand what mindfulness is. Over ten percent of students noted they did not practice mindfulness due to *Lack of Time* ($N = 11$, 10.28%). One student wrote, "No time, will get distracted!" Based on these responses, it is suspected that students have a limited view of mindfulness and possibly associate it with long meditation sessions. This finding further supports a need for proper mindfulness education, which might include providing students with quick, simple, and effective tools such as deep breathing, observation, body scans, or mindful walks.

Another prominent theme that emerged was a *Lack of Knowledge or Skills* ($N = 10$, 9.35%). These answers include "[I'm] not quite sure of what that entails" or "I'm not sure what mindful activities are." Based on other emergent themes for this and

previous questions, it is suspected that the number of students lacking knowledge or skills is significantly higher.

Less than five percent of the students noted they were not interested in or did not find mindfulness important ($N = 5$, 4.67%). Some responses did not fit into a prominent theme ($N = 8$, 6.5%) but related to the last one, with responses such as, "I didn't grow up doing them" and "They don't benefit me." It is unknown whether these students had ever tried mindfulness practices, had tried them but experienced no benefits, or if they simply were unaware of them.

Question 8: Perceived Disadvantages

Question 8 asked participants what disadvantages, if any, were associated with mindful practices. Emergent themes with representative student quotes are noted in Table 8. More than half of the participants did not provide an answer ($N = 54$, 50.5%), indicating they did not perceive any disadvantages, while a few specifically noted there were no disadvantages ($N = 3$, 2.80%).

One of the most surprising results of this study was that close to 50% of the students listed disadvantages of mindfulness ($N = 43$, 42%). The most common theme that emerged was that mindfulness might lead to overthinking or reduced mental health ($N = 16$, 15%). For instance, one student wrote, "You could start to overthink everything" or "might cause mental problems." Considering

Table 7
Qualitative Data for Question 7

Question 7: If you do not practice mindfulness, explain your reasoning			
Theme	N	%	Examples
No Answer	73	68.20%	
Lack of time	11	10.28%	"I'm too busy" "No time, will get distracted!"
Don't know how	10	9.35%	"Not quite sure of what that entails" "I'm not sure what mindful activities are"
Other	8	7.50%	"They don't benefit me" "I didn't grow up doing them"
Not interested/Not Important	5	4.67%	"I have little interest in using mindful activities" "Not important"

Note. N = frequency of participant answers.

the drastic split, it is assumed these were not the 50% or more of the students who noted advantages. Based on this thematic analysis, it is clear that these students do not have accurate knowledge about mindfulness or have practiced mindful behaviors.

Another theme that emerged was that mindfulness was time-consuming ($N = 15$, 14%), which reflects responses listed to the previous question about why they do not practice mindfulness. This result mirrors the results of Lederer and Middlestadt's (2014) research, where students expressed hesitation to practice due to perceived time demands. This suggests that students have limited information about the wide range of quick and effective mindful interventions. A few students noted that mindful activities might allow one to be taken advantage of or burden others ($N = 5$, 4.7%). For example, one student wrote, "You can have someone else's burdens fall on you." These results further underscore the lack of understanding surrounding mindfulness.

A few students noted that mindful activities simply did not work ($N = 3$, 2.8%). One student wrote "lack of results." It is unknown whether these students perceive mindfulness negatively due to upbringing or previous attempts. Some responses did not fit into a theme ($N = 4$, 3.7%). For example, one student wrote "tired," and another wrote, "see

things differently." These responses further show that many of the students did not have a complete understanding of mindfulness or the research connected to it. Results from this question also piqued interest because they contradicted responses in question two, where most participants rated their perception of mindfulness positively, and just a few students rated their perception of mindfulness negatively.

Question 9: Current Mindful Practices

The purpose of question 9 was to assess what if any, mindful practices the students were currently engaging in, as well as the frequency. Participants were asked to provide ratings between 1-5 for each behavior (1 = *Never*, 2 = *Rarely*, 3 = *Monthly*, 4 = *Weekly*, 5 = *Daily*). Averaged together, the score for meditation walks, journaling, mindful apps, and breathing was below 3 on the Likert scale, indicating students rarely engaged in these behaviors. Only 12% of the participants practiced mindfulness on a weekly basis (score of 4 or higher). Each emergent practice is analyzed individually below, from most common to least common. Results can be viewed in Table 9.

