NVEO
Natural Volatiles & Essential Oils

Influence of Mindfulness-Based Self-Efficacy on Rumination: Dual Mediating Effects of Self-Compassion and Dysfunctional Attitudes

ID Changhak Kyung[1,*], ID HeeJung Lee[2] and ID Sela Lim[3]*

[1]Department of Clinical Psychology, NungIn University, Paltan-myeon, Hwaseong-si, Gyeonggi-do, South Korea
[2]Department of Naturopathic, Dongbang Culture University, Seongbuk-gu, Seoul, South Korea
[3]*Department of Clinical Psychology, NungIn University, Paltan-myeon, Hwaseong-si, Gyeonggi-do, South Korea

*Corresponding author. Email: sera325@nate.com

Abstract

This study explored the correlation between mindfulness-based self-efficacy (MSE) and rumination in males and females in Seoul, Incheon, Gwangju, Jeonju, Gangneung, and Pusan to determine and confirm a dual mediating model of self-compassion and dysfunctional attitudes. To this end, data were collected from 172 of 180 surveys conducted. The survey consisted of the Mindfulness-Based Self-Efficacy Scale (MSES), the Korean version of Self-Compassion Scale (K-SCS), the Dysfunctional Attitudes Scale (DAS), and the Rumination Scale (RS). The results were analyzed using IBM SPSS V.22 and M-Plus 6.12 programs. To verify the average and standard deviation of variables and the influence of the mediation model of MSE on rumination through self-compassion and dysfunctional attitudes, the author used bootstrapping methods. As a result, this study presented descriptive statistics for each variable and a correlation analysis between MSE and self-compassion (β=.844, p<.001), between self-compassion and dysfunctional attitudes (β=.725, p<.001), and between dysfunctional attitudes and rumination (β=.459, p<.001) was conducted. Moreover, a correlation analysis was conducted between MSE, rumination through self-compassion, and dysfunctional attitudes (β=.281, C.I[.133~.548]) in due order.

Keywords: Mindfulness-Based Self-Efficacy, Rumination, Path Model

1. Introduction

Why do people meditate to achieve mindfulness-based self-efficacy (MSE) and rumination? In general, there seem to be two answers. First, people try maintain MSE to overcome psychological or cognitional problems and thus use MSE as a means to modify dysfunctional attitudes [1]. Second, people meditate for MSE to achieve a better understanding of for self-compassion for their life, enlarge their consciousness, and gain wisdom, thereby using MSE as a means to achieve (positive) transformations in consciousness [2].

These two aims often cannot be clearly separated, and most practitioners of meditation probably pursue both to a certain extent.

People who have undergone extensive MSE training for MSE and rumination have shown improvements on cognitive performance in dysfunctional attitudes and self-compassion. Despite the public's growing interest and an increasing number of studies on the impact of MSE and rumination, there is a surprising scarcity of summaries of the empirical evidence [3], especially for evidence that stems from research outside the therapeutic context within dysfunctional attitudes and self-compassion.

Numerous studies have been conducted to determine the effects of meditation on the fields of study, however, there is an even more shocking lack of elaborate psychological theories that make sound predictions about what to expect if one meditates.

The traditional sense of meditation in Western culture, prior to significant encounters with Asian practices, involved sustained consideration or thought upon a subject. However, at the moment, Eastern studies culture using Western research method that psychological tools.

This theoretical approach is frequently mirrored in the measures used in the studies, which include all kinds of dependent variables that are not specific to MSE and rumination research and have also been used in many other kinds of research [4].

Although we place an emphasis on empirical evidence in this article, we are convinced that real progress in understanding the effects of MSE and rumination cannot be made if future empirical studies are not guided by better theories [5].

Therefore, after briefly surveying previous attempts to summarize the literature on the effects of MSE, rumination, dysfunctional attitudes, and self-compassion, we introduce existing theoretical approaches from South Korea. Following our analysis of the empirical evidence, we return to the issue of how we might make progress in understanding MSE, rumination, dysfunctional attitudes, and self-compassion and its effects.

There have long been attempts to bring together meditation for psychotherapy in South Korea [6], and over time, meditation has become an established psychotherapeutic technique [7]. There are also recently developed approaches to psychotherapy that center around meditation within MSE, rumination, self-compassion, dysfunctional attitudes and its effects. There have long been attempts to bring together meditation for psychotherapy [8], and over time, meditation has become an established psychotherapeutic technique [9]. Furthermore, some recently developed approaches to psychotherapy center around meditation for MSE [10].

However, MSE and rumination are perceived as positive cognition based on unconscious critical thoughts and also cause psychological confusion and psychopathology. Kyung [11] reported the results of a positive correlation between dysfunctional attitudes and self-compassion.

Furthermore, comparative studies of research or cognition types focusing on psychological mindfulness have reported that psychological mindfulness positively influences a victims' mental health and MSE and rumination, and in some cases, has more positive and long-term effects than dysfunctional attitudes and self-compassion [12].

As a result, it is found that there is a lack of research on mediating effects of MSE, rumination, dysfunctional attitudes, and self-compassion.

Therefore, this study aims to investigate the relationship between MSE and rumination [13], and dysfunctional attitude and self-compassion, and examines the mediating model between dysfunctional attitudes and self-compassion between MSE and rumination.

