



Research Article

MINDFULNESS STRUCTURE AND ITS RELATIONSHIP WITH EMOTIONS AMONG YOUNG MONK AND NUN STUDENTS AT VIETNAM BUDDHIST UNIVERSITY

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ABSTRACT

Mindfulness structure and its relationship with emotions have been found in various studies, mostly in the non-Buddhist populations. This study aimed to explore those issues in the Buddhist sample. The research sample included 163 young monk and nun students. A questionnaire was used for measuring mindfulness and experiences of positive and negative emotions. The exploratory factor analysis identified three components of mindfulness, namely awareness, peace of mind, and non-distraction. Mindfulness and its components were found to enhance positive emotions while reduce negative ones in monk and nun students. The mediation analysis indicated that mindfulness has both direct and indirect positive effects on positive emotions through negative emotions, with the direct effect being stronger. The findings of this study contribute to a better understanding of the structure of mindfulness in Buddhists, and the mechanism by which it affects positive emotions.

KEYWORDS

Mindfulness structure, Monk and Nun students, Positive and Negative emotions.

INTRODUCTION

Mindfulness is a term that appeared in the ancient philosophy of Eastern Buddhism around 2500 years ago. It has been widely studied and applied in many

fields in the West, including clinical psychotherapy, education - training, healthcare, leadership, and many others. Its effectiveness has been recognized in health

care, emotional balance, and well-being (Krygier et al., 2013; Wu et al., 2019). A review by Davidson & Kaszniak (2015) indicates that research on mindfulness and meditation from both scientific and clinical practice perspectives has increased in recent years. Mindfulness has grown into a multibillion-dollar industry that encompasses not only in training but also products, services, and experiences (Berthon & Pitt, 2019). Mindfulness-based therapy is the basis for widely accepted interventions in clinical psychology and has become the third most popular therapy approach in the West after cognitive behavioral (CBT) and psychoanalytic (Brown, Cordon, 2009; Baer, 2015). However, according to Davidson & Kaszniak (2015), interpreting these research results has been challenging. A meta-analysis by Phan-Le et.al. (2022) indicates that mindfulness is studied in various domains, but its operational definitions are not clearly articulated in these domains. The authors suggest that academic research on the classification of mindfulness is needed to avoid confusion about its meanings. The concept and the structure of mindfulness are quite diverse and not yet unified, which leads to equating different ways of understanding mindfulness in practice and making it difficult to determine what is and is not in different contexts and fields of study. This ambiguity hinders the proper study and application of mindfulness in a variety of fields. This research was conducted to contribute to empirically understanding the concept of mindfulness and its components, to try to measure it and identify the role of each mindfulness component on emotions in a Vietnamese sample.

Concept and structure of mindfulness

Mindfulness is originally derived from Buddhism and is associated with meditation. Sati, its root word, appears in ancient Pali - the original language of the Buddha's teachings. Accordingly, sati initially meant 'remember',

not memories of the past events but remembering to be aware. However, as Buddhism has evolved, the meaning of this term has changed, it's expanded to include 'bare attention' (Bethon & Pitt, 2019). The purpose of mindfulness in the traditional Buddhist context is to alleviate suffering by cultivating insight into the mind. Mindfulness practice is the practice of actively working with states of mind to keep peace in mind regardless of what happens (Siegel et al., 2009).

Nowadays, the concept of mindfulness has been expanded and adapted in quite diverse ways. Mindfulness is the non-evaluative awareness of sensations, emotions and thoughts (Grossman et al., 2004), the awareness that emerges through paying attention on purpose, focusing on one's actions and words, the ability to acknowledge in the present moment, acceptance without criticism, judgement or affection towards one's own experiences (Germer, Siegel, & Fulton, 2005; Kabat-Zinn, 2003; Baer et al., 2006; Feldman et al., 2007). Mindfulness is the recognition of all things in the present moment as they truly are, without underestimation or overestimation (Coffey et al., 2010). In psychotherapy, based on the original mental qualities of sati, mindfulness has been adapted for therapeutic purposes. The addition of acceptance to the concept of mindfulness has important implications for psychotherapy for people dealing with overwhelming trauma. Mindfulness techniques focus on forming and cultivating awareness of present experiences with a spirit of acceptance (non-judgment, non-reaction) which are key elements of meditation.

Mindfulness is a multidimensional construct and the names of its components have been found to be quite different in empirical studies as well as in practice. According to Kabat-Zinn (1990), key elements of mindfulness meditation practice included: Non-

judgment, Patience, Beginner's mind, Trust, Non-striving, Acceptance, and Letting go. Germer et al. (2013) pointed out three elements of mindfulness practice, namely Awareness, Present-Centricity, and Acceptance. The mindfulness model of Shapiro et al. (2017) includes 3 other factors: Intention, Attention and Attitude.