Prayer

Prayer had the highest average score at 3.92, where almost 70% of participants marked a 4 or 5. 38% of the students stated they prayed daily, and 30% reported praying monthly. These results were

Table 8
Qualitative Data for Question 8

Question 8: What might be some disadvantages to mindfulness (if any)?			
Theme	N	%	Examples
No Answer	54	50.50%	
Overthinking/ Reduced mental health	16	15.00%	"You could start to overthink everything" "Might cause mental problems"
Time consuming	15	14.00%	
Taken advantage of by others/Burdened	5	4.70%	"You can have someone else's burdens fall on you" "Being taken advantage of"
Other	4	3.70%	"Tired" "See things differently"
They don't work	3	2.80%	"Lack of results"
No Disadvantages	3	2.80%	

Note. N = frequency of participant answers.

expected since study participants were enrolled at a private Christian University. Interestingly, responses to previous questions reflect that many students did not associate prayer with mindfulness. Regardless, the consistency in prayer is like paying off. Rigorous academic research has revealed the physical healing benefits of prayer (Levin, 2016) and notes its efficacy in therapeutic intervention to reduce anxiety (Sadeghimoghaddam et al., 2019).

Thoughtful Walks

Taking thoughtful walks had the next highest average rating of 2.85. Thirty-five percent of participants marked a 3 or 4, indicating consistency in this behavior. Ten percent of the students stated they took thoughtful walks daily, and 25% reported doing so weekly. Whether it be the natural aspects of being outside, the exercise aspect, the solitude, or all, walking serves as a stress-reducing technique for many of these students. Interestingly, over 40% of the students reported rarely or never taking a mindful walk. Considering the benefits associated with this practice (e.g., Gotink et al., 2016), parents and educators might begin promoting it as a simple yet effective stress reduction method.

Breathing Techniques

Breathing techniques had the next highest average rating of 2.75. About 28% of participants listed breathing techniques as a consistent mindful practice, 11% reported doing breathing exercises

daily, and almost 17% reported doing this weekly. While it is unclear what forms of breathing techniques were utilized, this is a refreshing finding considering the plethora of psychophysiological benefits associated with them (e.g., Zaccaro et al., 2018). Just under 40% of the students listed *Never* or *Rarely* using these techniques, proving an educational void.

Journaling

Journaling came in with the next highest rating, with an average of 2.36. About 22% of participants listed journaling consistently, with almost 10% doing so daily and 13% doing so weekly. It is important to note that a little under 20% noted journaling monthly, which is fairly significant compared to the other practices. This suggests that while most students understand its benefits, 20% may find it too time-consuming. Considering the well-supported benefits of journaling (e.g., Balkie & Wilhelm, 2005), it was noteworthy that close to 40% of the students had never journaled.

Mindful Applications on Electronic Devices

Using a mindful application on an electronic device scored the next highest rating, with an average of 2.09. A little over 16% of the students reported frequent use, with approximately 8.5% using these applications daily and 7.5% using the applications weekly. This was expected, considering there are hundreds of mindful applications

Table 9
Data for Question 9- Current Mindful Practices

Rating	Meditate		Prayer		Walks		Journaling		Mindful Apps		Breathing Techniques	
	N	%	N	%	N	%	N	%	N	%	N	%
1 (Never)	56	52.34%	3	2.80%	20	18.69%	40	37.38%	52	48.60%	27	25.23%
2 (Rarely)	22	20.56%	11	10.28%	25	23.36%	23	21.50%	19	17.76%	14	13.08%
3 (Monthly)	16	14.95%	19	17.76%	24	22.43%	20	18.69%	19	17.76%	32	29.91%
4 (Weekly)	9	8.41%	33	30.84%	27	25.23%	14	13.08%	8	7.48%	18	16.82%
5 (Daily)	4	3.74%	41	38.32%	11	10.28%	10	9.35%	9	8.41%	12	11.21%
Average Rating	1.91		3.92		2.85		2.36		2.09		2.75	

Note. N = frequency of participant answers.

that can currently be downloaded on smartphones at free or low cost. While few studies have investigated the efficacy of these applications, van Emmerik and colleagues (2018) examined the GZ Mindfulness Coach, a self-help digital application used by an insurance company. Results showed significant increases in mindfulness, reductions in psychiatric symptoms, and higher levels of psychological health and overall life quality after even eight weeks of application usage. It is suspected that the use of these mindful applications will increase over time.