This study is based on the assumption that the issues of cognitional maladjustment due to various MSE and rumination experienced by meditators living of South Korea are related to dysfunctional attitudes and self-compassion.

The results will be useful in enhancing the understanding of factors affecting the meditator, and may offer clinicians an opportunity to provide basic data on research and psychotherapy.

2. Methods

2.1. Subjects' Ages

	N	%
Male	66	38.4
Female	106	61.6
Total	172	100.0

The research participants consisted of 66 males (38.4%) and 106 females (61.6%).

2.2. Subjects and Data Collection

This study was conducted from March to April 2018 and the participants were males and females living in Seoul of Korea. Data from a total of 172 participants were analyzed [Table 1].

Table 1. General Characteristics of Subjects

		Subjects		%
		Male	Female	
	20–29	21		12.2
	30–39	33		19.2
Ages	40–49	45		26.2
	50–59	48		27.9
	Over the age of 60	25		14.5
Total		172		100.00

2.2.1 Descriptive Statistics of Variable

The Descriptive statistics of variable were analyzed [Table 2].

Table 2. Descriptive Statistics of Research Variables

Sex	Age	N	Rumination		Dysfunctional Attitudes		Self-Compassion		Mindfulness-Based Self-Efficacy	
			M	SD	M	SD	M	SD	M	SD
	20-29	3	5.08	0.00	4.77	0.00	4.85	0.00	4.54	0.00
	30-39	21	4.32	1.16	4.39	0.85	4.35	0.62	3.89	0.38
	40-49	9	3.55	1.38	2.88	1.17	3.74	0.76	3.58	0.69
Male	50-59	18	4.46	1.20	3.92	1.52	4.16	0.71	4.05	0.49
	Over the age of 60	15	3.61	1.63	3.60	1.28	3.97	0.82	3.88	0.60
	Total	66	4.12	1.34	3.89	1.28	4.15	0.73	3.92	0.53
	20-29	18	4.54	1.07	4.40	1.07	4.40	0.55	3.96	0.30
	30-39	12	4.92	0.24	4.69	1.01	4.64	0.28	4.29	0.30
Female	40-49	36	4.10	0.98	3.43	0.95	4.18	0.69	3.74	0.39
	50-59	30	3.66	1.37	2.88	1.29	3.93	0.69	3.69	0.41
	Over the	10	3.71	1.33	2.41	0.83	3.29	0.34	3.37	0.35

		N	M	SD	M	SD	M	SD	M	SD
	age of 60									
	Total	106	4.11	1.17	3.49	1.28	4.12	0.69	3.79	0.43
	20-29	21	4.61	1.00	4.45	1.00	4.47	0.54	4.04	0.35
	30-39	33	4.53	0.98	4.50	0.91	4.45	0.54	4.04	0.40
	40-49	45	3.99	1.08	3.32	1.01	4.09	0.72	3.71	0.46
Total	50-59	48	3.96	1.35	3.27	1.46	4.02	0.70	3.83	0.47
	Over the age of 60	25	3.65	1.49	3.12	1.25	3.70	0.74	3.68	0.57
	Total	172	4.11	1.23	3.64	1.29	4.13	0.71	3.84	0.47

Self-compassion was analyzed by negatively scoring negative factors before calculating the total

Note: N(Number of people), M(Mean), SD(Standard deviation)