Based on a review of studies and expert consultation, Bishop et al. (2004) proposed a mindfulness model with two components: attention and acceptance. The attention component involves the ability to purposefully regulate attention, through continuous and active observation of thoughts, feelings, physical sensations, and other stimuli as they occur in the present moment. The acceptance component involves remaining open and receptive to these experiences without judging, reacting to, or minimizing them, especially when they are upsetting. These two components are thought to be common in most definitions of mindfulness (Coffey et al., 2010). The authors' study also backs up this two-component structure of mindfulness.

However, some authors discovered different components of mindfulness in their measurements. For example, mindfulness entails concentration and being aware of what's going on in the present (Brown and Ryan, 2003); curiosity and distraction (Lau et al., 2006); attention, awareness of what is happening in present time, and acceptance/nonjudgment (Feldman et al., 2007); or mindfulness is defined as a personality trait consisting of 5 components: non-judgment, non-reaction to inner experiences, observing experiences and inner feelings; the ability to describe experiences verbally and act with awareness (Baer et al., 2006). Hang Nguyen et al. (2022) also confirmed this five-component structure of mindfulness on the Vietnamese samples. Meanwhile, Leary & Tate (2007)

focused on a quite different five-component model, that involves mindful attention, diminished self-talk, nonjudgment, nondoing, and a particular set of philosophical, ethical, or therapeutic beliefs.

Thich Nhat Hanh, a Vietnamese Buddhist monk is a well-known and reputable Zen master. He is one of the great contributors to the spread of Eastern Buddhist mindfulness in the West. He is the author of many Buddhist mindfulness books that are widely available in the West. He is considered the "father of mindfulness". Thich Nhat Hanh's perspective on mindfulness is to be fully conscious in the current moment, in what is happening right now rather than what has been or what might happen in the future (Brooks, 2022; Sitzman & Watson, 2018). Mindfulness means being aware of what it is, what is happening and, practicing mindfulness helps to recognize and transform pain and suffering. It's the basis of depression treatment (Anh Ngoc, 2022). Thich Nhat Hanh (2007) distinguishes mindfulness (being aware of what is going on) from concentration (attention to the object of mindfulness) and insight (deep understanding and discovering the nature of things), arguing that mindfulness leads to concentration and insight. According to him, mindfulness (Smṛti), Concentration (Samādhi) and Insight (Vipassanā) are the three kinds of energy generated by Buddhist meditation practice. There is neither concentration nor insight without mindfulness. In other words, mindfulness is relatively independent from concentration and insight, both of which are considered parts of western mindfulness. Thus, Thich Nhat Hanh's Buddhist mindfulness and its structure differ significantly from "Western" mindfulness. The distinction between western and eastern Buddhist mindfulness was mentioned by Christopher et al. (2009) and raise concerns about measuring

mindfulness that is conceptualized in a Buddhist context.

The concept of mindfulness has evolved from its origins in ancient Buddhism to the practice of mindfulness through meditation techniques, and to the development of a psychotherapeutic method based on adjusting the initial basics. In empirical research, the concept of mindfulness is more complex and can be viewed as a state, a personality trait, or a skill. At the same time, its structure is multidimensional, but quite diverse, with different names. A review of Brown & Cordon (2009) showed that, most of the modern psychological literature on mindfulness emphasizes three basic elements of mindfulness: awareness, attention on the present, and acceptance. However, neither the concept nor the structure of mindfulness have been unified among scholars, between researchers and practitioners, between Buddhist perspectives and current scholars.

Relationship between mindfulness and emotions

Several researchers have indicated a significant contribution of mindfulness in emotion regulation. Mindfulness was found to play a key role in reducing negative emotions in both clinical and nonclinical populations. Mindfulness predicted lower levels of daily negative affect (Weinstein et al., 2009; Keng et al., 2011). Results from nonclinical samples showed significant associations between mindfulness and lowered intensity and frequency of negative emotions (Brown & Ryan, 2003; Chambers et al., 2008). It also contributed to reducing anxiety (Shapiro et al., 1998), decreasing stress reactivity (Davidson et al., 2003; Pace et al., 2009; Goyal et al., 2014) and reducing loneliness (Lindsay et al., 2019). Nguyen Minh Thach et al. (2022) found that mindfulness can reduce stress in Vietnamese sample. Verma and Araya (2010) researched on the technical aspect of meditation

found that monks and nuns who used more advanced meditation techniques had fewer symptoms of psychological distress than those who used less advanced.

