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MINDFULNESS AMONG BHARATANATYA DANCERS

Psychology

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ABSTRACT

Mindfulness is a conscious experience of the present moment without being judgmental about the thoughts, feelings, and behavior. Mindfulness training has found to be extremely effective in promoting and enhancing psychological well being. The aim of the study was to explore the relationship between practice of Bharatanatya and presence of mindfulness. A pilot study was conducted to determine the sample size. The study population (N=240) was consisted of dancers and non dancers. The main study recruited dancers (n=120) from three different dance schools of Manipal, Udupi & Sirsi and non dancers (n= 120) from general population using purposive sampling strategies on the basis of inclusion and exclusion criteria. They were assessed on Five facets of Mindfulness Questionnaire. The session lasted for 10-15 minutes for each participant. Statistical analysis was conducted using descriptive statistics, Student's t-test and One way ANOVA. Results indicated statistically significant difference between Mindfulness and Bharatanatya practice. The results also showed that Mindfulness increases as the number of years of practice increases, but there was no statistically significant difference found among the groups regarding number of years of practice.

KEYWORDS

Mindfulness; Bharatanatya; Dancers; Practice

INTRODUCTION

Mindfulness refers to "reminding oneself to bring attention to present moment experience, in a non judgmental and open manner" (Huxter M.J., 2007). It is a construct that is rooted in Theravada Buddhism (Keng, Smoski, & Robbin, 2011). Among the commonly used definitions of mindfulness, most accepted one is "paying attention in a particular way: on purpose, in the present moment, and non judgmentally" (Kabat-Zinn, 1994, p.4). The word mindfulness is originated from the Pali word sati, which means "having awareness, attention, and remembering" (Bodhi, 2000). Mental qualities beyond sati (awareness, attention and remembering) are being included in "mindfulness" to reduce clinical conditions. These qualities include non judgment, acceptance and compassion. (Didonna, 2009). Some of the other components of mindfulness are Acceptance & Presence (Kohls, Sauer, & Walach, 2009); Observe, Describe, Act with awareness, Non judgemental and Non reactive (Baer, R. A., Smith, Hopkins, Krietemeyer, & Toney, 2006); others include non conceptual, present centered, intentional, and liberating (Germer, 2004). Honing the skills of mindful components enable to make better choices because the person recognizes and deals with the internal state – thoughts, physical sensation, emotions as well as external environment. When developed and refined, mindfulness can function effectively on every level, from the individual to the corporate, the societal, the political and the global. With such an outcome and effects, there has been great interest in determining the ways to cultivate and maintain mindfulness. With the presence of knowledge, awareness and vision, cultivation of mindfulness is possible when the person is healthy. Hence the primacy is given to the "awareness of the body". It can be cultivated either through the practise of meditation (Kabat-Zinn, 2005), by attending to breathing (Feldman, Greeson, & Senville., 2010), walking or eating or through yoga (Shelov, Sachday, & Friedberg, 2009) and related exercises.

In addition, Swimming (Berger & Owen., 1988), Dance/Movement therapy (Barton,2011), Qigong movement therapy (Astin et al., 2003), Silent sitting (Frewen, P. A., Evans, E. M., Maraj, Dozois, & Partridge, 2008) would be helpful. If a person does a little bit of practice everyday, there is a high chance that a little bit of mindfulness is cultivated. "If one does more practice everyday, and adds to the regular formal practice, the effects are more dramatic. While this has long been evident to meditators, it is beginning to be documented through scientific research" (Lazar et al., 2005, p.43). This could be applied to practice of dance as well. Dance is naturally therapeutic due to its physical, emotional and spiritual components (Chaiklin & Wengrowner, 2015). As an ancient Indian art form, Bharatanatya requires conscious understanding of present, mind and emotions. Bharatanatya is a sequence of movements combined with the expressions. Movement and breath signifies the tart of life. "Movement impacts psychological functioning because engaging the body engages the right brain, and offers new, in the movement experiences, which activate memory, emotion and sensory processes simultaneously. Movement offers a multilevel opportunity to use the body alongside the mind as a resource for developing capacity to regulate emotions internally and achieve improved emotional competency in relationship. Right brain states such as imagination can be engaged introducing imagery and metaphor during movement. This can enable the individual to explore emotions through the body and immediately experiment by re choreographing; that is, exploring another possibility or moving in a new way" (Homann, 2010).

