



Effect of Yoga on Happiness Among High and Low Mindful School Students

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Abstract- Happiness among the School Students is crucial for the all-round development. Yoga has become popular in different parts of world and is being utilized as an art for promoting Happiness. The present study was conducted with a motive to analyze the impact of Yoga on Happiness among High and Low Mindful Students. A preliminary sample of $n = 2000$ High School Students in the age group 12 to 16 years was administered Freiburg Mindfulness Inventory to assess their Level of Mindfulness. On basis of the result obtained from the Inventory, a final sample of $n = 167$ Subjects were chosen. Out of this sample 84 Subjects comprising of 34 High Mindful Subjects (16 Boys + 18 Girls) and 50 Low Mindful Subjects (25 Boys + 25 Girls) were assigned to the Experimental Group and 83 Subjects comprising of 34 High Mindful Subjects (16 Boys + 18 Girls) and 49 Low Mindful Subjects (24 Boys + 25 Girls) to the Control Group. These subjects were given Oxford Happiness Questionnaire to assess their Level of Happiness. Yoga Intervention as per schedule developed by Shirley Telles, Nilkamal Singh, Abhishek Kumar Bhardwaj, Ankur Kumar and Acharya Balkrishna in 2013 was administered to the Experimental Group which includes Om Chanting, Meditation, Pranayamas (Yoga Breathing Techniques), Bandhas Mudras, Asanas (Physical Postures) and Yoga Relaxation Techniques which were practiced 30 to 40 minutes every day for a month. The Control Group received no Yoga Intervention but just engaged in general talks. These Subjects were again assessed by using Oxford Happiness Questionnaire for the Level of Happiness. A $2 \times 2 \times 2$ ANOVA Repeated Measure was performed on the pre and post raw scores. Results revealed that the main effect of Mindfulness on measure of Happiness was found $F(1, 163) = 10.316, p < .01$ as statistically significant wherein High Mindful Subjects were found happier (19.09) as compared to the Low Mindful Subjects (17.93) counterparts. The main effect of Gender on the measure of Happiness was found $F(1, 163) = .045, p > .05$ as statistically non-significant. But, the main effect of Yoga Intervention was found $F(1, 163) = 74.882, p < .01$ as statistically significant wherein the Happiness in the School Students in the Experimental Group increased abruptly from 18.05 to 20.77 after Yoga Intervention and no significant changes were found in the Control Group at Pre-Test (18.97) and Post-Test Level (19.07). In nutshell, High Mindful Subjects were found happier than to the Low Mindful Subjects and Yoga Intervention proved effective in promoting Happiness for both High and Low Mindful Students.

Key Words: Mindfulness, Happiness, Yoga Intervention, Yoga Schedule, Om Chanting, Meditation, Pranayamas, Bandhas Mudras, Asanas

1. INTRODUCTION

Happiness is paramount goal of one's life that leads to prosperity and allows enjoying a contented life. Literal meaning of happiness is "good fortune" or "prosperity" that focuses on individual's personality adaptation to his/her environment (Hornung, 2006). According to Seligman, (2004), "state of happiness leads to focus on constructive emotions (contentment, happiness, hope), character traits (love, courage, compassion, curiosity, integrity, moderation, to mention a few) and institutions (justice, responsibility, parenting)".

During the past two decades, there has been a shift from a deficit-centred pedagogy to a more positive perspective, with an emphasis on students' individual strengths and well-being (Seligman, Ernst, Gillham, Reivich & Linkins, 2009; Sin & Lyubomirsky, 2009;

Stiglbauer, Gnams, Gamsjäger & Batinic, 2013; Vuorinen, Erikivi & Uusitalo-Malmivaara, 2019). Happy children learn best is a statement uttered by UNICEF (2019), OECD (2018) and several international educational boards (Finnish National Agency for Education, 2014; Salzburg Global Seminar, 2019). The statement is backed by a plenitude of studies (Csikszentmihalyi, 2014; Heffner & Antaramian, 2016; Nickerson, Diener & Schwarz, 2011; Oishi, Diener & Lucas, 2009). Happiness brings willingness and energy to pursue and achieve goals, to engage in learning and to live a fulfilling life (Seligman, 2011).