The descriptive statistics for males in the 20–29 age group were reported as M=5.08 (*SD*=0.00) for rumination, *M*=4.77(*SD*=0.00) for dysfunctional attitudes, *M*=4.85 (*SD*=0.00) for self-compassion, and *M*=4.54 (*SD*=0.00) for mindfulness-based self-efficacy. The descriptive statistics for males in the 30–39 age group were reported as *M*=4.32 (*SD*=1.16) for rumination, *M*=4.39 (*SD*=0.85) for dysfunctional attitudes, *M*=4.35 (*SD*=0.62) for self-compassion, and *M*=3.89 (*SD*=0.38) for mindfulness-based self-efficacy. The descriptive statistics for males in the 40–49 age group were reported as *M*=3.55 (*SD*=1.38) for rumination, *M*=2.88 (*SD*=1.17) for dysfunctional attitudes, *M*=3.74 (*SD*=0.76) for self-compassion, and *M*=3.58 (*SD*=0.69) for MSE. The descriptive statistics for males in the 50–59 age group were reported as *M*=4.46 (*SD*=1.20) for rumination, *M*=3.92 (*SD*=1.52) for dysfunctional attitudes, *M*=4.16(*SD*=0.71) for self-compassion, and *M*=4.05 (*SD*=0.49) for mindfulness-based self-efficacy. The descriptive statistics for males in the over 60 age group were reported as be *M*=3.61 (*SD*=1.63) for rumination, *M*=3.60 (*SD*=1.28) for dysfunctional attitudes, *M*=3.97 (*SD*=0.82) for self-compassion, and *M*=3.88 (*SD*=0.60) for mindfulness-based self-efficacy. The descriptive statistics for males in general were reported as *M*=4.12 (*SD*=1.34) for rumination, *M*=3.89 (*SD*=1.28) for dysfunctional attitudes, *M*=4.15 (*SD*=0.73) for self-compassion, and *M*=3.92 (*SD*=0.53) for MSE. The descriptive statistics for females in the 20–29 age group were reported as *M*=4.54(*SD*=1.07) for rumination, *M*=4.40 (*SD*=1.07) for dysfunctional attitudes, *M*=4.40(*SD*=0.55) for self-compassion, and *M*=3.96 (*SD*=0.30) for MSE. The descriptive statistics for females in the 30–39 age group were reported as *M*=4.92(*SD*=0.24) for rumination, *M*=4.69 (*SD*=1.01) for dysfunctional attitudes, *M*=4.64(*SD*=0.28) for Self-Compassion, and *M*=4.29 (*SD*=0.3) for MSE. The descriptive statistics for females in the 40–49 age group were reported as *M*=4.10 (SD=0.98) for rumination, *M*=3.43 (*SD*=0.95) for dysfunctional attitudes, *M*=4.18 (*SD*=0.69) for self-compassion, and *M*=3.74 (*SD*=0.39) for MSE. The descriptive statistics for females in the 50–59 age group were reported as *M*=3.66 (*SD*=1.37) for rumination, *M*=2.88 (*SD*=1.29) for dysfunctional attitudes, *M*=3.93(SD=0.69) for self-compassion, and *M*=3.69(*SD*=0.41) for MSE. The descriptive statistics for females in the over 60 age group were reported as *M*=3.71 (*SD*=1.33) for rumination, *M*=2.41 (*SD*=0.83) for dysfunctional attitudes, *M*=3.29 (*SD*=0.34) for self-compassion, and *M*=3.37 (*SD*=0.35) for MSE. The descriptive statistics for females in general were reported as *M*=4.11 (*SD*=1.17) for rumination, *M*=3.49 (*SD*=1.28) for dysfunctional attitudes, *M*=4.12 (*SD*=0.69) for self-compassion, and *M*=3.79 (*SD*=0.43) for MSE.

The descriptive statistics for those in the 20–29 age group in general were reported as *M*=4.61(*SD*=1.00) for rumination, *M*=4.45 (*SD*=1.00) for dysfunctional attitudes, *M*=4.47(*SD*=0.54) for self-compassion, and *M*=4.04(*SD*=0.35) for MSE. The descriptive statistics for those in the 30–39 age group in general were reported as *M*=4.53 (*SD*=0.98) for rumination, *M*=4.50 (*SD*=0.91) for dysfunctional attitudes, *M*=4.45(*SD*=0.54) for self-compassion, and *M*=4.04(*SD*=0.40) for MSE. The descriptive statistics for those in

the 40–49 age group in general were reported as *M*=3.99 (*SD*=1.08) for rumination, *M*=3.32 (*SD*=1.01) for dysfunctional attitudes, *M*=4.09 (*SD*=0.72) for self-compassion, and *M*=3.71(*SD*=0.46) MSE. The descriptive statistics for those in the 50–59 age group in general were reported as *M*=3.96 (*SD*=1.35) for rumination, *M*=3.27 (*SD*=1.46) for dysfunctional attitudes, *M*=4.02 (*SD*=0.70) for self-compassion, and *M*=3.83 (*SD*=0.47) for MSE. The descriptive statistics for those in the over 60 age group in general were reported as *M*=3.65 (*SD*=1.49) for rumination, *M*=3.12 (*SD*=1.25) for dysfunctional attitudes, *M*=3.70 (*SD*=0.74) for self-compassion, and *M*=3.68 (*SD*=0.57) for MSE. The descriptive statistics for all the research participants in general were reported as *M*=4.11 (*SD*=1.23) for rumination, *M*=3.64 (*SD*=1.29) for dysfunctional attitudes, *M*=4.13 (*SD*=0.71) for self-compassion, and *M*=3.84 (*SD*=0.47) for MSE.

2.2.2 Correlation Analysis of Variables

A correlation analysis of the variables was conducted [Table 3].

Table 3. Correlation Analysis of Variables

	Rumination	Dysfunctional Attitudes	Self-Compassion	Mindfulness-Based Self-Efficacy
Rumination	1			
Dysfunctional Attitudes	.632**	1		
Self-Compassion	.571**	.716**	1	
Mindfulness-Based Self-Efficacy	.537**	.601**	.844**	1

Note: * p<.05 ** p<0.01 *** p<.001

Rumination was found to be positively correlated with dysfunctional attitudes (*r*=.632, *p*<.001), self-compassion (*r*=.571, *p*<.001), and mindfulness-based self-efficacy (*r*=.537, *p*<.001). Dysfunctional attitudes was found to have a positive correlation with self-compassion (*r*=.716, *p*<.001) and mindfulness-based self-efficacy (*r*=.601, *p*<.001). Self-compassion was found to be positively correlated with MSE (*r*=.844, *p*<.001).

2.2.3 Correlation Analysis of Variable Subfactors

A correlation analysis of the variables was conducted [Table 4].