Dance includes rhythms, movements, tempos, times of leading, following, and choreography. By framing interactions between all these components, it reminds the dancer to pay attention to more than one component because all the components have to be in harmony with each other. It also reminds the dancer to attend to process within, to portray one's self as a beautiful dancer. When the internal and external processes are in accordance with each other, a graceful dancer can emerge. According to western modern science, the deliberate, conscious mechanistic control of the environment can change one's sense of well being, distress, and comfort. Many studies have reviewed that therapy through dance increases psychological and physical health which includes mindfulness, body and self awareness. (Appel, 2009).

Mindfulness training involves - yoga, sitting, breathing exercise, body scan, walking and emotional regulation skills (Gallegos A M, et al., 2013). With the increase in mindfulness there is increase in the memory, emotion regulation and sensory processes. Bharatantya also involves practice of similar techniques. Hence, it would be interesting to study the state of mindfulness, which is expected to occur as a result of practice of Bharathanatya. The current study aims to investigate the direct relationship between the Bharatanatya & the mindfulness as the dance includes components of mindfulness.

METHOD

Participants

The study population (N=240 women) was consisted of dancers and non dancers. The main study recruited dancers (n=120 women, Mean age= 21.85, age range 18-45 years) from three different dance schools of Manipal, Udupi & Sirsi and non dancers (120 women, Mean age= 22.19, age range=18-45 years) from general population using purposive sampling strategies on the basis of inclusion and exclusion criteria. There were 21 dancers, recruited in the same way in pilot study as described above, which provided the sample size (N=240) for the main study. All participants were able to read and write either Kannada or English and had +2 level of education. Also the study controlled for people who have exposure to meditation, yoga and aerobic exercises.

Materials and Procedure

Five facets of mindfulness questionnaire was adapted from Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). It was a 39 item, 5 point likert scale. This questionnaire is formed on a factor analytic study of five different questionnaires on mindfulness. The factor analyses explored five factors represent elements of mindfulness. The five facets are observing, describing, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience. The five factors displayed adequate to good internal consistency, with alpha values ranging from 0.75 (Non reactivity) to 0.91 (Describing).

Procedure

Phase I

A pilot study was conducted to determine the sample size for the main study. Dancers from Sirsi, Manipal and Udupi were recruited for the study. It also aimed to generate rough idea regarding time taken for administration of tools. In addition, the study gave the researcher better understanding of the feasibility and ground reality of conducting the study in various dance schools. There were three groups of dancers (dancers with one to five years of practice, dancers with five to ten years of practice and dancers with above ten years of practice) with seven participants in each group. The sample size for the main study was determined using the ANOVA formula, since the study had more than two groups.

Phase II

The study was conducted from November 2015 to April 2016. The study was initiated with the Ethical clearance. Subjects were recruited from various Dance Schools of Sirsi, Udupi and Manipal as per the Inclusion and Exclusion criteria by means of Purposive sampling strategies. Consent was obtained after briefing about the study. The data was collected in one session for most of the participants. Some of them took two sessions. Each session lasted for 10-15 minutes. The session began with brief introduction to the study. The questions of the participants regarding the study were answered. Questionnaire was administered. Subjects of non dancers group were recruited from the general population on the basis of Inclusion and Exclusion Criteria. The same procedure was followed by them.

Statistical Analysis

Data has been treated with IBM SPSS Statistics (Statistical Package for the Social Sciences) version 23 using appropriate statistical procedure. Considering the study design and sample size, descriptive statistics (mean and standard deviation) was analyzed.

Independent sample test is used to infer whether there is any statistically significant difference between the means in two unrelated groups. In t-test, samples are drawn from normal populations and are at random. In this study, the t-test is used to explore whether there is any statistically significant difference between the means in dancers and non dancers with respect to age and mindfulness.

Analysis Of Variance (ANOVA) is used in the study. In this study, one way ANOVA was used to determine the means of three independent (unrelated) groups i.e. among dancers who have 1-5 years, 5-10 years and above 10 years of practice in Bharatanatya dance.