Meditation

Based on responses to previous questions, it was no wonder that meditation produced the lowest average at 1.91. Half of the participants marked 1, meaning they never practiced meditation. A little under 4% of the participants reported meditating daily, and close to 8.5% noted doing so weekly, conveying that this was not a consistent practice for these participants. It is unknown if students who listed prayer as a mindful practice also listed meditation as a practice (which it is). As mentioned in previous question analyses, it is suspected that the term *meditation* may still have negative connotations to some Christians, believing it undermines biblical principles. For instance, Groothuis (2004) published an article in *Christianity Today* magazine suggesting that the Eastern philosophies underlying meditation, which center on mind clearing, were dangerous and did not promote a higher state

aligned with biblical teachings. A glance at current Christian blogs continues to propagate this belief. For instance, one writer for the *Truth Story* blog writes on the dangers of meditation, claiming, “The problem with following Eastern religious practices is God forbids it” (Clay, 2018) and “Meditation may lead to demon affliction” (Clay, 2018). While sources like this are not evidence-based, they attract a wide array of readers who believe their statements and may fail to investigate expert (even expert Christian) views of meditation and its varying forms of it. In today’s culture, where social media runs rampant, there is an epidemic of misinformation about multiple topics (Hilary & Dumebi, 2021). Meditation is no exception.

DISCUSSION

While many students have examined the effectiveness of mindful interventions, very few have examined perceptions surrounding them. This is the first study to examine the perception of mindfulness among students at a Christian university. The results of this exploratory study revealed some novel information about their awareness of, perception of, and knowledge (and lack thereof) about mindfulness. Most students were freshmen, self-identified as Christians, reported some understanding of mindfulness, and claimed to learn about mindfulness in their childhood homes. While many professed an understanding of the concept, results of the thematic analysis revealed that close to half of the students had an inaccurate

and limited notion of mindfulness and were unsure how to achieve it.

Most students reported feeling positive about the term *mindfulness*, noting advantages related to stress relief and relaxation. Approximately half of the students perceived mindfulness as peace-producing, relaxing, and an effective health tool for stress reduction. This result is reassuring, considering the physical and mental health benefits of various mindful practices. An unanticipated finding was that many students associated mindfulness with helping others or selflessness, a concept often promoted among religious communities. Interestingly, only a small percentage of students mentioned the cognitive benefits of mindfulness, which suggests the need for more purposeful conversations surrounding mindfulness and realistic techniques to achieve it. Being aware of the cognitive benefits of these interventions may challenge negative perceptions and motivate consistent practices. This is especially important in educational settings where high levels of focus and clarity are advantageous.

Regarding practice, approximately a third of students claimed to use mindful practices to create more peace, while a third reported not practicing mindfulness. For those noting no mindful practices, the two predominant themes were that it was time-consuming or they lacked knowledge about it. Lack of knowledge about and misunderstanding of mindfulness was reflected in multiple sections of the thematic analysis. For instance, 50% of the participants were unaware of or had an inaccurate perception of mindfulness. Another interesting result was that 50% of the students listed the disadvantages of mindfulness, with the most common theme being that mindfulness could lead to overthinking or *reduced* mental health.

Based on the responses, the topic of mindfulness was either ignored or inaccurately addressed by parents and/or educators. Findings highlight a need to educate parents about the evidence-based benefits of mindfulness so that interventions can be introduced at an early age. Such a small percentage of students reporting learning about mindfulness in school suggests an opening for educators to introduce the concept at an early age, and certainly at the college level when students are often on their own and may be experiencing relational and academic stressors.

Regarding current mindful practices, prayer,

thoughtful walks, and breathing were the most frequently practiced techniques, while journaling, mindful apps, and meditation were the least practiced techniques. These results are somewhat promising and convey that while many lack an understanding of mindfulness, many are utilizing these tools to improve mental health. It is important to note that 70% of the participants reported having a consistent prayer practice. However, results revealed that this was the only form of mindfulness consistently practiced by the majority. In fact, most students did not regularly or have never utilized any other mindful techniques. Nearly half of the students had never practiced breathing techniques, and very few engaged in meditation, despite evidence supporting their efficacy.