Table 4. Correlation Analysis of Variable of Subfactors

		Rumination		Dysfunctional Attitudes		Self-Compassion		Mindfulness-Based Self-Efficacy
		About that time	The most recent	personal standards perfectionism	self-critical perfectionism	Negative factor	Positive factor	
Rumination	About that time	1						
	The most recent	.691**	1					
Dysfunctional Attitudes	personal standards perfectionism	.416**	.690**	1				
	self-critical perfectionism	.402**	.674**	.925**	1			
Self-Compassion	Negative factor	-.208**	-.303**	-.448**	-.491**	1		
	Positive factor	.572**	.637**	.723**	.732**	-.536**	1	

Mindfulness-Based Self-Efficacy	.422**	.536**	.580**	.598**	-.715**	.761**	1

* p<.05 ** p<0.01 *** p<.001
A correlation analysis was conducted instead of negative scoring to more easily identify the relationships between the negative factors of self-compassion and the other variables

About that time of rumination was found to have a positive correlation with the most recent rumination (*r*=.691, *p*<.001), personal standards perfectionism (*r*=.416, *p*<.001), and self-critical perfectionism *(r*=.402, *p*<.001). It was also found to have a negative correlation with the negative factor of self-compassion (*r*=-.208, *p*<.001). On the other hand, it was found to have a positive correlation with the positive factor of self-compassion (*r*=.572, *p*<.001) and MSE (*r*=.422, *p*<.001).

The most recent of rumination was found to have a positive correlation with personal standards perfectionism (r=.690, p<.001) and self-critical perfectionism (r=.674, p<.001). It was also found to have a negative correlation with the negative factor of self-compassion (*r*=-.303, *p*<.001). On the other hand, it was found to have a positive correlation with the positive factor of self-compassion (*r*=.637, *p*<.001) and MSE (*r*=.536, *p*<.001).

Personal standards perfectionism was found to have a positive correlation with self-critical perfectionism (r=.925, p<.001). It was also found to have a negative correlation with the negative factor of self-compassion (*r*=-.448, *p*<.001). On the other hand, it was found to have a positive correlation with the positive factor of self-compassion (*r*=.723, *p*<.001) and MSE (*r*=.580, *p*<.001).

Self-critical perfectionism was found to have a negative correlation with the negative factor of self-compassion (*r*=-.491, *p*<.001). It was also found to have a positive correlation with the positive factor of self-compassion (*r*=.732, *p*<.001) and mindfulness-based self-efficacy (*r*=.598, *p*<.001).

The negative factor of self-compassion was found to have a negative correlation with the positive factor of self-compassion (*r*=-.536, *p*<.001) and MSE (*r*=-.715, *p*<.001). The Positive factor of Self-Compassion was found to have a positive correlation with MSE (*r*=.761, *p*<.001).

2.3. Measurement

2.3.1 Mindfulness-Based Self-Efficacy Scale (MSES)

To measure MSE, we used the MSES by Cayoun and Freestun [14] which was developed for validation by Yong [2]. This scale consists of 35 items and 7 sub-scales. It consists of items on behavior, cognition, interoception, affect, interpersonal, avoidance, and mindfulness. In the present study, the total of the MSE of Cronbach's α was .896 [Table 5].

Table 5. Reliability Analysis of Mindfulness-Based Self-Efficacy

	Number of Items	Cronbach's α
mindfulness-based self-efficacy	35	.896

2.3.2 Korean Version of Self-Compassion Scale (K-SCS)

To measure self-compassion, we used the K-SCS by Neff [3] which was validated by Gu and Jung [15]. This scale consists of 26 items and 6 sub-scales. It consists of items on self-kindness (self-judgment), common humanity, isolation), mindfulness, and over-Identification. In the present study, the total of the self-

compassion of Cronbach's α was .953. In thus study, the sum of negative factors of self-compassion scale after the backscoring was used [Table 6].

Table 6. Reliability Analysis of Self-Compassion

	Factor	Items	Cronbach's α	
self-compassion	negative factor	1*, 2*, 4*, 6*, 8*, 11*, 13*, 16*, 18*, 20*, 21*, 24*, 25*	.941	.953
	positive factor	3, 5, 7, 9, 10, 12, 14, 15, 17, 19, 22, 23, 26	.949	

* refer to negatively scored questions

2.3.3 Dysfunctional Attitudes Scale (DAS)

To measure dysfunctional attitudes, we used the DAS, developed by Jung and Oh and Shin [16], which consists of 22 items and 2 sub-scales, namely personal standards perfectionism and self-critical perfectionism. In the present study, the total of the self-compassion of Cronbach's α was .979 [Table 7].

Table 7. Reliability Analysis of Dysfunctional Attitudes

Sub Factor	Item numbers	Items	Cronbach's α
personal standards perfectionism	1, 2, 3, 4, 5, 6, 10, 18, 19, 20, 21, 22	12	.952
self-critical perfectionism	7, 8, 9, 11, 12, 13, 14, 15, 16, 17	10	.974
Total		22	.979

2.3.4 Rumination Scale (RS)

To measure dysfunctional attitudes, we used the RS, which was developed by Calhoun, Cann, Tedeschi, and Mcmillan [17] and translated by Shin [18]. This scale consists of 22 items and 2 sub-scales, namely About that time and The most recent. In the present study, the total of the self-compassion of Cronbach's α was .952 [Table 8].