Ethical Clearance

The following are the ethical considerations which were taken during the study. Informed consent with the general instruction about the study was taken. Participants were informed through the subject information sheet that they were being assessed according to the procedure in the study. Each participant was given the freedom to quit from the study at any moment. Confidentiality was assured to the participants. The participants were recruited based on the inclusion exclusion criteria. These issues were discussed with the members of the Institute Research Committee before agreeing ethical protocols. The investigator's contact has been provided to participants in case of their interest in knowing about the results of the scale administered. Extensive debriefing was given to all the participants.

RESULTS

The main purpose of the study is to explore mindfulness in Bharatanatya dancers and Non dancers. Table 1 shows mean age and standard deviation of the participants, ranged from 18 to 45 years. Student's t test was done to assess the differences in age between two groups. There was no statistically significant difference in age, t (231.87) = -.528, p = .598 between the two groups. Table 2 shows the distribution of different socio demographic variables within the two groups (N = 240). Analysis in terms of frequencies and corresponding percentages were computed for Education, Occupation and Income. Table 3 shows analysis of independent sample t test. The results showed significant difference in the mindfulness and two of its components i.e. Observation and act with awareness. Given a violation of Leven's test for homogeneity of variances, F = 7.39, p = .007, t-test not assuming homogenous variances was calculated. The results of this test indicated that in comparison with non dancers, dancers were high on mindfulness score. Observation scores were higher in dancers than in non dancers. Leven's test indicated equal variance (F = 1.79, p = .183) on Observation scores. On the component, Act with awareness, dancers scored higher than non dancers. Leven's test indicated equality of variance (F =.051, p = .821). One of the main hypothesis of the study was to assess the level of mindfulness, in the dancers who have practised dance for certain number of years. To test the hypothesis ANOVA was employed. The dancers group has been divided into 3 groups, dancers who have practised dance for 1 - 5 years (Group I), 5-10 years (Group II) and above 10 years (Group III). Table 4 shows results of the One way ANOVA. According to the results it can be inferred that there was no statistically significant difference in age between the groups. But the age of the dancers in group I was found to be higher than the age of the dancers in group II. Group III dancer's age was highest when compared to the other two groups. On Post hoc analysis, there was no significant difference in mean between Group I & Group II (MD = 1.25, p = .663), Group II & Group III (MD = -2.125, p = .116) and Group III & Group I (MD = .875, p = 1.000). Age was not the significant factor among all the three groups. Table 5 shows statistically significant difference (F (2,117) = 4.14, p = .018) between the three groups of dancers in Mindfulness as determined by one way ANOVA. Post hoc analyses using Bonferroni HSD indicates that there was statistically significant difference between group II and group III (MD = -.22, p = .034). There were differences in mean between other groups but not statistically significant. Table 6 shows results on Student's t-test which depicts that there was no statistically significant difference between the groups on regularity of practice with respect to mindfulness.

DISCUSSION

As outlined previously, dancers scored significantly higher than non dancers on mindfulness, observation and awareness. This result is consistent with prior studies which indicated that dance constitutes components which cultivate mindfulness (Appel, 2009). These components are very much similar to the techniques used to develop mindfulness. Most of the studies on Dance Movement therapy also support the findings of the current study. As noted in a study conducted by Enghauser (2007) the most important somatic concept, indicated that senses and sensitization of the body develops awareness. While dancing, the dancer concentrates more on the body's relationship, not only with itself and the others but also with the environment, nature and the world, thus cultivating awareness. This could be one of the reasons for the dancers to score high on Awareness than non dancers. Cash & Wittingham's (2010) study supports the results. Observation, one of the main components of dance, is what makes a person, a better dancer. Dancer observes the steps, each movement, facial expression and the coordination of themselves and other dancers very carefully, repeat the same again. Thus they develop the art of observing from the beginning years of their dance journey.

As indicated in table 5, mindfulness scores showed significant difference among the three groups of dancers. Mindfulness scores declined in Group II, but again increased in the Group III. Similarly, on Observe and Non Judgment domains, the scores declined in 5-10 years of practice but increased in the group who practiced for more than 10 years. Where as, the scores gradually increased across the 3 groups on Describe, Act with Awareness and Non reactive domains. However, on Post Hoc analyses the mean difference between group II and group III was significant. This could be because in the early years (1- 5 years of practise), dancers are still understanding and learning the concept and movements. As they master the art around 5-10 years and above 10 years of practice they would steadily cultivate the state of mindfulness. Mindfulness requires a lot of maturity, physical strength, awareness of the surrounding and ability to not to react to any situation instantly. Similarly, Dance is an enduring art which requires postural strength of the body and control over it, coordination among the body parts, muscle permanency and flexibility. In addition, dancers need to understand their own body to convey the rightful meaning of the song on which they are performing. They need to have emotional stability to