Using mindfulness-based therapy techniques on a clinical population, the results showed benefits of mindfulness in treating major depression (Teasdale et al., 2000; Ma & Teasdale, 2004), and anxiety (Kabat-Zinn, 1992; Evans et al., 2008), as well as reducing negative feelings associated with anxiety and depression (Lane et al., 2007; Hoge et al., 2013). Mindfulness practice may lead to a reduction on negative emotional states such as sadness and anger, as well as an increase in resilience among younger breast cancer survivors (Crosswell et al., 2017).

Thich Nhat Hanh (2007) explained that the awareness of what is going on (mindfulness) allows one to concentrate on the object of mindfulness. If the concentration is strong and long time enough, it helps to deeply understand its nature. Thus, people can be free of negative emotions like anger, fear and despair.

Mindfulness has been proven to reduce not only the negative emotional states, but also to promote wellbeing and emotional balance (Goyal et al., 2014). Mindfulness-based interventions with coaching acceptance skills toward present-moment experiences may lead to enhancing positive emotions in daily life (Lindsay et al., 2018). The relationship between mindfulness and happiness/ well-being, which is a positive psychological/ emotional state with pleasure, life satisfaction and other positive emotions (Fredrickson, 2001; Diener, 2000), is of great interest to research.

Various studies have found a significant association between mindfulness and happiness (Coo et al., 2017; Bellin, 2015; Brown et al., 2003). Studies have found

evidence of a mindfulness effect on happiness increase in both meditating and non-meditating groups (Hollis-Walker & Colosimob, 2011), in all mindfulness practice methods (Englund-Helmeke & Shawn, 2014). The empirical study of Sieghl (2007) which explains the neural mechanism of this relationship, has shown that mindfulness meditators feel happier than non-mindfulness people because the training of mindfulness meditation combines many activities between the brain and body. Moreover, mindfulness meditation encourages the development of various individual psychological functions that make people feel more positive about their current lives and generally happier. Marchand's study (2014) indicates that mindfulness is associated with neural mechanisms involving multiple brain regions. Mindfulness practices contribute to the development of a combined activity in the prefrontal cortex that positively affects the overall activity of the brain, resulting in an overall balance of an individual emotion and awareness.

Mindfulness practice is considered as a method of improving people's health and happiness in Vietnam (Phung Son, 2011), bringing meditators positive emotions, creativity, activeness, relaxation, and happiness (Phung Son, 2014). Thich Nhat Tu (2018) emphasized the importance of mindfulness meditation in purifying and nourishing the body and mind.

Distinguishing between happiness that comes from the mind and that comes from the material, Thich Nhat Hanh (2015) demonstrated that practicing mindfulness meditation brings authentic happiness, because there is a peace of mind that derives from within and is not quickly diluted as the feeling of happiness that comes from material. Similarly, Thich Thanh Tu (2002) affirmed that happiness does not come from outside due to the six bases exposed to the six ceilings (eyes seeing beauty, ears hearing sound, etc ...) but rather

from the the tranquillity in the mind achieved through meditation, contemplation, mastering the mind, relying on joy and letting go of everything, the peak is to master the birth and death, to live and die, to come and go. Mindfulness has also been found to facilitate job satisfaction, increase job satisfaction and improve employees' quality of life (Nguyen Minh Thach et al., 2022). Mindfulness meditation acts as a moderating variable between the five precepts practice and happiness (Van Phong Nguyen, 2022). Thus, in Vietnam, mindfulness is thought to have a close relationship with happiness, and positive emotions in general.

In sum, the understanding of mindfulness and its role in human mental state is still being explored around the world and similar studies have conducted in Vietnam as well. The diversity of mindfulness concepts and constructs promotes research on this issue among diverse populations. In Vietnam, the term mindfulness is known by two different names: "chánh niệm" or "chú tâm" (Nguyen Huong Mai, 2017), though they are all translated from the original English word.

Futhermore, studies on mindfulness in the Buddhist population, who live the different lifestyles, follow their own spiritual values, and doctrinal principles, are limited. The relationship between mindfulness and emotions in non-Buddhist people has also been studied, but it is unclear how it is in monks. The findings aforementioned studies indicate that the study focused on relationship between mindfulness and happiness rather than other emotional states. This research will contribute to understanding the structure of mindfulness in monks and its relationship to their emotions, both positive and negative.