Table 8. Reliability Analysis of Rumination

Subfactor	Items number	Items	Cronbach's α
About that time	1,2,3,4,5,6,7	7	.921
The most recent	1,2,3,4,5,6,7	7	.946
Total		14	.952

2.4. Data Analysis

The path model was used to test the mediating effect of self-compassion and dysfunctional attitudes in the relationship between mindfulness-based self-efficacy and rumination. The model parameters were estimated by the maximum likelihood method, and M-Plus 6.12[19] was used for the analysis. Data collected for this study were analyzed using IBM SPSS V.22 as follows. We used a 95% confidence interval based on the empirical distribution estimated by bootstrapping to verify the mediating effect.

Bootstrapping interpreted the sample as statistically significant if it did not know the distribution of the population and if the 95% confidence interval did not include zero [20].

3. Results

3.1. Path Model

A MSE analysis was conducted to confirm the effects of rumination. Specifically, MSE and rumination have a significant effect on self-compassion and dysfunctional attitudes, In addition, MSE was found to have a significant effect on self-compassion (β=.844, p<.001), self-compassion was found to have a significant dysfunctional attitudes (β=.725, p<.001), and dysfunctional attitudes was found to have a significant rumination (β=.459, p<.001). A significant correlation was not found between MSE and dysfunctional attitudes, self-compassion and rumination, MSE, and rumination [Table 9].

Table 9. Path Model

Path			B	B	s.e	t	p
		Self-Compassion	1.255	.844	.022	38.414	.000
Mindfulness-Based Self-Efficacy	→	Dysfunctional Attitudes	-0.03	-.011	.099	-0.113	.910
		Rumination	0.508	.196	.106	1.850	.064
Self-Compassion	→	Dysfunctional Attitudes	1.325	.725	.091	7.931	.000
		Rumination	0.134	.077	.122	0.633	.527
Dysfunctional Attitudes	→	Rumination	0.438	.459	.078	5.898	.000

* p<.05 ** p<0.01 *** p<.001

3.2 Measurement Model

We performed bootstrapping by extracting 2000 parts of the escapism of MSE to the rumination through the dysfunctional attitudes and self-compassion. As a result, the indirect effect was significant because the path through the dysfunctional attitudes and self-compassion included 0 in the 95% confidence interval of the indirect effect (β=.281, C.I[.133~.548]) [Table 10] [Figure 1].

Table 10. Measurement Model

Independent variable	Parameter1	Parameter2	Dependent variable	Total effect [bootstrapping CI 95%]	Direct effect [bootstrapping CI 95%]	Total indirect effect [bootstrapping CI 95%]	Indirect effect [bootstrapping CI 95%]
Mindfulness-Based Self-Efficacy	Self-Compassion	Dysfunctional Attitudes	Rumination				.281 [.133 ~ .548]
Mindfulness-Based Self-Efficacy	Self-Compassion	-	Rumination		-	.340 [.133~.548]	.065 [-.181 ~ .296]
Mindfulness-Based Self-Efficacy	-	Dysfunctional Attitudes	Rumination	.537 [.405 ~.644]			-.005 [-.090 ~ .082]
Mindfulness-Based Self-Efficacy	-		Rumination		.196 [-.057~.436]	-	-