perform on stage. To acquire all these components, a dancer has to endeavor for years to master the art of dance (Smitt & Bird, 2013). For a dancer, it requires at least ten to fifteen years of experience to accomplish sophisticated, developed and refined proprioception senses. In the beginning, dancer is getting adjusted to the movements and coordination of those movements. After a few years, the movements will be automatic and very well coordinated; hence the attention shifts to the posture, facial expressions and the surroundings. As a dancer masters the art, not only while performing but also in day to day activities the dancer will be conscious of each and every movement of the body which will result in cultivating awareness, hence Mindfulness. Interestingly, this could also be because; the mean age of the dancers in Group II is lesser than the other two groups. There are possibilities that age could be a significant factor in developing mindfulness. Since the mean age is not significantly different among the groups, it can not be hypothesized.

On t-test, dancers who practice regularly scored high on all the variables than irregular practioners. However, the scores were statistically not significant. Interestingly, on divided attention, regular dancers committed fewer errors than non dancers, which indicate that regular practice makes the dancer to attend to more than one activity at a time. In Sustained and Focused attention dancers who practice regularly took much time than dancers who do not practice regularly. As the number of years of regular practice increases, it is likely that the dancer's divided attention increases. As mentioned earlier in the discussion, the dancers have to concentrate not only on their own movements but also other's movements, music, stage and the audience. Since, regular practice makes a dancer near to perfect; it is likely that they score high on divided attention than dancers who do not practice regularly.

CONCLUSION

Mindfulness is a state (Kabat-Zinn, 1999), which can be cultivated through daily practice. It is conscious effort to remind oneself to be in the present. For an individual to develop mindfulness, continuous attention and awareness to their body and the surroundings is necessary. Meditation is one of the ways to cultivate mindfulness, but not the only way. The results of the present study found that Bharatanatya can be one of the other techniques to cultivate and maintain mindfulness. Bharatanatya is a holistic approach towards developing mindfulness. It is blend of sensory motor rhythmic activity which integrates physical, emotional, cognitive and social elements. The current study found that Bharatanatya dancers have high mindfulness than non dancers. Also, if the dance practice is regular, then there is a high probability of developing mindfulness than irregular practice.

Bharatanatya is a blend of Nritta, Nritya and Natya which consists of Physical, cognitive components. Through dance, there are various numbers of benefits like strength, balance, concentration, stamina and endurance. In addition, there are musculoskeletal benefits, healthy physiological functioning. Since dance constitutes of emotional components, it provides a great source for emotional catharsis. The dance also includes Carnatic classical music which decreases anxiety and stress, speed healing and increase optimism. It also has the capacity to reduce blood pressure levels and increase quality of life. The divided attention is inversely proportionate to cultivation of mindfulness. This has been observed in other studies as well where divided attention acts against developing mindfulness. This could be used in children with Specific Learning Difficulties (SLD) and Attention Deficit Hyperactive Disorder (ADHD). In addition, several neurological studies have been done to assess the functions of mudras. The concept of “mudra” explains that bringing together the nerve terminals (acupressure points), activates several brain areas which are responsible for higher motor functioning, in turn resulting in appropriate posture of the body for dance. Neurological changes have been reported during dance. Since not many studies have been done in this area, the results of the current study could be framed as ground work for more research.

The study has its limitations. Only female population was included in the study. Even though it acts as strength, including males might not give the same results. Since data has been collected from only three dance schools, the subjects who have been practicing on their own or in different schools were missed out. There are different schools of dance in Bharatanatya (Kalakshetra, Pandanalloru, Mysore style etc). The study did not consider the different schools of dance. They might have different effects on an individual with respect to mindfulness and well being.