Outcomes of several studies have depicted an association between subjective well-being and school success (Gilman & Huebner, 2003; Verkuyten & Thijs, 2002). It is important that the adolescence students imbibe healthy lifestyles, which means good physical



and mental conditions, a positive image of oneself, self-efficacy and self-determination. Adolescents with good mental and emotional health develop resilience to adapt better to difficult situations which boost their wellbeing. The resources, vulnerabilities, social context, peer groups and family condition shape the life style of adolescents (Lima & Morais, 2016).

Several works done in the last decades has allowed identifying mindfulness to be beneficial for well-being and is a matter of research across numerous academic and clinical disciplines (Kabat-Zinn, 2003; Singh, Wahler, Adkins & Myers, 2003; Siegel, 2007; Zylowska, Ackerman, Yang, Futrell, Horton, & Sigi Hale, 2008). Further, (Kabat-Zinn, 1994) has defined mindfulness as “paying attention in a particular way, on purpose, in the present moment, and non-judgmentally”. Alternatively, it is the awareness that emerges through paying attention on purpose, in the present moment, and non-judgmentally to the unfolding of experience moment by moment (Kabat-Zinn, 2003).

There is a growing base of literature that demonstrates meditation and its components of mindfulness are related with increased experience of momentary positive emotions as well as greater appreciation of, and boosted responsiveness to, pleasant daily-life activities (Geschwind, Peeters, Drukker, van Os J, Wicchers, 2011). Subjective happiness may be one of the variables which is influenced by mindfulness and has gained more importance with the positive psychology trend (Akin & Akin, 2015).

Yoga pursuits lead to the manifestation of mindfulness and happiness in people actively practicing it (Yadav & Srisrimal, 2020). Several evidences have been gathered in the last more than two decades in the support of application of yoga and mindfulness practices for improving individual mental health and well-being (Gotink, Busschbach, Benson, Fricchione, & Hunink, 2015). School-based yoga and mindfulness programs have become widespread over the last decade in the USA (Butzer, Ebert, Telles, & Khalsa, 2015) and are a promising approach to improving child and adolescent health and well-being (Khalsa and Butzer, 2016). In a survey study, 84.5 percent participants stated that yoga improved their energy and 86.5 percent agreed for happiness (Ross, Bevan & Thomas, 2013). A study conducted on second-and third-grade students using a short program of mindfulness yoga found measurable changes in levels of stress among them (Butzer 2015). Cortisol levels in our saliva are measurable and tend to enhance during stress. The study administered a 10-week classroom-based intervention. Students in the second grade, showed a decrease in cortisol level from before and after the intervention, while both second-and third-grade students showed significant decreases in cortisol level from before to after performance of a cognitive task.

Teachers also noticed certain improvements in student behavior (Butzer, Day, Potts, Ryan, Coulombe, Davies & Khalsa, 2015).

A comprehensive program was administered to improve the well-being of students of an elementary school with the aim to find whether mindfulness and yoga instruction helped to improved quality of life more compared to the usual care the school provided among stressed students. Mindfulness and yoga were added to the school’s existing empathy-based programming to provide supplementary support students facing stress. The students practicing yoga reported to experience happiness in the same environment, which previously caused stress (Roy, 2000).

Present study: The present study was undertaken with the aim of evaluation and assessment of the effect of Yoga on the Happiness among the High and Low Mindful students of Mandi and Kullu districts of Himachal Pradesh. Happiness tends to boost the well-being and school success in the students. Yoga has been successfully used as a mean to uplift the levels of Happiness among High School Students.