METHODOLOGY

Sample

Vietnam Buddhist University is a higher education institution run by Vietnam Buddhist Sangha, with campuses in Hanoi, Hue, and Ho Chi Minh City. Vietnam Buddhist University in Ho Chi Minh City is the country's largest boarding school of Buddhist studies with the largest number of students, providing an environment for Buddhist discipline application and practice to help thousands of monk and nun students live the moral life and experience spiritual harmony of Buddhist traditions.

The University offers two undergraduate training systems: formal training and distance education. Distance learning is available to people of all socioeconomic backgrounds who wish to study (except the age condition for monks and nuns following this program is over 35 years). For formal training, the monks and nuns must pass the entrance exam and meet other requirements (i.e., enrollment regulations). After admission, students are registered for the boarding school at the University, and they must follow the strict rules of the University. There, the monk, and nun students are not only equipped with knowledge but they are also allowed to practice necessary skills, develop spiritual values as well as to attain concentration and wisdom achievements.

The sample was randomly selected, consisting of 163 young students of both classes (who attended a Basic Education class with a total of 237 students in formal system of training). 33.7% were male, 64.4% were female, and a small percentage lacked information. The mean age was 26.9 (SD=3.9), ranging from 19 to 35 years old, with the majority (72.3%) between the ages of 23 and 29. The sample belonged to many different sects, in which, the majority (68.3%) belonged to Pure Land Sect, the rest belonged to Meditation (13.9%), Secret (2.4%) and other sects (19%).

Tools

A questionnaire was the main tool for data collection. The main contents of the questionnaire were as follows:

- Positive and negative emotions questionnaire: consists of 12 items on emotions, six of which are positive, such as feel pleasant, comfortable, satisfied, happy, love, calm, and six of which are negative, such as feeling lonely, sad, depressed, uncomfortable, and worried. Items are all Likert-scale with five levels measuring the frequency of experiencing these emotions, where 1 is "Always" and 5 being "Rarely or never". Positive and negative emotions scores are separately calculated by averaging score of related items. The lower the score is, the more frequent emotion experienced.

- Mindfulness questionnaire: consists of 22 items on mindful experiences, such as "I clearly aware my heart is suffering/ happy", "I can get rid of sadness in my heart to focus on my work at present time", "During working time, my mind does not concentrate and easily distracts". Those items were designed from 3 basic elements of mindfulness discussed above (awareness of own outside and inside experiences, concentration on the present, and acceptance). Likert-scale with 1 being "Always" and 5 being "Rarely or never" measure the frequency of experiencing mindfulness. The scale has 6 inverse items, of which the scores were reversed. The lower the score is, the higher level of mindfulness is experienced.

STATISTICAL ANALYSIS

An exploratory factor analysis (EFA) was used for Mindfulness data to explore its components. Accepted criteria for EFA include that the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy must be $>.5$, Bartlett's test of sphericity should be statistically significant at .05, factor loadings $>.5$, eigenvalue >1 and Total Variance Explained $>50\%$ (Hair et al., 2010). The

communality of each variable is accepted between .25 and .40 (Beavers et al., 2013).

The components of mindfulness found from EFA, and total mindfulness were considered independent variables, and positive and negative were considered as dependent variables. Cronbach's Alpha reliability of all scales/ subscales was calculated. The reliability of the positive emotions scale was 0.90 and the negative emotions scale was 0.87. The reliability of mindfulness and its components will be displayed.

Descriptive statistics were used to introduce mindfulness and emotional states to monks and nuns. The simple and multivariate regression models were used to analyze the effect of overall mindfulness and its components on the emotions of the monk and nun students. Mediation analysis was performed to determine the mechanism of the effect of mindfulness on emotions.

The analyses were processed with SPSS 22.0. In addition, Hayer's Process, 3.2 version was used for analyzing the mediation effect.

RESEARCH RESULTS

Mindfulness structure in monk and nun sample

The EFA with principal component and varimax rotation method was used to explore the underlying theoretical structure of mindfulness from empirical data of monk and nun students. In the first EFA, there were two failed criteria including: factor loading coefficient of 5 items $<.5$ and total variance explained $<50\%$. After removing 5 items that did not meet the standards, the statistical indicators showed that the second EFA was appropriate. In detail, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test showed that the data are suitable for factor analysis ($KMO = .85$; $\chi^2 = 968.60$, $p < .001$). Eigenvalues of extracted factors ranged from 2.7 to 3.2. The communality of all variables was $>.40$ (Table 1). Results indicated that mindfulness consists of 3 components, explaining more than 53% of the variance of the data set. Cronbach's alpha coefficients of the mindfulness scale and its components were acceptable. Reliability of mindfulness scale was 0.87, and 0.75, 0.78 and 0.84 for the three components respectively.

