

# Psychological Meaning of the Sounds for Meditation and Healing

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**ABSTRACT:** *Meditation treatments are applied as training techniques to improve a wide range of cognitive processes and self-regulation. To measure the effect of meditation, approaches have been carried out in a psychological and physiological way. This study focuses on the sound meditation, and aims to see what sound means in the sound meditation. Listening tests were conducted using five representative sounds for meditation and healing. 80 male and 104 female college students participated and 34 emotional expressions were asked for the test. The results were analyzed by factor analysis etc. The meanings of the sounds are characterized by four factors; stability, vitality, rhythm, and profoundness. The preference of sounds was expressed differently by the factors. The structure of the meaning of sounds could be utilized for the measurement of the effect of sound meditation and healing with various aspects and more accurately.*

**KEYWORDS:** *Sound meditation, Healing, Meaning, Psychological effect, Physiological effect.*

## BACKGROUND

Meditation can be classified according to purpose as yoga meditation, which Yoga meditation leads to liberation under all human constraints, Transcendental meditation (TM), which leads to a state in which one can see things brightly and freely from meditation in the hostile metaphysical meaning of Buddhist meditation and subjective prejudice, Kerrington's Clinical Standard Meditation (CSM), and the meditation with relative and empirical meaning of Bensonian Relaxation Response (RR) (Kim, 2005).

Meditation has two main approaches, intensive meditation and mindfulness meditation (Hussain, et al. 2010). Intensive meditation aims to focus on any sound, image or sensation. Transcendental Meditation (TM), developed by Maharshi Mahesh Yogi in 1958, is the most common form (Hussain, et al. 2010). Transcendental meditation is said to be one of

the simplest forms with Zen, Vipassana, and Yoga, which practitioners repeat mantras or sacred sounds for the purpose of concentration (Foris, 2005). Mindfulness meditation, on the other hand, involves becoming more aware of the continuous flow of thought, image, emotion, and sensation without distinguishing it from itself. This develops the unresponsive state of the heart, the basis of a calm and peaceful state of consciousness, and Vipassana and Zen belong to mindful meditation.

Summarizing the effects of each kind of meditation into three can be seen as the effect of relaxation, the effect of concentration, and the effect of awakening and insight (Park, 2006). These effects are not related to each other but are related concepts. The effect of concentration is increased through relaxation of the body, and the insight is experienced through deep concentration. MBSR (Mindfulness Based Stress Reduction) is a representative case of application for the prevention and treatment of diseases by reducing stress through relaxation of the body (Kabatzzinn, 1991).

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The effect of meditation on health is based on the principle of the connection between body and spirit, which is why meditation practice is accepted as a mental and physical treatment for health and well-being (Hussain, et al. 2010). Meditation treatments are applied as training techniques to improve a wide range of cognitive processes and self-regulation (Cahn, 2006; Srinivasan, 2006). It can be effective in the treatment of (Kim, 2007; Chang, 2007). In particular, the use of mindful meditation for ADHD has been attributed to the behavioral symptoms of carelessness and impulse, the potential neurological impairment of attention and suppression, and the potential effects of secondary deficits of stress, anxiety, and depression (Yoon, 2010).

As meditation becomes common, research for the scientific proof of its effects begins to be actively conducted. The effects of meditation practice mainly started from psychological and physiological effects (Benson, 1975), and the psychological effects are embodied in perception, memory and intelligence, creativity and self-realization, and the physiological effects are heart rate, blood pressure, brain waves, and budding. Metabolism, respiration and skin reactions, etc. Looking at the effects of various researchers, anger and stress reduction (Delmonte, 1984; Fling, et al. 1981; Janowiak, 1994; Shapiro, 1998), improved cognition (Fiebert, et al. 1981; Hall, 1999) and concentration enhancement (Rani, et al. 1996; Redfering, et al. 1981) have been observed by statistical methods.

As described above, meditation is very diverse in the way it is performed or in the effective aspect, and thus it is difficult to deal with specific concepts. Many studies that have been known so far focus on the effects and attempt to reveal them through logical and scientific methods. Despite these many studies, the study of sounds, images, emotions, and sensations that mediate meditation is neglected. When the meaning or nature of these mediators is correctly understood, the linkage with various effects such as previous studies may be better explained.

