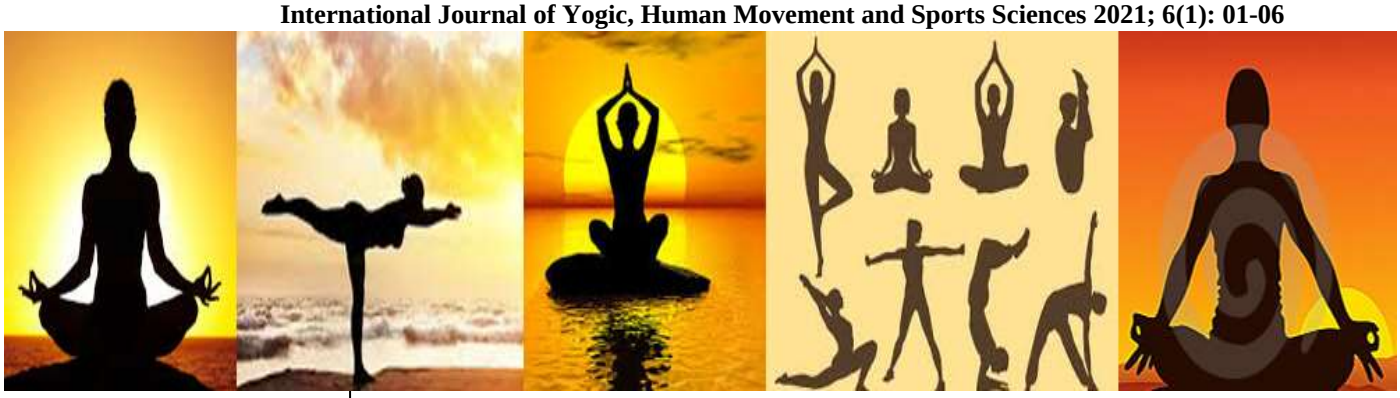
International Journal of Yogic, Human Movement and Sports Sciences 2021; 6(1): 01-06



ISSN: 2456-4419
Impact Factor: (RJIF): 5.18
Yoga 2021; 6(1): 01-06

www.theyogicjournal.com
Received: 25-10-2020
Accepted: 02-12-2020

Karan Singh
B.A. Hons., Applied Psychology, Final Year, Sri Aurobindo College, Evening, University of Delhi, New Delhi, India

Aftab Ahmad Jaan
Research Scholar, JS University, Shikohabad, Uttar Pradesh, India

Corresponding Author:
Karan Singh
B.A. Hons., Applied Psychology, Final Year, Sri Aurobindo College, Evening, University of Delhi, New Delhi, India

A study of different yogic and naturopathic interventions on reactions to frustration

Karan Singh and Aftab Ahmad Jaan

Abstract
The main objective of present study was to compare the effect of three methods of relaxation namely 1) Hatha Yoga-intermittent fasting, 2) Aerobics & sauna bath and 3) General relaxation on frustration level amongst female practitioners in the age group of 21 to 27 years from different educational institutions of Delhi. A sample of 80 female yoga and fitness enthusiasts (28 in Hatha Yoga and intermittent fasting group, 21 in general relaxation group and 31 in aerobics and sauna bath group) in the age group of 21 to 27 years were being studied for 7 weeks. Reactions to Frustration Scale (RFS) constructed and standardized by Dr. B.M. Dixit and Dr. D.N. Srivastava (2004) was being implemented. Descriptive statistics like mean, standard deviation ANOVA was used with the help of SPSS 25 statistical package. The findings revealed that there was significant main effect for the method/technique of relaxation used on level of frustration. Multiple comparison was being done further in which the Hatha Yoga/fasting group was found to have significantly lower level of frustration at $p>0.1$ on aggression, fixation, regression, resignation and in total score in comparison to general relaxation group and aerobics/ sauna bath group. Further the aerobics/sauna bath group was found to be better than general relaxation group on level of frustration ($p<.01$).