Figure 1 Path Model
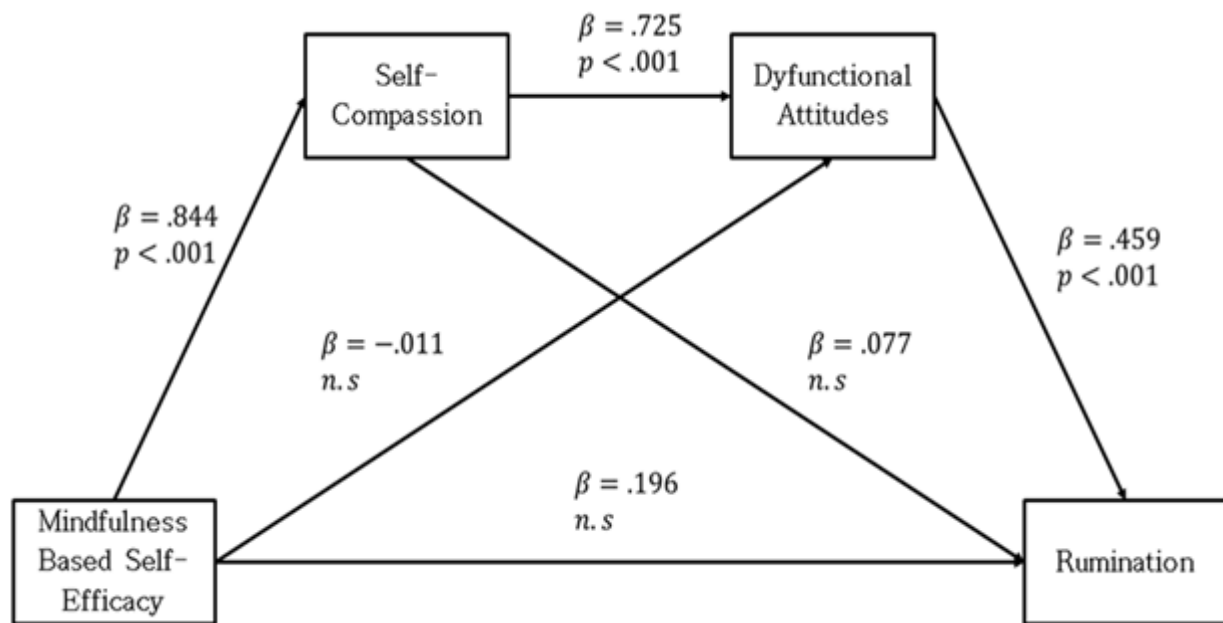
4. Conclusions

This research examined the relationship between MSE, self-compassion, rumination, and dysfunctional attitudes of individuals aged 20 to 69 (N=172). In addition, the study set, analyzed, and presented a path model to determine if MSE had an influence on dysfunctional attitudes, through the mediums of self-compassion, and rumination. The results of analysis showed that rumination had a significant positive relationship with dysfunctional attitudes, self-compassion, and MSE. Dysfunctional attitudes was found to have a significant positive relationship with self-compassion and mindfulness-based self-efficacy. Self-compassion had a significant positive relationship with mindfulness-based self-efficacy. Additionally, the results of correlation analysis between the subfactors of the research variables showed that the time of rumination has a significant positive correlation with the most recent rumination, personal standards perfectionism, and self-critical perfectionism. It showed a negative correlation with negative factors, and a significant positive correlation with MSE. The most recent rumination had a significant positive correlation with personal standards, perfectionism, and self-critical perfectionism. It showed a significant negative correlation with negative factors, and a significant positive correlation with MSE. Personal standards perfectionism had a significant positive correlation with self-critical perfectionism. It showed a significant negative correlation with negative factors, as well as a significant positive correlation with MSE. Self-critical perfectionism had a significant negative correlation with negative factors and a significant positive correlation with positive factors and self-efficacy. The negative factors had a significant negative correlation with positive factors and MSE. The positive factors showed a significant positive correlation with MSE. A path model verification was conducted to verify the serial mediating model of self-compassion and dysfunctional attitudes and the impact that MSE has on rumination. Accordingly, MSE was shown to have a significant positive impact on self-compassion. Self-compassion was shown to have a significant positive impact on dysfunctional attitudes, and dysfunctional attitudes was shown to have a significant positive impact of rumination. No significant impact was not found between MSE and dysfunctional attitudes, self-compassion and rumination, or MSE and rumination. In addition, in the case of the path where MSE passes through self-compassion and dysfunctional attitudes in sequence and reaches rumination, indirect effects

were found to be significant. In the case of the path where MSE reaches rumination through self-compassion, and the case of the detailed indirect effects of MSE reaches rumination through dysfunctional attitudes or the direct effect of reaching rumination, they were shown not to be significant.

This is consistent with a previous study [1], which reported a significant correlation between MSE, of meditation experienced people and dysfunctional attitudes. Lee [1] discovered that most causes of MSE that interfere with dysfunctional attitudes and self-compassion after meditation are experienced in daily life.

Young [2] discovered that among females, most of the causes of MSE that interfere with thinking are related to dysfunctional attitudes. Choi [21] discovered among meditation experienced people that most of the causes of MSE that interfere with thinking are related to self-compassion, individual cognitional healthy lifestyle, and experiences of rumination in daily life. Kang [22] discovered among meditation experienced people that most of the causes of mindfulness that interfere with cognitional healthy school life and deliberate rumination are related to self-disclosure and posttraumatic growth responses, individual lifestyle, roles, and experiences in daily school life. Gilbert [23] reported that self-compassion is an important factor that affects rumination. Yun [24] reported a significant correlation between self-compassion with dysfunctional attitudes. Gwak [25] discovered the effectiveness of thought control strategies on rumination. Therefore, MSE of changes in these cognition conditions could lead to a deterioration of psychological function.

What we have outlined above can be seen as a continuum that appears at this point to have returned to its beginning. We start with the workings of the ordinary mind, which takes anything that happens to appear in the mind or senses as an object of awareness, but in an undisciplined and apparently random way. According to Buddhist thought, nothing is truly random in the human mind.

However, what appears to be the spontaneously attentive mind is actually the mind reacting to phenomena with a host of unconscious cognition and attitudes that include MSE, dysfunctional attitudes, self-compassion, and rumination. When, in MSE, awareness is encouraged to roam freely over the phenomena of experience, it does so with qualitatively more clarity and continuity than is accessible in ordinary states of mind.

In conclusion, the mediating effect of MSE on rumination and dysfunctional attitudes and self-compassion of meditation experienced people were analyzed in South Korea, and significant results were obtained.

Notably, the results of this study could be used as a reference for cognitional mental health, especially during counseling interventions and in clinical settings.

This research is meaningful due to the following:

First, it is meaningful in that it collected data specifically on adults, created a model that included the correlation between MSE, self-compassion, rumination, and dysfunctional attitudes, and verified the model through serial mediator model analysis.