## PURPOSE

Sound meditation is based on hearing in the human senses. It is argued that sound is used mainly in meditation because only the sound of hearing is used in the five senses of the human body in a form sufficient for the ultimate effect of meditation (Giri, 2006). In particular, the term alpha, beta, gamma wave, etc. refers to the EEG state associated with relaxation, meditation, sleep, etc., and has a mechanism for controlling the state of the body made from sound (<https://www.innersoundsmeditation.com>).

In general, sounds can vary not only in the listener's feelings, emotions, and values, but also in the environment or atmosphere in which they belong. This shows the necessity of considering what messages are included when using sound intentionally (Han, 1998(I); Han, 1998(II); Han, 1998(III)).

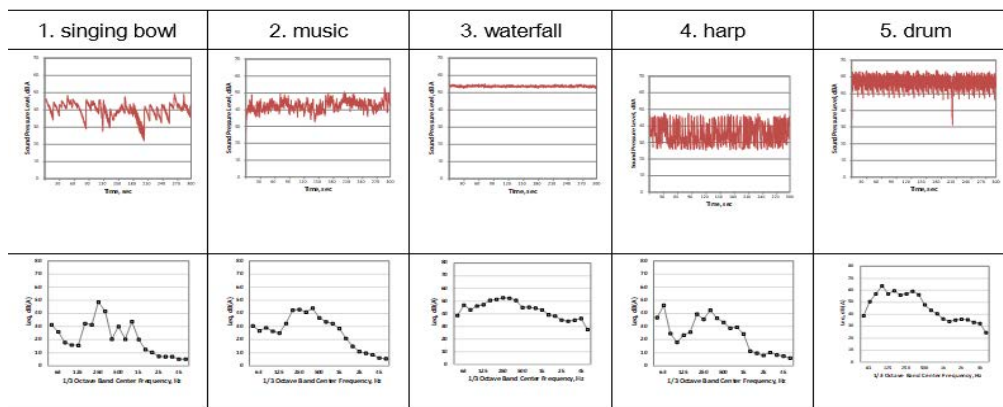
Before examining how the effects of meditation and healing using various sounds are revealed, it is necessary to understand the psychological attributes and meaning structures of sounds according to human emotions and emotions. This is because it enables the selection and provision of the optimal sound source for meditation and healing through the sound, and can enhance or maximize the effect. Therefore, the main purpose of this study is to analyze the psychological properties and meaning structure of humans for sound, one of the various mediations of meditation and healing.

## METHODS

This study focuses on the sound and psychological evaluation of the sounds in order to see the psychological meaning of the various sounds used in meditation and healing. First of all, the selection of a representative sound source as a meditation sound source for sound and the selection of a vocabulary for psychological evaluation thereof become very important factors. The sound source selected representative sound sources through researches on meditation and healing through existing studies, meditation techniques, YouTube, etc. Expression words were collected from previous studies (Han, 2004). Listening tests to listen to the sounds used for meditation and healing and to evaluate the impressions were conducted on college students. The results were analyzed according to statistical procedures.

Sound is used as the main tool in TM, and various kinds of sounds are utilized. Tibet's bowl is a very common meditation tool, and the meditation is performed through the sound generated when rubbing or tapping a bowl, and the psychological effect of this is significant (Goldsby, 2017). When using sounds in meditation, finding the meaning of sounds will be a very meaningful work in connection with the effects of meditation. Mantra means repeating certain phrases (<https://en.wikipedia.org/wiki/Mantra>) and appears in various forms of languages and methods, depending on religion (Dudeja, 2017). In addition, the examples can be found using music sounds such as soothing sounds (Bauer, 2015) used for judo meditation, natural sounds (Highstein, 2016), drums (Gingras, et al. 2014), bells, etc. Such various sounds can be found in numerous kinds of sound sources through keyword search of websites such as YouTube.

This study selected representative sound sources through investigations on the sounds used for meditation and healing through existing studies, meditation techniques and YouTube. Five sound sources, singing bowl, representative meditation sound source, healing music and harp music that are recently used for healing purposes, waterfall sound known as the sound of nature, and drum sound, a percussion instrument that makes up the repetitive rhythm of human heartbeat, were selected. Figure 1 shows the temporal variation of the five sound sources.