Table 1: Factor Loadings of Mindfulness items

Item	Components			Extraction
	Awareness	Peaceful mind	Non-distraction	
Aware of what is going on in my mind	0.704			.552
Aware clearly that my heart is suffering/ happy	0.702			.548
Get rid of sadness, focus on work at present	0.682			.581
Paying full attention to what is being done	0.663			.508
Aware exactly what should or should not be done	0.650			.493
The worry was happened, but I not caught up with it in present		0.720		.550
I completely experience present moments		0.711		.631
Realize that the thoughts come and go but not follow them.		0.698		.597
Watch and know my feelings but don't get caught up in it.		0.624		.597
Actively explore my experiences at present without judgment		0.558		.418
Clearly aware my feelings and accept it		0.542		.527
Automatically doing things without awareness of what is being done			0.742	.613
During working time, my mind does not concentrate and easily distract			0.714	.569
Feel that it is difficult to focus on what is going on at present			0.650	.430
Hurrying up carrying out tasks without adequate attention			0.632	.470
Sleepless due to over-anxiety or sadness			0.609	.548
Easily being attracted by outside conditions and losing control of emotions			0.557	.471
Eigenvalues*	3.231	3.144	2.728	
% of variance explained*	19.004	18.493	16.049	
Total variance explained	53.547			

Note: * Results after rotation

The first component includes items that describe the ability to be aware of the inner and outer worlds to be entirely focused on the present moment, temporarily naming Awareness. The second component refers to

the ability to recognize fluctuations in the mind, but still can maintain stable mind, not getting caught up in the complex world of emotions and thoughts, temporarily called Peaceful mind. The third component

refers to the ability to concentrate in general, without being distracted and is named non-distraction. The distraction component consists of all reversed clauses.

Descriptive statistics of mindfulness and emotions among monk and nun students

Overall mindfulness and its three components

The three-component construct of mindfulness was found, and descriptive statistics (Table 2) showed that, the mindfulness experience of Buddhist University's student sample was "often" ($M = 2.15$), with the score of Peaceful mind being slightly higher ($M = 2.44$) than the other two components of mindfulness. It means that the ability to maintain a peaceful mind with acceptance and non-judgment is a bit lower level of mindful state than two others.

The distributions of mindfulness components variables covered a wide range of scores, from "always experience mindfulness" being the highest score, to "rarely experience mindfulness" being the lowest

score. In the sample group of monk and nun students, some were in a high mindful state (being aware and paying attention on the work, keeping mind in peace at the present without judgment, with acceptance, no distraction) while some others rarely experienced that. However, the rarely mindful students were in the minority, while those with much higher mindfulness accounted for the majority. The distribution of overall mindfulness score was slightly skewed toward the low score (with the meaning of a higher level of mindfulness). The concentration is greatest near point 2 (i.e., often). Among the components, non-distraction was strongly skewed with $Sk = 1.128$ with the lowest standard deviation ($SD = .65$). It means that the concentration, non-distraction among the monks and nuns are relatively on the same level, the difference between them in this regard was trivial. In general, monks and nuns often experienced a state of mindfulness, which is characterized by concentration, non-distraction, and awareness of what is going on inside and out in the present moment.

Table 2: Descriptive statistics of variables

Statistics	Mindfulness variables				Emotion variables	
	Awareness	Peaceful mind	Non-distraction	Overall mindfulness	Positive emotions	Negative emotions
Mean	2.03	2.44	1.99	2.15	2.22	4.10
Median	1.80	2.33	1.92	2.13	2.00	4.14
Std. Deviation	.81	.89	.65	.63	.84	.59
Skewness	.757	.132	1.128	.224	.737	-1.871
Minimum	1.00	1.00	1.00	1.00	1.00	1.00
Maximum	4.60	4.67	5.00	3.54	4.44	5.00

Emotions

Table 2 data showed that positive emotions score is quite low ($M=2.22$) representing a high frequency of experiencing. Conversely, the average score of negative emotions is high ($M=4.1$) denoting the rarer frequency of experiencing. The distribution of negative emotions score is strongly skewed ($Sk=-1.87$). This means, there was a smaller difference in frequency of negative emotional experiences between monks and nuns. In general, monk and nun students often experienced positive emotions and only occasionally or

rarely had negative emotions. They were quite happy from an emotional perspective.

The relationship between mindfulness and the emotions

Prediction of mindfulness on emotions

Table 3 showed the results of 10 regression models, four of which were simple and one of which was multiple, used to examine the prediction of mindfulness variables for each emotion variable.