Future Directions

Bharatanatya is a pure classical South Indian art form which constitutes several similar concepts explained in Mindfulness, as found in the study. Hence there is a need to look into other classical art forms like Kuchipudi, Kathak, Mohiniattam etc to find out the differences in cultivation of mindfulness. Bharatanatya is a mixture of more than one aspect. It constitutes music, postures, movements, expression, emotions, rhythm etc. Each of the components might have different effects on a dancer. Need to study each component individually is high. From the current study, it has been established that Bharatanatya cultivates mindfulness since 1- 5 years of practice. The shorter version of Bharatanatya might lead to cultivation of mindfulness in people. Also a comparative study regarding the efficacy of other dance forms like Bollywood with respect to classical dance forms has to be analyzed. There is a high need to study Classical music as an individual aspect. The study did not differentiate the dance from its music. So it could be possible that, the results might have been influenced by classical music. Since the population was not professional dancers, future studies might concentrate on only Professionals to explore the actual impact of dance without any covariance. Then the study could compare professionals with Yogis or people who practice Zen meditation . It has been established from many studies that motor activities lead to changes in the activation of several brain areas. Further, the areas which are involved in motor activity, emotions, cognitions and the connections between these three pathways in a dancer could be identified. However, certain personality factors might have an impact on dancer in cultivating mindfulness. The control measures with respect to personality traits should be taken care of.

Unlike exercise programs that require specialized instructors and equipments, dancing is already available and inherently sustainable. Especially, in India, the studies need to be done on art forms as they have rooted in systematic, original and aesthetic manner.

Table 1 Independent samples t- test to assess the significance of age between two groups.

	Dancers		Non dancers				
	Mean	SD	Mean	SD	t	df	p
Age	21.85	4.59	22.19	5.41	-.528	231.87	.598

Table 2 Frequency distribution and percentage of dancers and non dancers on Education, Occupation and Income

Variable		Dancer		Non Dancer	
		f	%	f	%
Education	Pre University	12	10	1	0.8
	Diploma	7	5.8	28	23.3
	Graduation	75	62.5	48	40
	Post Graduation	24	20	43	35.8
	Professionals	2	1.7	0	0
Occupation	Dancers	9	7.5	0	0
	Student	99	82.5	106	88.3
	Housewife	4	3.3	8	6.7
	Own Business	4	3.3	1	0.8
	IT professionals	4	3.3	5	4.2
Income (monthly in Rs)	Below 10,000	8	6.7	11	9.2
	10,000 – 25000	22	18.3	28	23.3
	25,000 – 50,000	38	31.7	36	30
	50,000 – 1,00,000	37	30.8	25	20.8
	Above 1,00,000	15	12.5	20	16.7

Table 3 Independent samples t-test value of Mindfulness and it's components in dancers and non dancers.

	Dancers		Non Dancers				
	M	SD	M	SD	t	df	p
Mi	3.39	.38	3.18	.29	4.68	221.37	.000*
Ob	3.72	.68	3.41	.621	3.69	238	.000*
De	3.54	.70	3.50	1.87	.213	238	.831
AwA	3.59	.72	3.20	.72	4.18	238	.000*
NJ	2.88	.63	2.87	.69	.115	238	.909
NR	3.20	.566	3.13	.64	.926	238	.356

* The mean difference is significant at the 0.05 level

Table 4 Analysis of Variance to assess significance of age among three groups of dancers

	Group I	Group II	Group III		
	M (SD)	M (SD)	M (SD)	F (2,117)	p
Age	21.98	20.73	22.85	2.21	.114

Table 5: Analysis of Variance to assess groups of dancers on Mindfulness and it's components.

	Group I	Group II	Group III		
	M (SD)	M (SD)	M (SD)	F (2,117)	p
Mi	3.33 (.41)	3.31 (.29)	3.53 (.42)	4.14	.018*
Ob	3.73 (.55)	3.58 (.65)	3.86 (.81)	1.69	.189
De	3.42 (.68)	3.50 (.68)	3.71 (.75)	1.93	.150
AwA	3.44 (.80)	3.54 (.62)	3.81 (.69)	3.04	.051
NJ	2.88 (.71)	2.78 (.62)	2.99 (.56)	1.15	.319
NR	3.15 (.47)	3.20 (.61)	3.26 (.62)	.37	.688

*The mean difference is significant at the 0.05 level

Table 6 Independent samples t test to assess the difference with respect to regular and irregular dance practice.

	Regular		Irregular				
	M	SD	M	SD	t	df	p
Mi	3.39	.41	3.38	.36	.183	116	.855

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