Results of the thematic analysis revealed that—except for prayer—very few students practiced meditation. Ironically, meditation has been given the most scientific attention due to its exceptional ability to produce positive mental and physical health benefits. For instance, those who meditate experience significant reductions in psychiatric symptoms (Kumar et al., 2022), decreased feelings of loneliness (Saini et al., 2021), improved immune functioning, reductions in stress levels (Thibodeaux & Rossano, 2018), mitigation in stress reactivity, an increase in self-compassion, and a decrease in blood pressure (Pascoe, 2021). Considering these benefits and the multiple forms of meditation, education, and awareness surrounding these practices are recommended for parents and educators, primarily in Christian and other religious communities where negative stereotypes might persist.

In addition to varying forms of meditation, the Christian community might consider promoting the benefits of other evidence-based mindful activities (e.g., journaling, deep breathing, thoughtful walks) to supplement and even enhance current prayer routines. Mindfulness exists as a concept within all major world religions, including Christianity, yet these varying perceptions and misinformation might preclude people from utilizing them. Perceptions seem to be changing, as noted by Kopel and Habermas (2019), who write, “The crossing lanes between science and religion may represent a paradigm shift that merges empirical studies in medical practice with faith...toward

a new understanding of the relationship between spirituality and medicine” (p. 310). It is suspected that continued research supporting the emotional, mental, and spiritual benefits of mindfulness may shed accurate knowledge, change perceptions, and facilitate more mindful practices within Christian populations.

LIMITATIONS AND FUTURE RESEARCH

Because most participants self-identified as Christians, we could not draw conclusions about perceptions from other religious and secular backgrounds. Future research might compare views of mindfulness with students of varying religious and non-religious backgrounds. For instance, a deeper dive into the “otherness” aspect of mindfulness is recommended to examine whether the compassion and prosocial aspects of mindfulness are as prevalent in non-Christian students. Furthermore, the small sample size makes it difficult to generalize the results to all freshmen (first-year) ground students. Obtaining more data from a larger sample might broaden the examination.

The research data was collected during the 13th week of a psychology class, which means some students may have been introduced to the concept of mindfulness in the psychology course from which the data was gathered. Without a psychology course, it is theorized that knowledge of mindfulness would be much lower. Additionally, most students were freshmen. Future research might examine students in all years of college who either have not taken a psychology course or where data is gathered earlier in the semester. This study did not assess the types of electronic applications used by students. More research is needed to examine the efficacy of mindful electronic applications. While hundreds of technological applications are available and claim to promote mindfulness (e.g., Headspace, Insight Timer, Calm), few methodologically sound studies have evaluated their efficacy (Gál et al., 2021).

CONCLUSION

Most students reported learning mindful practices in their homes, with only a small number learning about them in school. It is suspected that many of these students attended private Christian elementary and high schools. Future research might compare these responses with students who do not identify as Christian. Additionally, a

deeper analysis of *Christianity* as an identity might be explored since students come from varying denominations and possess a wide array of spiritual beliefs and practices. Finally, the study results indicate that mindfulness is a polarizing topic and may reflect a larger polarization among Christian communities. A closer examination of the myths and negative messages about meditation and mindful practices, particularly among Christian populations, is also recommended.

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Appendix 1: Mindfulness Awareness, Perception, and Practices Questionnaire

**Mindfulness Awareness, Perception, and Practices Questionnaire

Please answer each bulleted question below to the best of your ability.

1. Are you aware of the concept of "Mindfulness?" Please provide a number rating between 1-5 (1 = not at all, 3 = somewhat, 5 = very aware)
Number Rating _____

2. When you hear the word mindfulness, how do you feel about it?
Please provide a number rating between 1-5 (1 = very negative, 3 = neutral, 5 = extremely positive)
Number Rating _____

3. When you hear the word "mindfulness," what feelings, thoughts, or images come to mind, if anything:

4. If you DO consider yourself a "mindful" person, where do you think this came from? (Please leave this blank if you consider yourself to be a mindful person)

5. Do you think mindful practices are beneficial? If so, explain your reasoning

6. If you do practice mindfulness, explain your reasoning

7. If you do not practice mindfulness, explain your reasoning

8. What might be some disadvantages of mindfulness (if any)?

9. How often do you do the following? Please provide a number rating between 1- 5 for each behavior (1 = never, 2 = rarely, 3 = monthly, 4 = weekly, 5 = daily)

Meditate _____

Pray _____

Breathing techniques _____

Thoughtful walks _____

Journaling _____

Use a mindfulness application on an electronic device _____

Other _____

If other, please describe here: Other _____

If other, please describe here: _____