**Figure 1.** Time domain and frequency characteristics of sound sources for meditation and healing.

Emotional expression words of sound for meditation and healing were extracted representative from the auditory landscape evaluation research using the field experience type investigation method called the Caption Evaluation Method, which extracts consciousness with the language information in the form of a caption of a photograph.

The caption evaluation method is the starting point of thinking that it is important to reflect the opinions of citizens for the landscape that the citizens are considered to be fond of rather than the expert position in solving the problem of town development and urban landscape. It is a technique developed for the purpose of grasping / arranging the overall image of citizens living in the target area who are interested in the scenery and what criteria they are evaluating. The caption evaluation method mainly analyzes the caption attached to the photograph to extract the language, and extracts the evaluation expressed by the consciousness as the language information in the form of the caption of the photograph (Koga, 1999).

In addition to the caption evaluation method, which focuses on the visual focus, the auditory landscape evaluation research has been developed. Impression expressions extracted from the results of the research (Han, 2004) about the landscape of visual and auditory elements, features, impressions, judgments (preference) over the years (2002 ~ 2004) in the center of Namwon-city, Jeonbuk, South Korea, were used. Therefore, unlike expression words extracted from existing dictionaries and literatures, they are useful in terms of applicability and practicality in the evaluation of sound emotions. 34 terms among 275 impression expressions for auditory landscape evaluation resulting from the previous research were selected through the screening process considering the representativeness for the evaluation of emotions and the excellence of evaluation for the evaluation of meditation and healing.

## EXPERIMENTS

The method of reproducing the sound source used for psychological evaluation for meditation and healing allows

the subject to select freely. They select and play subjects' own smartphone, computer, audio or bluetooth speakers, and adjust the volume of the sound source to the appropriate loudness that they think. The playing time for each sound source is 5 minutes, and the total time for evaluation took about 30 minutes.

As shown in Table 1, the composition and contents of the evaluation items are cautions for evaluation, 3 items for personal attributes, 34 items for emotion evaluation for each sound source, and 1 item for preference evaluation. In particular, the ratings of 34 items of emotional expressions for sound sources consist of a seven step unipolar scale of "not at all (1), neutral (4) and very much (7)".

## RESULTS AND ANALYSIS

**SUBJECT'S GENERAL ATTRIBUTES:** Table 2 shows the composition of the subjects who participated in the experiment. There are 184 male and female college students in their teens and twenties, including 80 males (43.5%) and 104 females (56.5%).

The frequency of selection of the playback method of the sound source is smartphone, computer, audio, and bluetooth speaker, consisting of 73 people (40.6%), 28 people (15.6%), 33 people (18.3%), and 46 people (25.6%), respectively.

**FEELINGS AND EMOTIONAL EVALUATION FACTORS OF SOUND:** In order to analyze the overall image of the psychological semantics of the feelings and emotions of sound for meditation and healing, a response was evaluated for a seven-stage monopolar scale composed of 34 expressions. Table 3 shows the results of the extraction method (Principal Component Analysis, Rotation Method: Equamax with Kaser Normalization) on the expressions of the emotions of the sound.

The first factor consists of variables expressing the psychological stability of sound for meditation or healing such as comfortable, stable, peaceful, calm, etc., which is the factor of stability. The second factor is resonant, energetic, powerful, magnificent etc. It is composed of variables that

**Table 1.**  
Composition and contents of evaluation items.

No.	Composition	Item	Content	Evaluation Method
1	Notice for evaluation		1) preparation 2) sound composition 3) presentation time and required time of sound source 4) test environment 5) evaluation method	
2	Personal property	3	1) gender 2) age 3) playback method	selecting
3	Emotional evaluation of sound sources	34	seven step unipolar scale of "not at all(1) - neutral(4) - very much(7)"	rating scale
4	Preference rating	1	Preference rank of sound source	ranking

**Table 2.**  
The composition of the subject.

Category		Subjects				Total
		DL	SA	SN	SL	
Gender	Male	22	41	2	15	80
	Female	19	12	57	16	104
	Total	41	53	59	31	184
Age	10's	2	2	0	2	6
	20's	39	50	59	29	177
	Total	41	52	59	31	183
Playback method	Smartphone	41	5	26	1	73
	Computer	0	1	27	0	28
	Audio	0	2	1	30	33
	Bluetooth	0	45	1	0	46
	Total	41	53	55	31	180

express the vitality of the sound, such as being vigorous. The third factor is rhythmic, cadenced, sweet, etc., which represents rhythm. And the fourth are profound, subtle, mysterious, and noble, and can be interpreted as a factor of profoundness.