2. METHOD

i) Study Areas: The study was conducted in different Schools of Mandi and Kullu districts of Himachal Pradesh in India. Students with age group 12 to 16 years were selected. Himachal Pradesh, known as Dev Bhoomi, is situated in abode of the Himalayas. It is home to scenic mountain towns. Here the snow peaked mountains and lush green forests maintain its bounty.

ii) Subjects: The study has been conducted on a preliminary sample of n= 2000 Subjects out of which 167 Subjects were finally selected. More appropriately, the Freiburg Mindfulness Inventory was given to the Subjects and on this basis, High and Low Mindful Subjects were selected. These Subjects were given Oxford Happiness Questionnaire to assess their Level of Happiness. There were 84 Subjects in Experimental Group, with 34 High Mindful Subjects (16 Boys + 18 Girls) and 50 Low Mindful Subjects (25 Boys + 25 Girls) and in Control Group there were 83 Subjects with 34 High Mindful Subjects (16 Boys + 18 Girls) and 49 Low Mindful Subjects (24 Boys + 25 Girls). The description of the Measures is as follows:-

iii) Measures

i. Freiburg Mindfulness Inventory: The FMI was developed by Buchheld, Grossman, and Walach in 2001 as a quantitative measure for self-



- evaluation of mindfulness to be used in research assessing changes in mindfulness pre and post-mindfulness meditation. The measure was originally written in German, and later revised and translated into English (Walach, Bucchheld, Buttenmuller, Kleinknecht and Schmidt, 2006). Statements like "I am open to the experience of the present moment," are rated on a four-point scale from 1 (rarely) to 4 (always). These are simply added up for the raw score. Item 13 is reverse scored. Scores range from 14 to 56 and higher scores indicate a greater degree of mindfulness. The Freiburg Mindfulness Inventory served as a manipulation check on participants' ability to engage in a "mindful" state, and was also used to measure changes in mindfulness that resulted from the training. Walach et al. (2006) created a short form with 14 items that appeared robust and statistically sound (Cronbach's $\alpha = .79$, $\text{rit} = .21$), internal consistency was found to be high $r = .87$ (Walach, Buchheld, Buttenmuller, Kleinknecht, & Schmidt, 2006). It conceptualizes mindfulness as a unidimensional construct with highly correlated factors of "presence" and "acceptance" (Kohls, Sauer & Walach, 2009).
- ii. **The Oxford Happiness Questionnaire:** The Oxford Happiness Questionnaire by developed by Hills & Argyle (2002). An improved instrument, the Oxford Happiness Questionnaire (OHQ), has been derived from the Oxford Happiness Inventory, (OHI). The revised instrument is compact, easy to administer and allows endorsements over an extended range. When tested against the OHI, the validity of the OHQ was satisfactory and the associations between the scales and a battery of personality variables known to be associated with well-being were stronger for the OHQ than for the OHI. OHQ is a compact scale for the measurement of psychological well-being consists of 29 items, each presented as a single statement which can be endorsed on a uniform six-point Likert scale. The OHQ demonstrated Cronbach's alpha of 0.90 were reported (Robbins, Francis & Edwards, 2010). Further 12 items marked i.e. 1, 5, 6, 10, 13, 14, 19, 23, 24, 27, 28, 29 should be scored in reverse. The highest score for an item is 6, and the lowest is 1. Add the numbers for all 29 questions (Use the converted numbers for the 12 items that are reverse scored) and divide the total by 29 which will give the final score (Hills & Argyle, 2002). This sum of the item scores is an overall measure of happiness, with high scores indicating greater happiness.
- iii. **Yoga Intervention:** Yoga schedule was based on the program used by Shirley Telles, Nilkamal Singh, Abhishek Kumar Bhardwaj, Ankur Kumar and Acharya Balkrishna in 2013 (Telles et al., 2013) was followed in the Yoga workshop. It comprises of Om Chanting, Meditation, Pranayamas (Yoga Breathing Techniques), Bandhas Mudras, Asanas (Physical Postures) and Yoga Relaxation techniques. The Subjects were given Yoga Intervention for one months, in during the school timing. The duration of Yoga session was 30 to 40 minutes per day. The Subjects were informed about the procedure and precautions that they have to keep in mind while performing Yoga.
- iv. **Procedure:** The objective of the present study was to identify the Level of Happiness among the High and Low Mindful Subject one the one hand and on the other to provide Yoga Intervention to the students differing in Mindfulness. The study has been conducted on the preliminary sample of $n = 2000$ Subjects. More appropriately, the Freiburg Mindfulness Inventory was given to the Subjects and on the basis of the scores High and Low Mindful Subjects were selected. These Subjects were given Oxford Happiness Questionnaire to assess their Level of Happiness. There were 84 Subjects in the Experimental Group comprising of 34 High Mindful Subjects (16 Boys + 18 Girls) and 50 Low Mindful Subjects (25 Boys + 25 Girls) and in the Control Group there were 83 Subjects comprising of 34 High Mindful Subjects (16 Boys + 18 Girls) and 49 Low Mindful Subjects (24 Boys + 25 Girls). Only the Subjects of Experimental Group were given Yoga Intervention. Oxford Happiness Questionnaire was again given to both the Groups at Post-Test Level. The score was calculated, tabulated and analyzed as follows:-