Table 3: The Prediction of Mindfulness on positive and negative emotions

Models	Independent variables	Dependent variables					
		a) Positive emotions			b) Negative emotions		
		R^2	B/ β	F/t	R^2	B/ β	F/t
1a - 1b	Awareness	.224	.486	46.730***	.096	-.223	17.223***
2a - 2b	Peaceful mind	.275	.495	61.386***	.077	-.183	13.458***
3a - 3b	Non-distraction	.115	.437	21.095***	.228	-.483	65.408***
4a - 4b	Overall Mindfulness	.323	.758	77.405***	.202	-.420	41.058***
5a - 5b	Awareness	.314	.205	2.368*	31.1	-.158	-1.804
	Peaceful mind		.334	3.806***		-.004	-.046
	Non-distraction		.160	2.299*		-.486	-6.904***

Note: * $p<.05$; *** $p<.001$; Multivariate models do not violate statistical assumptions (Variance inflation factor – VIF <2; normal distribution of residuals; linearity)

The results of simple regression models show that all three components of mindfulness and the overall mindfulness can significantly predict the positive emotions ($p<.001$). Among the three components of mindfulness, the peaceful mind had the highest coefficient of determination ($R^2 = 0.275$), explaining 27.5% for the variation of positive emotions, whereas non-distraction explained only 11.5%. Overall

mindfulness potentially explained 32.3% of the variation of positive emotional experiences. In short, when combined with positive regression coefficients (B), the results demonstrated that mindfulness in general, and each of its components, may lead to increasing positive emotions in monk and nun students.

Considering the role of each mindfulness component in predicting positive emotions in the multivariable regression model, the results showed that all 3 components are statistically significant predictors for the dependent variable. However, the Standardized Coefficients (β) indicated a difference in their effect size. In this model, Peaceful mind had the strongest effect on positive emotions compared to the other two components ($\beta=.334$, $t=3.806$, $p<.001$), the standardized coefficient β of non-distraction is the lowest ($\beta=.160$, $t=2.299$, $p=.023$). That is, a peaceful mind was more likely to influence on positive emotions in monk and nun students.

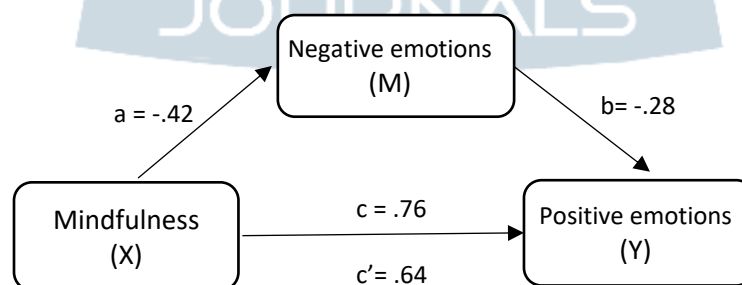
The results of the simple regression models for negative emotions suggested that mindfulness and its three components were all statistically significant negative predictors for this emotion ($p<.001$). Overall mindfulness could explain 20.2% of the variation in negative emotions ($R^2=.202$, $F=41.058$, $p<.001$). If awareness and peaceful mind explain only 9.6% and 7.7% respectively of the variation of negative emotions, this rate in non-distraction is much higher, 22.8%. The role of the three mindfulness components in reducing negative emotions was obvious in the multivariate

model. The results showed that, when other variables were controlled, only non-distraction statistically significantly predicted negative emotions ($\beta=-.486$, $t=-6.904$, $p<.001$). The remaining two components in the model were not statistically significant ($p>.05$). Thus, monk and nun students who regularly experience non-distraction, the frequency of their negative emotions decrease.

Indirect effect in relationship between mindfulness and positive, negative emotions

The foregoing findings about bivariate relationships suggested that mindfulness not only increases positive emotions, but also contributes to reducing negative emotions in the monk and nun students' lives. Simultaneously, it was found that negative emotions correlate significantly and negatively with positive emotions ($r = -.412$, $p<.001$).

The triangle relationship models were added to better understand how mindfulness affects each type of emotion. Positive and negative emotions were tested as mediating variables in two models. The first model for mediator of negative emotions is shown in Figure 1.