According to the reliability analysis of the factor analysis results, the Cronbach's alpha value, which is the reliability measure, is 0.948, 0.895, 0.780, and 0.811 from the first factor to the fourth factor, respectively, to ensure sufficient reliability (above 0.6). Therefore, the items can be combined and analyzed on one scale.

#### **PERCEPTION DIFFERENCE BY ATTRIBUTE OF PSYCHOLOGICAL EVALUATION FACTORS:**

Table 4 shows the results of the one-way ANOVA analysis to identify the difference in recognition according to the types of sound sources for the four factors of psychological evaluation, the sense of stability, vitality, rhythm, and profoundness. In the variance test of the Levene statistic in the one-way ANOVA, the profoundness factor (> .468) is satisfied by Scheffe's post hoc test. The mean homogeneity test of (<.001) and Games-Howell's post hoc test were used for multiple comparisons.

**STABILITY:** There was a statistically significant difference in the perceived differences of subjects' perceived stability by sound source ( $F = 108.202, p < .001$ ), and the difference in vitality was found in healing music, harp performance, waterfall sound> It was higher in the order of singing bowl> drum sound.

**VITALITY:** The perceived difference in the perceived vitality by the source types showed statistically significant difference ( $F = 270.241, p < .001$ ), and the difference in the perceived vitality was the result of drum sound> waterfall sound> singing bowl, harp playing> healing music appeared higher.

**RHYTHM:** Recognition difference of rhythmic feelings by subjects showed statistically significant difference ( $F = 181.653, p < .001$ ). The waterfall sounded higher in order.

**PROFOUNDNESS:** Recognition difference of the subjects' perceived profoundness by sound source showed statistically significant difference ( $F = 112.784, p < .001$ ), and Scheffe's post-test showed that the difference of profoundness was singing bowl, healing music, harp playing, drum sound. It was higher in order of sound.

Table 5 shows the results of analyzing the independent sample T-test to analyze the differences in subjects' gender perceptions of the psychological evaluation factors. There was a statistically significant difference ( $p < .05$ ) only for rhythmic feelings, and males were rated higher than females. In addition, there was no statistically significant difference ( $p > .05$ ) in the recognition difference on the method of reproducing the sound source for psychological evaluation factors according to the one-way ANOVA.

**PREFERENCE RANK OF SOUND SOURCE:** Corresponding-K sample analysis of nonparametric tests was conducted to determine whether the subject's preference