3. RESULTS

The study has been conducted on 167 Subjects that comprises of 84 Subjects in the Experimental Group with 34 High Mindful Students (16 Boys + 18 Girls) and 50 Low Mindful Subjects (25 Boys + 25 Girls) and 83 in Control Group with 34 Subjects in High Mindful Group (16 Boys + 18 Girls) and 49 Subjects in Low Mindful Group (24 Boys + 25 Girls). These Subjects were given Oxford Happiness Scale. The obtained score of Experimental and Control Group at Pre-Test and Post-Test Level is as follows: -



Table 1.1: Average Score of High and Low Mindful High School Students of Himachal Pradesh on the Measure Happiness

Experimental Group							
Level of Mindfulness	Pre-Test			Level of Mindfulness	Post-Test		
	Gender wise Score		Average		Gender wise Score		Average
	Boys	Girls			Boys	Girls	
HM	19.03	18.19	18.61	HM	21.42	20.96	21.19
LM	17.70	17.27	17.49	LM	20.81	19.88	20.35
Average	18.37	17.73	18.05	Average	21.11	20.42	20.77

Control Group							
Level of Mindfulness	Pre-Test			Level of Mindfulness	Post-Test		
	Gender wise Score		Average		Gender wise Score		Average
	Boys	Girls			Boys	Girls	
HM	18.95	20.20	19.57	HM	19.05	20.39	19.72
LM	18.43	18.30	18.37	LM	18.60	18.25	18.42
Average	18.69	19.25	18.97	Average	18.83	19.32	19.07

Notations: HM = High Mindfulness and LM = Low Mindfulness

The average score of High Mindful Subject in the Experimental Group was 18.61 that increased to 21.19 after Yoga Intervention. No significant difference was found in the Subjects of Control Group, as the Score of High Mindful Students was 19.57 at Pre-Test Level and 19.72 at Post-Test Level. Here it is quite clear that the Yoga Intervention has proved effective in promoting the Happiness among the High Mindful School Students. Similarly, the score of Low Mindful Subjects in the Experimental Group was 17.49 that increased to 20.35. It again verifies the efficacy of Yoga Intervention for Low Mindful Subjects as well. But slight difference was found between Boys and Girls in their Happiness Score in the Experimental and the Control Group. In order to know the impact of Yoga Intervention 2 x 2 x 2 ANOVA Repeated Measure was applied whose description is as follows:-

Table 1.2: A 2 x 2 x 2 ANOVA Repeated Measure Performed on the measure of Happiness among High and Low Mindful High School Students of Himachal Pradesh

Source	SS	df	MS	F	p
Between-Subjects Effects					
M	99.654	1	99.654	10.316	<.01
G	.437	1	.437	.045	n.s
M x G	12.566	1	12.566	1.301	n.s
Error-I	1574.538	163	9.660		
Within-Subjects Effects					
Y	162.154	1	162.154	74.882	<.01
Y x M	.242	1	.242	.112	n.s
Y x G	.120	1	.120	.056	n.s
Y x M x G	2.030	1	2.030	.937	n.s
Error-II	352.969	163	2.165		

Notations: M= Mindfulness, G= Gender and Y= Yoga Intervention
SS= Sum of Squares, df= Degree of Freedom, MS= Mean Square, F= Frequency, p= Significance

The main effect of Mindfulness on the measure of Happiness was found $F(1, 163) = 10.316, p < .01$ as statistically significant. The average score of High Mindful Subjects was 19.09 whereas of Low Mindful Subjects as 17.93. High Mindful Subjects were happier

in their Life as compared to their Low Mindful Subject counterparts.