Second, the significance of verifying the mediating model in this research is explained as follows. It is meaningful in that it verified the serial mediating effect of self-compassion and rumination in the relationship between MSE and dysfunctional attitudes. Through this, it could then be confirmed that MSE has an impact on dysfunctional attitudes through self-compassion and rumination.

Third, the importance of verifying the indirect effects and significance of the path model in this research are as follows: It is meaningful in that it verified the indirect effects and significance of the path model that was

formed through self-compassion and rumination from the impact that mindfulness-based self-efficacy has on dysfunctional attitudes. This implies that MSE can impact dysfunctional attitudes, and in particular, that positive impact can be made through self-compassion and rumination.

The limitations of this research and suggestions for future research are as follows:

First, the graduate students who are attending the department of meditative psychology participating in this research have already learned the concepts of mindfulness and self-compassion. They are expected to have shown social desirability for those questions in this survey. This provides a limitation in that we cannot confirm whether responses from these students were truthful responses.

Second, while this research derived the result that self-compassion and rumination acted as mediating factors between MSE and dysfunctional attitudes, we were disappointed that we could not find a more structured research method using a structural equation model.

Third, we were unable to discover mediating models in domestic and overseas research that matched with the results of this research. Specifically, our research model was created through structures from previous research which presented the correlations between each variable. There was a limitation in that it was difficult to find research data in Korea and overseas which directly studied mindfulness and rumination.

Fourth, this research did not create a program reflecting MSE, self-compassion, Rumination, and dysfunctional attitudes together, but rather, simply reflected the correlation results from previous research to create the research model. Moreover, the results were not verified through clinical groups.

We would like to suggest the following for further research based on these research results:

First, this research showed that MSE and dysfunctional attitudes have a significant correlation. This means that, if factors of MSE are high, this is likely to lead to an increase in the likelihood of positive dysfunctional attitudes. There is a need for more studies to measure the MSE status of various subjects, in order to clearly define and verify their relationship with the related variables used in this research.

Second, studies related to MSE and dysfunctional attitudes in Korea are scarce. Most studies merely measured mindfulness factors and self-efficacy factors separately to reach areas of cognition. Furthermore, there have been no studies which conducted verification using self-compassion or rumination as mediating factors in a path model from MSE to dysfunctional attitudes. Therefore, there is a need for future studies to further verify whether self-compassion and Rumination play a mediating role in the process of MSE impacting dysfunctional attitude.

Third, this research used a path model which emphasized clarity and simplicity to verify the serial mediating model of self-compassion and rumination in the relationship between MSE and dysfunctional attitudes. While path models are a good quantitative research method to reduce error and to find hypothesis that fit reality [26], more detailed research is required using verification by a structural equation model. This aims to clearly define the interrelations between the factors that make up the model or the relationship between each factor and the whole through statistical methods. Additionally, more varied research methods such as experimental research, the observational method, the interview method, or longitudinal research should be considered, not only from a cross-sectional perspective.

Fourth, the scale for self-compassion, which was used as a mediating variable in this research, was adapted and verified through research by Kim et al. [27]. Later, the CS which improved the SCS was developed overseas by Raes, Pommier, Neff, and Guct [28]. Further verification was subsequently conducted by Gu [29] through surveys of adults. There is a need for further development of this area in Korea.

Fifth, this research examined the correlation between mindfulness-based self-efficacy, self-compassion, rumination, and dysfunctional attitudes and created a path model. This implies that people with high MSE are likely to lead to positive dysfunctional attitudes. Additionally, self-compassion and rumination act as important factors when MSE leads to dysfunctional attitudes [30]. Therefore, future research should take these results into consideration and attempt to develop a program that reflects the concepts of MSE, self-compassion, rumination, and dysfunctional attitudes.

REFERENCES

Lee, H. Y. "The Effects of Mindfulness Meditation on the Maximization and Dysfunctional Attitude of Maximizes." M.S. thesis, Department of Psychology Graduate School, Duksung Women's University, South Korea 2009.

Yong, H. C. and Hwang, K. Y. "The Relation of Dysfunctional Meta-Cognition, Meta-Mood, and Gibchak." East West Mind Science 9.2 (2006): 15-31. DOI:10.1080/15298860309027

Neff, K. D. "The Development and Validation of a Scale to Measure Self-Compassion." Self and Identity 2.3 (2003): 223-250. DOI:10.1080/15298860390209035

Ha, J. E. "The Effect of the Adult Attachment Anxiety on Posttraumatic Stress and Growth: Mediating Effect of Self-Compassion and Brooding." Ph.D. dissertation, Department of Education in Guidance and Counseling, Graduate School of Sookmyung Women's University, South Korea 2003.

Park, S. R. "The Effect of Self-Compassion on Self-Regulation: The Effectiveness of the Self-Compassion Enhancement Program." Ph.D. dissertation, Department of Psychology, Graduate School, Seoul National University, South Korea 2015.

Germer, C. K. The Mindful Path to Self-Compassion. The Guilford Press, New York, 2009, pp. 260.

Tedeschi, R. G. and Calhoun, L. G. "Posttraumatic growth: conceptual foundations and empirical evidence." Psychological Inquiry 15 (2004): 1-18, DOI:10.1207/s15327965pli1501_01

Park, Y. J. "The Effect of Intrusive Rumination, Deliberate Rumination and Self-Compassion on Post-Traumatic Growth." M.S. thesis, Department of counseling, Korea Counseling, Graduate University, South Korea 2018.