Note: X: independent variable, Y: dependent variable, M: mediator.

a, b, c, c': effect coefficients; ** $p<.01$; *** $p<.001$

Figure 1: The mediate effect of negative emotions on mindfulness – positive emotions relationship

Table 4: Results of indirect effect of negative emotions on relationship between mindfulness and positive emotions

Models	Effect coefficients	R ²	F	p
1: $X \rightarrow Y$	$c = .76$.323	77.405	<.001
2: $X \rightarrow M$	$a = -.42$.202	41.058	<.001
3: $X \rightarrow M \rightarrow Y$	$b = -.28$ $c' = .64$.354	44.125	<.001
	Sobel test = 2.54			
				.011

Note: The non-standardized effect coefficients are shown.

All three regression models are statistically significant with $p < 0.001$, implying that independent variables significantly predicted the dependent variable. That is to say:

(1) In model 1 (i.e., effect of X on Y without M), mindfulness could be a predictor of positive emotions with a total effect size of $c = .76$, $p < .001$. Mindfulness could explain 32.3% of the variation in positive emotions (R-square = .323, $p < .001$).

(2) In model 2 (effect of X on M), mindfulness also probably predicts negatively for negative emotions with effect size of $a = -.42$, $p < .001$; Mindfulness could explain 20.2% of the variation in negative emotions (R-square = .202, $p < .001$).

(3) In model 3, the multivariate regression model included two independent variables X and M (i.e., mindfulness and negative emotions), and the dependent variable Y (i.e., positive emotions) was statistically significant at $p = .001$ with marginal effect size of $b = -.28$. The direct effect size of mindfulness on happiness in this model was significant ($c' = .64$). The indirect effect coefficient was calculated as the product of the marginal coefficients of “a” and “b” = $(-.42) * (-.28) = .12$. Since Sobel test estimate was 2.54 and significant ($p = .011$), the indirect effect of negative

emotions in mindfulness – positive emotions relationship was significant. Mindfulness and negative emotions could explain 35.4% of the variation in positive emotions (R-square = .354, $p < .001$).

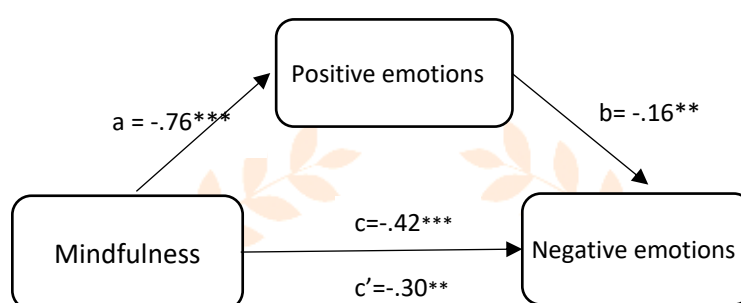
(4) When the effect coefficients of the above models were compared, in the model with the mediator as negative emotions, the effect size of mindfulness on positive emotions $c' = .64$ was reduced compared to total effect of $c = .76$ in the model without negative emotions, and at the same time, the indirect effect of negative emotions ($a * b = .12$) was statistically significant.

According to Hayes’s (2018) procedure, those results indicated that negative emotions acted as a mediator between mindfulness and positive emotions. In other words, the path to enhancing positive emotions of mindfulness was through reducing negative emotions. The overall magnitude of the mindfulness effect on happiness is .76, including the direct effect of 0.64, and the indirect effect of .12. Therefore, mindfulness has both direct and indirect effects on positive emotions, with the direct effect accounting for the larger proportion.

In the second model, where the positions of the two emotions were swapped, the mediating role of

positive emotions in the mindfulness-negative emotions relationship was tested. The results showed that the total effect of mindfulness on negative emotions was significant ($c = -.42$; $p < .001$), its direct effect of $c' = -.30$ was significant after controlling for the positive emotions variable in the mediate model ($p < .001$). The indirect effect was found to be equal to

$(.76) * (-.16) = -.12$ and significant because Sobel test was significant (estimate = $-.264$, $p = .008$) based on estimates of marginal effects of mindfulness on positive emotions $a = .76$ ($p < .001$) and effect of positive emotions on negative one $b = -.16$ ($p < .001$). Therefore, positive emotions were a mediator in the relationship between mindfulness and negative emotions.



Note: a, b, c, c': effect coefficients; ** $p < .01$, *** $p < .001$

Figure 2: The mediate effect of positive emotions on mindfulness – negative emotions relationship

To sum up, mindfulness has two paths to enhancing the positive emotions of monk and nun students. On the one hand, mindfulness practice can directly increase their positive emotional state, such as happier, more satisfied, and more pleasant. On the other hand, through reducing negative emotions, mindfulness indirectly enhances positive emotions. Likewise, mindfulness also has two direct and indirect paths to reducing negative emotions. It not only directly weakens negative emotions, but also indirectly through enhancing positive emotions to reduce them.