Keywords: Reaction to frustration, hatha yoga, aerobics, general relaxation

Introduction
Emotional disturbances amongst the youth in the present times might result in many psychosomatic problems such as anxiety, tensions, frustrations and emotional disturbances in day to day life. Frustration is the one of these important reactions to stresses and is a common but less discussed and studied emotional response. Some researchers have associated this to anger and disappointment arising from the perceived resistance to the fulfillment of individual needs, desires and expectations. The greater the resistance, the more the frustration is likely to be. Internal frustration may arise from inability to achieve personal goals and desires, instinctual drives and needs, or dealing with perceived deficiencies such as a career goal, lock down due to some pandemic, inability to play sports due to injury, so on and so forth. External causes of frustration involve conditions outside an individual control, such as getting stuck up in a traffic jam while going for n important work or exam or some difficult task that is time bound and too demanding. Individual differences play an important part in coping with frustration depending upon one's gentic factors, level of education, culture and gender to name a few. Some individuals may engage in passive-aggressive behaviour, making it difficult to identify the original cause(s) of their frustration, as the responses could be indirect. Frustration has been defined as the psychological state which results from the blocking of a goal-directed activity (Kisker, 1964) [3]. For the purpose of this study, we have adopted the following statement of frustration. It is the feeling of being blocked in satisfying a need or attaining a goal that the individual perceives as significant. An example of blockage of motivational energy would be the case of a soldier who wants time off to go and attend to his ailing family member but is denied permission by his/her superior. In all likelihood, the frustrated individual may resort to less adaptive methods of trying to reach the goal. He/she may, for example, attack the barrier physically, verbally, or both. When a person's striving are thwarted either by obstacles that block progress toward a desired goal or by absence of an appropriate goal, frustration occurs.

Frustrations are often particularly difficult for a person to cope with because they can lead to low self esteem, making the individual feel that he or she has failed in some way or is incompetent to handle the task or challenge.

The reactions to frustration and its sub scales as studied here are also known as Defense Mechanisms. These defense mechanisms are so called as they try to defend individuals from the psychological effects of a blocked goal. When some employees get frustrated, they become tensed and irritable. They experience an uneasy feeling in their stomach and also might show various other subsequent or parallel reactions of frustration. Following are the various types of reactions to frustration:

1. Resignation: also known as with drawl. Behaviors such as asking for asking to change the PhD supervisor or quitting a job.
2. Fixation: Attaching oneself in an un reasonable or exaggerated way to some person or arrested emotional development during childhood or adolescent level. In this the individual might hold his/her elders for his/her problems, without having a deep insight.
3. Aggression: means the intent of harming the others (living or non-living like hitting a wall or driving recklessly. It is one of the most persistent and frequent responses to frustration.
4. Regression: this is considered as an alarming stage. For example, behaving in an immature and childish manner and developing self-pity (to feel sorry for oneself).

The primary objective of the study was to compare the physically active groups amongst themselves for their reactions to frustration and its sub-scales.

Procedure

The main objective of present study was to compare the effect of three methods of relaxation namely 1) Hatha Yoga-intermittent fasting, 2) Aerobics & sauna bath and 3) General relaxation on frustration level amongst female practitioners in the age group of 21 to 27 years from different educational institutions of Delhi. A sample of 80 female yoga and fitness enthusiasts (28 in Hatha Yoga and intermittent fasting group, 21 in general relaxation group and 31 in aerobics and sauna bath group) in the age group of 21 to 27 years were being studied for 7 weeks. Research question- Does the type of activity depend on the reactions to frustration?

Therefore -"The main objective of study was to compare the three groups (N=80).

1. Hatha yoga-fasting (45 minutes yoga class and time restricted fasting-16:8) group (28),
2. Aerobics –sauna bath (30 minutes low to moderate intensity and 15 minutes sauna bath) group (18),
3. General relaxation (lie down in shavasana and 45 minutes instructions to focus from top to bottom) group (21),

Frustration level was measured using RFS scale (pre-post) amongst female practitioners from different educational institutions of Delhi.