The main effect of Gender on the measure of Happiness was found $F(1, 163) = .045, p > .05$ as statistically non-significant. The average score of the Boys on the measure of Happiness was 18.53 whereas of Girls as 18.49. The Boys were slightly better in Happiness compared to the Girls. However, the difference was statistically non-significant.

The main effect of Yoga Intervention was found $F(1, 163) = 74.882, p < .01$ as statistically significant. Average score of High School Students before Yoga Intervention in the Experimental Group was 18.05 that increased to 20.77 after Yoga Intervention. It reflects the efficacy of Yoga Intervention in Experimental Group whereas non-significant difference was observed in Control Group, where there were not many changes in Pre-Test Level (18.97) and Post-Test Level (19.07) scores. Thus, we can say that Yoga Intervention has proved effective in promoting the Happiness among the High School Students.

The two-way interaction between Y x M was found $F(1, 163) = .112, p > .05$, as statically non-significant. Similarly, the two-way interaction between Y x G was found $F(1, 163) = .056, p > .05$ as statically non-significant. The three-way interaction between Y x M x G was found $F(1, 163) = .937, p > .05$ as statistically non-significant.

4. CONCLUSION

The present study was conducted on a preliminary sample of $n = 2000$ High School Students with 12 to 16 years of age who were given Mindfulness Scale to perform so as to identify their High and Low Mindfulness Level. A final sample of $n = 167$ Subjects was selected based on the Mindfulness Score from the aforesaid sample. There were 84 Subjects in the Experimental Group with 34 High Mindful (16 Boys + 18 Girls) and 50 Low Test Subjects (25 Boys + 25 Girls) and 83 in the Control Group with 34 High Mindful (16 Boys + 18 Girls) and 49 Low Mindful (24 Boys + 25 Girls). These Subjects were given Oxford Happiness Questionnaire to perform so as to know its degree. The Experimental Group was given Yoga Intervention Schedule as developed by Shirley Telles, Nilkamal Singh, Abhishek Kumar Bhardwaj, Ankur Kumar and Acharya Balkrishna in 2013. It includes Om Chanting, Meditation, Pranayamas (Yoga Breathing Techniques), Bandhas, Mudras, Asanas (Physical Postures) and Yoga Relaxation Techniques practiced every day 30 to 40 minutes in a month. The Control Group received no Yoga Intervention but just engaged in general talks. On the raw scores a 2 x 2 x 2 ANOVA Repeated Measure was performed. Results revealed that the main effect of Mindfulness on measure of Happiness was found $F(1, 163) = 10.316, p < .01$ as statistically significant wherein High Mindful Subjects reported more Happiness in their Life (19.09)



as compared to their Low Mindful Subject counterparts (17.93). The main effect of Gender on the measure of Happiness was found $F(1, 163) = .045$, $p > .05$ as statistically non-significant. But, the main effect of Yoga Intervention was found $F(1, 163) = 74.882$, $p < .01$ as statistically significant wherein the Happiness in the High School Students in Experimental Group increased from 18.05 to 20.77 after Yoga Intervention and no difference was found in Control Group at Pre-Test (18.97) and Post Test-Level (19.07). The two-way interaction between $Y \times M$ was found $F(1, 163) = .112$, $p > .05$, as statically non-significant. Similarly, the two-way interaction between $Y \times G$ was found $F(1, 163) = .056$, $p > .05$ as statically non-significant. The three way interaction between $Y \times M \times G$ was found $F(1, 163) = .937$, $p > .05$ as statistically non-significant.

To conclude, the study revealed that the High Mindful Subjects are happier in their Life as compared to the Low Mindful Subjects. There is a great competition in Present Time. The cutthroat competition has abruptly increased in school, colleges and university. Now a days students who are high mindful and more happy in their Life get success in their academic. To improve the level of Mindfulness and Happiness, the Yoga has further proved very effective.

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