DISCUSSION

The findings of this study indicate that, mindfulness in monk and nun students is the three-component structure, comprised of awareness, peace of mind, and non-distraction. The naming of these components reflects the essence of mindfulness as being

consciously aware of what is happening in both inner and outer states in the present moment, maintaining peace in mind with non-judgment, emotional control and concentration, without distractions. The results are significant in initially generalizing the nature of mindfulness among highly educated Buddhists and they contribute to a more precise operational definition of mindfulness.

Compared with the structures of mindfulness in foreign studies, the components discovered in this study have a certain consistency in nature, only differing in name. For example, many authors have emphasized awareness of what's going on, which can include conscious state (Brown, Ryan, 2003), recognizing subtleties in landscape (Baer et al., 2006) or new perception (Prison et al., 2012). Our research is concerned with conscious awareness of what's going

on in thoughts and feelings in the present, but this awareness is not governed by those thoughts and feelings. Other scholars refer to attention when discussing concentration (Feldman et al., 2007, Baer et al., 2004). Our study also mentioned concentration but named it non-distraction with the implication that mindfulness is concentration on the present time without being distracted by other things. In addition, acceptance is considered a common component of the concept of mindfulness. In some studies, acceptance has been interpreted as non-judgment, non-response toward awareness of one's own thoughts and feelings (Baer et al., 2006; Feldman et al., 2007). In this study, the peaceful mind component also refers to non-judgment, but in addition to emotional control.

The results of this study are also significant in terms of measuring mindfulness on a Vietnamese sample because our mindfulness questionnaire initially shows high reliability, and the acceptable factorial validity. Thus, besides Five Facet Mindfulness Questionnaire developed by Baer et.al. (2006) and adapted in Vietnam (Nguyen et.al., 2022), our questionnaire makes a meaningful contribution.

Our research adds evidence to prove the role of mindfulness in emotional health of a Vietnamese sample. Mindfulness can increase positive emotions and reduce negative emotions. Although, this relationship has been found in various previous studies elsewhere but perhaps this is the first finding on a sample of monks in Vietnam. We also point out the more important role of non-distraction component in lowering negative emotions and the peaceful mind in increasing positive emotions. This may be meaningful in mindfulness practice for Vietnamese people.

Moreover, this research also shows the mechanism of this effect. That is, on the one hand, mindfulness can improve people's more positive emotional states by

reducing the frequency of negative emotions. On the other hand, mindfulness can decrease negative emotions by increasing positive ones. This result indirectly shows that positive and negative emotions are opposites (i.e., bipolar), contributing to complementing evidence of the debate over whether they are independent or bipolar. Research by Larsen et.al., (2017) discovered a strong negative correlation between positive and negative emotions but also co-occurrence. And Bagozzi et.al. (1999) argued that people in individualism cultures (e.g., United States) experience emotions in oppositional ways, where as people in collectivistic cultures (e.g., China) experience emotions in dialectic ways.

This study was carried out only on a group of Buddhist University students who were monks and nuns, who had experienced Dharma, and will soon have high-level knowledge of Dharma; therefore, the sample is taken within narrow scope, not enough to represent the majority, especially those who do not follow this religion. With the findings from our study, similar studies should be carried out on general population to find out scientific evidence to prove the contribution of Buddha's mindfulness to not only monks and nuns, but also to people in general.

This study examines the mindfulness structure based on scholar' findings, primarily in non-buddhist populations. Therefore, the conceptualization of mindfulness does not seem to be only in the context of Buddhism but has been expanded. It is thought that redesigning a mindfulness questionnaire from the original concept of Buddhism is also valuable in future studies.

CONCLUSION

The purpose of this study is to determine the structure of mindfulness and its relationship with emotions in

monks. The research has found a three-dimensional mindfulness structure including Awareness, Peaceful Mind and Non-Distraction. Both the overall mindfulness and its components are meaningful in increasing emotional health for monks and nuns, which means less suffering, anxiety and more happiness and satisfaction. However, this effect is unequal across mindful components.

The results also show that mindfulness can have both direct and indirect effects on emotions. Mindfulness can promote happiness and satisfaction through reducing unfortunateness and sadness or decreasing negative emotion by increasing positive emotional experiences. However, the direct effects still account for a larger proportion.

This result has practical significance in demonstrating the role of mindfulness toward emotions. Despite the existing limitations, in the future, the expansion of the scope of the research and the variables involved can help to confirm the precise evidence of the effect of mindfulness practice on enhancing emotional health in people.

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