**Table 3.**  
Factor analysis on emotional expressions of sound.

Expressions	Stability	Vitality	Rhythm	Profoundness	Communalities	Alpha if item deleted	Cronbach alpha	
Clear	0.792	-0.054	0.205	0.054	0.676	0.944	0.948	
Comfortable	0.776	-0.198	0.384	0.138	0.808	0.94		
Stable	0.765	-0.134	0.35	0.132	0.742	0.942		
Refreshing	0.738	0.147	0.264	-0.084	0.643	0.946		
Peaceful	0.731	-0.285	0.3	0.191	0.743	0.943		
Pleasant	0.706	0.075	0.463	0.01	0.718	0.943		
Elegant	0.703	0.078	0.108	0.163	0.538	0.948		
Sonorous	0.701	0.086	0.526	-0.032	0.776	0.942		
Warm	0.647	-0.219	0.509	0.104	0.736	0.943		
Calm	0.611	-0.397	0.278	0.338	0.722	0.945		
Assimilating	0.584	0.071	0.459	0.223	0.606	0.945		
Concentrating	0.503	0.109	0.42	0.353	0.565	0.947		
Atmospheric	0.476	-0.155	0.464	0.354	0.59	0.947		
Resonant	-0.102	0.857	-0.086	0.021	0.753	0.871		0.895
Energetic	-0.15	0.852	0.074	-0.082	0.76	0.868		
Powerful	-0.028	0.847	0.013	0.07	0.723	0.871		
Magnificent	-0.04	0.735	-0.107	0.336	0.666	0.892		
Vital	0.199	0.73	0.293	-0.273	0.732	0.88		
Dynamic	-0.025	0.727	0.215	-0.067	0.58	0.882		
Cheerful	0.211	0.614	0.439	-0.123	0.629	0.893		
Rhythmic	0.041	0.383	0.761	0.044	0.729	0.741	0.78	
Cadenced	-0.066	0.465	0.718	0.038	0.737	0.772		
Sweet	0.555	-0.273	0.573	0.148	0.732	0.737		
Affluent	0.491	0.132	0.539	0.154	0.572	0.707		
Impressive	0.467	-0.127	0.468	0.465	0.67	0.737		
Profound	-0.193	-0.015	-0.022	0.768	0.628	0.788	0.811	
Solemn	-0.132	0.15	-0.037	0.745	0.596	0.818		
Subtle	-0.037	-0.24	0.072	0.69	0.54	0.782		
Deep	0.241	0.124	0.116	0.653	0.513	0.788		
Reverberant	0.108	0.295	0.031	0.575	0.431	0.806		
Mysterious	0.354	-0.3	0.383	0.524	0.636	0.779		
Meditative	0.404	-0.165	0.165	0.512	0.48	0.788		
Noble	0.241	-0.212	0.286	0.511	0.446	0.79		
Silent	0.435	-0.435	0.192	0.449	0.617	0.791		
Eigenvalues	7.543	5.59	4.508	4.397				
% of Variance	22.186	16.44	13.258	12.931				
Cum pct	22.186	38.626	51.884	64.815				
<b>KMO Measure of Sampling Adequacy</b>							0.954	
<b>Bartlett's Test of Sphericity</b>	<b>Approx. Chi-Square</b>						21609.619	
	Df						561	
	Sig.						0	

ranking and ranking method matched. Table 6 shows the order of the average sequence of sound sources, which is the rank of harp> healing music> waterfall sound> drum sound> singing bowl. Table 7 shows the statistical values for the hypothesis test, with Kendall's coefficient of agreement of 0.418 and a significant probability of .000 (<.05).

Figure 2 is a graph showing the percentage (%) of the preference rank of the sound source selected by the participants in the experiment and the weight (5 to 1) multiplied by the sequence rank (1 to 5) for each sound source. The selection rate of the first rank, harp playing (62.5%)-healing music (22.4%)-waterfall sound (7.1%)-

drum sound (6.0%)-singing bowl (2.7%), corresponds well with the statistics of mean rank in Table 6. In addition, the ranking by the total points multiplied by the weight for the relative comparison between the sound sources is the harp (373)-healing music (239)-drum sound (216)-waterfall sound (200)-singing bowl (195), and in comparison with the selection rate of the first rank, the rankings of waterfall and drum sounds change. This means that the waterfall sound has a higher selection rate not only to the 1st rank than the drum sound, but also to the lower rank, which leads to the reversed results that the weighted rank for the waterfall sound became lower than the drum sound.