Calhoun L. G. and Thdeschi, R. G. "Facilitating Posttraumatic Growth; A Clinician's Guide." Lawrence Erlbaum Associates, Mahwah, New Jersey, 1999, pp.130.

Francis M. E. and Pennebaker, J. W. "The Impact of Writing on Physiological, Absentee, and Self-Reported Emotional Well-Being Measures." American Journal of Health Promotion 6.4 (1992): 280-287. DOI:10.4278/0890-1171-6.4.280

Kyung, C. H. "Effects of Mindfulness-Based Self-Efficacy on Rumination: Dual Mediating Effects of Self-Compassion and Dysfunctional Attitudes." M.S. thesis, Department of Meditation Psychology, NungIn Graduate School of University 2019.

Taylor, D. A., Gould, R. J., and Brounstein, P. J. "Effects of Personality Self-Disclosure." Personality and Social Psychology Bulletin 7.3,(1981): 487-492. DOI:10.1177/014616728173019

Ko, E. J. "Analysis on the Emotional Effect of Self-Compassion and Self-Esteem in the Occurrence of Negative life events. " Ph.D. dissertation Department of psychology, Graduate School, Korea University 2014.

Cayoun, B. A. and Freestun, J. "Mindfulness-Based Self-Efficacy." Psych Technologies 30.2 (2004).

Gu, D. Y. and Jung, M. C. "Study of Factor Validity of Korean Version Self-Compassion." Journal of Korea Contents Association 16.9 (2016): 160-169.

Jung, M. I., Oh, S. S., and Shin, H. K. "The Attribution of Success: Failure Experience in Functional and Dysfunctional Perfectionists." Korean Journal of Clinical Psychology 24.3 (2005): 709-719.

Calhoun, L. G., Cann, A., Tedeschi, R. G, and Mcmillan J. "A Correlation Test of the Relationship Between Posttraumatic Growth, Religion and Cognitive Processing." Journal of Traumatic Stress 13 (2000): 21-527. DOI:10.1023/a:1007745627077

Shin, S. Y. "The Effect of Meaning in Life and Social Support on Posttraumatic Growth: Rumination as a Mediating Variable." M.S. thesis, Department of counseling, Graduate School, Catholic University 2009.

Muthén, L. K. and Muthén, B. O. "Mplus; Statistical analysis with latent variables user's guide." Los Angeles, California, 2012, pp. 78.

Shrout, P. E. and Bolger, N. "Mediation in Experimental and No Experimental Studies; New Procedures and Recommendations." Psychological Methods 7.4, (2002): 422. DOI:10.1037/1082-989x.7.4.422

Choi, B. Y. "Mindfulness to gratitude and forgiveness: mediation effects by self-compassion and compassion for other," M.S. thesis, Department of Psychology The Graduate School Elwha Women's University, (2017)

Kang, H. J. "Influence of Self-Disclosure on Posttraumatic Growth: Dual Mediating Effects of Mindfulness and Deliberate Rumination." M.S. thesis, Department of Counseling, Graduate School, Catholic University 2019.

Gilbert, P. and Proctor, S. "Compassionate Mind Training for People with High Shame and Self-Criticism: Overview and Pilot Study of a Group Therapy Approach." Clinical Psychology and Psychotherapy 13.6, (2006): 353-379. DOI:10.1002/cpp.507

Yoon, J. Y. "The Influences of Maladaptive Perfectionism on Anger Expression Styles: The Mediating Effects of Emotional Clarity and Self-Compassion." M.S. thesis, Department of counseling, Graduate School, Catholic University 2018.

Gwak, A. R. "The Mediating Effects of Thought Control Strategies on the Relationship Between Event-Related Rumination and Posttraumatic Growth." M.S. thesis, Department of Counseling, Graduate School, Catholic University 2015.

Ha, J. H. "The Effect of the Adult Attachment Anxiety on Posttraumatic Stress and Growth: Mediating Effect to Self-Compassion and Brooding." Academic Advisor: Song, In-SubGuidance and Counseling Department of Education Graduate School of Sookmyung Women's University, Ph.D. dissertation thesis(2013).

G. U. Kim, K. D. Lee, Y. R. Chio, S. H. Chea, and W. K, Lee "The Validation Study of the Korean Version of the Self-Compassion Scale." Korean Journal of Clinical Psychology: Health 13. 4 (2008): 1023-1044.

Raes, F., Pommier, E., Neff, K.D., and Guct, D.V. "Construction and Factorial Validation of a Short Form of the Self-compassion scale." Clinical Psychology & Psychology 18. 3. (2011): 250-255.

Gu, D. Y. and Jung, M. C. "Study of Factor Validity of Korean Version Self-Compassion." The Korea Contents Association 16.9 (2016): 160-169.

Kyung, C. H., Lee, H. J., Lim, S. "Path Model of Mindfulness-Based Self-Efficacy on Rumination in Meditation Fields: Dual Mediating Effects of Self-Compassion and Dysfunctional Attitudes." Global Vision Press, 7.2 (2020).