**Table 4.**  
Recognition Differences between Psychological Evaluation Factors

Evaluation factor	Sound source	N	Mean	SD	F	P	Post hoc test
Stability	singing bowl <sup>a</sup>	170	-0.478	0.911	108.202 <sup>i</sup>	0	b.d>c>a>e <sup>i</sup>
	Music <sup>b</sup>	171	0.472	0.691			
	Waterfall <sup>c</sup>	177	0.224	1.08			
	Harp <sup>d</sup>	177	0.574	0.606			
	Drum <sup>e</sup>	175	-0.804	0.83			
Vitality	singing bowl <sup>a</sup>	170	-0.494	0.637	270.241 <sup>i</sup>	0	e>c>a.d>b <sup>i</sup>
	Music <sup>b</sup>	171	-0.767	0.66			
	Waterfall <sup>c</sup>	177	0.421	0.879			
	Harp <sup>d</sup>	177	-0.363	0.721			
	Drum <sup>e</sup>	175	1.17	0.599			
Rhythm	singing bowl <sup>a</sup>	170	-0.655	0.729	181.653 <sup>i</sup>	0	d>b.e>a>c <sup>i</sup>
	Music <sup>b</sup>	171	0.284	0.677			
	Waterfall <sup>c</sup>	177	-0.957	0.917			
	Harp <sup>d</sup>	177	0.877	0.662			
	Drum <sup>e</sup>	175	0.44	0.573			
Profoundness	singing bowl <sup>a</sup>	170	1.064	0.814	112.784	0	a>b.d.e>c (Scheffe)
	Music <sup>b</sup>	171	-0.069	0.778			
	Waterfall <sup>c</sup>	177	-0.754	0.838			
	Harp <sup>d</sup>	177	-0.073	0.777			
	Drum <sup>e</sup>	175	-0.129	0.852			

Note. <sup>i</sup>Welch's F test, <sup>i</sup>Games-Howell post-hoc test.

**Table 5.**  
Subject's gender perception difference.

Test variable	Group Variable	N	Mean	SD	T-value	T-sig.
Stability	male	74	-0.41	1.03	0.925	0.356
	female	95	-0.54	0.81	-	-
Vitality	male	74	-0.526	0.71	-0.494	0.622
	female	95	-0.477	0.57	-	-
Rhythm	male	74	-0.491	0.64	2.497	.013**
	female	95	-0.767	0.76	-	-
Profoundness	male	74	1.02	0.69	-0.618	0.538
	female	95	1.09	0.9	-	-

Note. \*\* : p<.05

**Table 6.**  
Preference ranking.

	Mean Rank
Singing bowl	3.92
Music	2.2
Waterfall	3.6
Harp	1.62
Drum	3.66

**Table 7.**  
Test statistics.

N	179
Kendall's W(a)	0.418
Chi-Square	299.086
Df	4
Asymp. sig.	0.000

Note. a. Kendall's Coefficient of Concordance



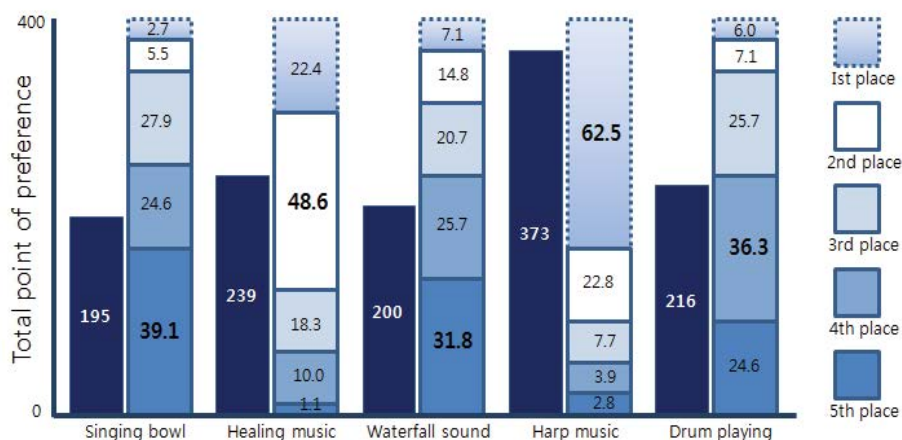


Figure 2. Sound ranking(%) and weight ranking

## DISCUSSION

### PSYCHOLOGICAL ATTRIBUTES AND SEMANTIC STRUCTURE OF SOUND:

The goal of this research is to find the meaning and value information as the optimal sound source for meditation and healing by accurately acquiring the subjective and psychological meaning of human beings included in the sound. Therefore, it is necessary to check what psychological meanings are included for meditation and healing. The studies on the psychological properties of sound mainly deal with the psychological meanings of human feelings and emotions. In particular, studies to physically objectify and quantify the human psychological attributes and values of noise, or to reveal sociocultural differences in emotional expressions of sound are representative (Namba, 1989; Namba, et al. 1991). In these studies, human psychological assessment of sound usually involves three factors: activity, stability and force (Han, et al. 1998). In addition, a study evaluating singing bowls for meditation reveals that three factors are involved: calm, mystery, and depth (Moon, et al. 2019). These studies differ in the types of sound sources and expressions used, but include all four factors: stability, vitality, rhythm, and profoundness. Therefore, even when considering the purpose of the study, the composition of sound sources and expressions, or the difference in the method of measurement and subjects, it has considerable universality in the composition and interpretation of four factors related to psychological evaluation of various sounds.

### RELATIONSHIP BETWEEN EVALUATION FACTORS AND PREFERENCE:

Preference for the four factors of the psychological properties of sound for meditation and healing: stability, vitality, rhythm, and profoundness are multidimensional. In the result of recognition difference analysis by type of sound source in Table 4, the stability was positive for harp playing, healing music, and waterfall sound, while singing bowl and drum sound were negative. The vitality is positive (+) drumming and waterfall sound, the harp, singing bowl, healing music (-) evaluation, the rhythm of the harp, drum sound, healing music (+), singing

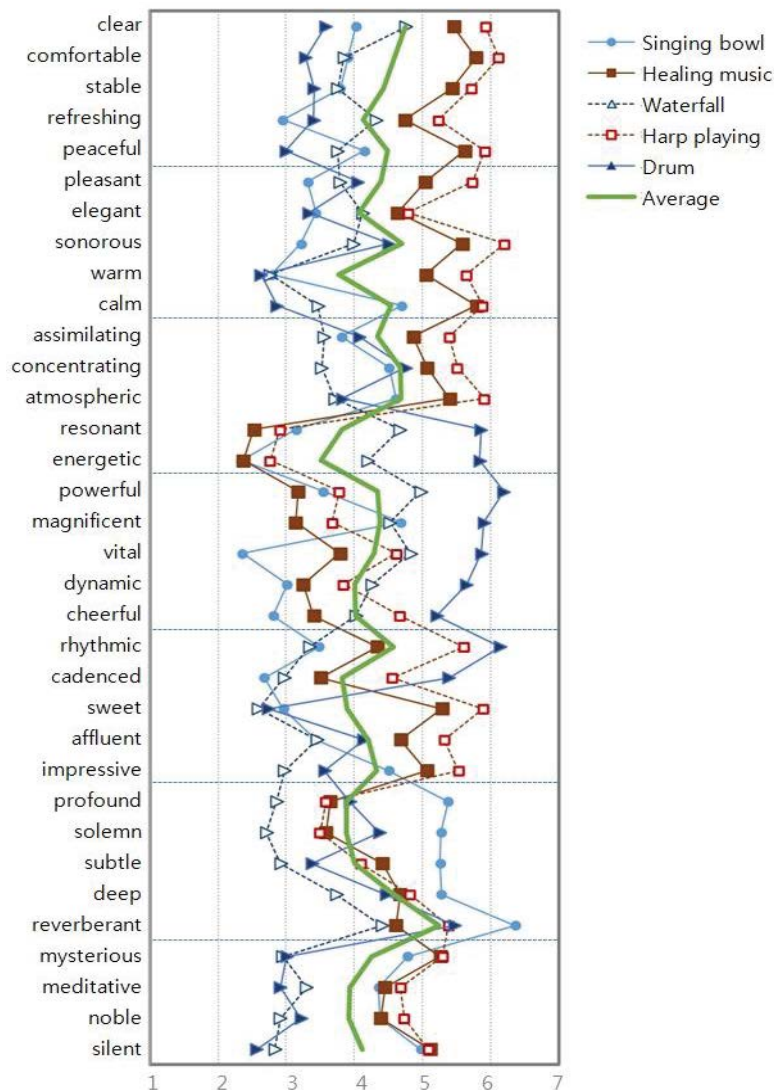
bowl and waterfall sound (-), The profoundness is positive for singing bowls, and the rest of healing music, harp, drums, and waterfall sounds are negative. The preferences of sound sources show clear differences in the evaluation of positives and negatives according to the four psychological attributes, and the preference rank ranking for each factor is multidimensionally combined.

Figure 3 shows the rating scale and the average profile of the sound source for meditation and healing, which correspond well with the recognition difference of each type of sound source in Table 4 and the result of preference analysis in Table 6.

The average preference rank of sound sources is shown in the order of harp> healing music> waterfall sound> drum sound> singing bowl. It means that the group of college students who participated in the experiment ranked the highest level of sound stability and rhythm and the lowest level of depth. This study reveals the psychological evaluation structure and properties of sounds that are used as various tools for meditation and healing in modern society. However, when these sounds are used, it is not yet clear how effective they will be. Therefore, in the future, it is necessary to study what is the best sound source to cope with various effects for meditation or healing and how the effect of sound using hearing will appear. In addition, it will be necessary to confirm the difference in the effects of the blind and normal.

### RELATIONSHIP BETWEEN ATTRIBUTES AND EFFECTS FOR MEDITATION AND HEALING:

If the research so far has been to find the effects of sound meditation and healing, this study is looking for the underlying reason for the effect. The psychological evaluation factors of sound sources revealed through factor analysis in the previous chapter were stability, vitality, rhythm, and profoundness. If so, it is worth noting how psychological factors and effects of sound meditation and healing relate. The factor of stability is high in healing music and harp playing, which is similar in rhythm. On the other hand, the evaluation factor of vitality is high in drum sound and waterfall sound.



**Figure 3.** Estimate and Equilibrium Average Profiles of Sound Sources for Meditation and Healing

The factor of profoundness is high in singing bowls. This result can be said to be the result reflected in psychological evaluation due to the inherent characteristics of the sound source, which may be said to be the cause of the effect. Of course, it is difficult to scientifically prove causality related to causes and effects through this study, and it is beyond the limits of this study to discuss it here. Nevertheless, based on the results presented here, it is possible to examine the possibility of the relationship between cause and effect, and to provide a basis for further research.

Reduction of anger and stress in the psychological effects of meditation revealed in previous studies can be considered in relation to the factors of stability of healing music and harp, and as a factor that increases spiritual wellbeing, the factors of profoundness can be linked (Goldsby, 2017). Heart rate, blood pressure, and breathing were measured as physiological effects, and the effects of stability and profoundness could be discussed as a decrease in heart rate and could lead to a decrease in blood pressure (Hussain,

et al. 2010). Vitality appeared in intense, periodic sounds such as drums and waterfalls. As shown in the previous study (Gingras, et al. 2014), leading to the effect of reducing cortisol by drums is related to vitality, which may play an important role in reducing fatigue. It may also be related to the claim that waterfall sounds lead to effects such as seeking peace and calm and improving sleep (Highstein, 2016). Transcendental meditation has been shown to increase the degree of order, integration and coherence of brain function, and it would be a very practical study to find out the relationship between the four attributes of sound and its effect.

## CONCLUSION

The purpose of this study is to identify psychological semantics and attributes of sound sources for meditation and healing. Psychological experiments using vocabulary expressing sound clarified the semantic structure and properties of sound sources.



In a psychological experiment involving a total of 184 male and female college students using five representative sound sources and 34 emotional expressions for meditation and healing, the semantic structure of the sounds for meditation and healing is characterized by four factors like stability, vitality, rhythm, and profoundness. In addition, as a result of analyzing the perceived difference of the sound of these factors, it was found that the stability is rated as harp and healing music, the vitality is drum sound, the rhythmic harp is played, and the depth of singing bowl is highly evaluated in terms of psychological meaning and value. Rhythm was higher in males than females, and the preference rank of sound sources was in the order of harp> healing music> waterfall sound> drum sound> singing bowl.

Meaning of the research is in that it has analyzed the structure of human psychological evaluation of sound for meditation and healing in modern society, and has experimentally verified the value of utilization through the relationship between its semantic structure and attributes in feeling and emotional aspects. In the future, sound effects will be used to verify pre and post effects for meditation and healing, and human auditory emotional effects using sound media.

#### ACKNOWLEDGEMENT

This research was supported by Basic Science Research Program through the National Research Foundation of Korea(NRF) funded by the Ministry of Education(No. 2018R1D1A1B07049706).

#### DECLARATIONS

The author declare no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

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