Online classes during CORONA lockdown were conducted. Instructions for add-on interventions were also given online. Reactions to Frustration Scale (RFS), constructed and standardized by Dr. B.M. Dixit and Dr. D.N. Srivastava (2004) [1] was being implemented. This scale covers four reactions namely-aggression, resignation, fixation and regression to meet the growing demands of the psychologists engaged in the measurement of reaction to frustration. It consists of 40 items out of which each reaction to frustration has 10 items equally divided into positive and negative items. The test items are presented as simple statements with six alternative responses.

Table 1: Shows item distribution in the various reactions to frustration.

Item distribution in RFS				
S. No	**Reactions to Frustration**	**Si. No. of Positive Items**	**Si. No. of Negative Items**	**Total**
1	Aggression (AGG)	1-5	21-25	10
	Resignation (RES)	6-10	26-30	10
3	Fixation (FIX)	11-15	31-35	10
4	Regression (REG)	16-20	36-40	10=40

Reliability

The test has sufficient degree of reliability. The reliability of the RFs was determined by two methods – test-retest method and method of internal consistency. The test-retest reliability of the test ranges from 0.62 to 0.82 and the internal consistency reliability ranges from 0.61 to 0.78. All these reliability coefficients use high and significant.

Validity

The scale was validated against Nairashya Mapa by Chauhan (1972), Verbal Frustration Test by Muthayya (1976) and Situational Test of Frustration by Malviya (1977). The validity against different criteria ranged from 0.42 to 0.80. Obtained correlation coefficient was found significant, providing evidence for sufficient degree of validity coefficient.

Table 2: Norms for interpretation of frustration level response

Percentile	Agg	Res	Fix	Reg	Total	Interpretation
100	39	44	45	44	159	Very High Frustration
95	35	38	39	42	130	
90	32	32	35	39	121	
80	28	29	33	36	115	
75(Q_3)	27	28	32	34	113	High Frustration
70	26	27	31	32	110	
60	24	26	29	31	107	
50 (Md)	23	24	27	30	104	Average Frustration
40	21	23	25	28	101	
30	20	21	23	26	96	Low Frustration

25(Q_1)	19	20	22	23	94	
20	17	19	21	21	91	
10	14	15	16	19	84	Very Low Frustration
5	11	13	12	16	72	

Hypothesis

a. Is there a main effect for type of activity being practiced by the subjects? That is, do practitioners group differ significantly in their frustration level?

b. If yes then and which group is better than the other and to what extent.

Results and discussion

Table 3: Descriptive statistics showing mean and standard deviation of type of activity and level of frustration sub factors

Reaction to Frustration variable	Type of Activity	Mean	Std. Deviation	N
Aggression	Hatha Yoga rel	18.821	2.1951	28
	Aerobics & rel	20.258	1.1823	31
	General Rel	20.952	2.0850	21
	Total	19.937	2.0084	80
Fixation	Hatha Yoga rel	22.964	2.0089	28
	Aerobics & rel	25.225	1.9614	31
	General Rel	27.047	2.4591	21
	Total	24.912	2.6394	80
Regression	Hatha Yoga rel	25.571	2.7001	28
	Aerobics & rel	29.064	2.7439	31
	General Rel	31.428	3.1236	21
	Total	28.462	3.6420	80
Resignation	Hatha Yoga rel	20.964	2.0454	28
	Aerobics & rel	22.838	1.8456	31
	General Rel	23.952	2.2688	21
	Total	22.475	2.3383	80
Total Level of Frustration	Hatha Yoga rel	88.321	5.3545	28
	Aerobics & rel	97.387	6.2539	31
	General Rel	103.381	7.7812	21
	Total	95.787	8.7217	80

Descriptive statistics table-3 shows that the mean and standard deviation values for Hatha yoga and relaxation group on aggression variable was 18.82±2.19, for aerobics and relaxation group on aggression variable it was 20.25±1.18, for general relaxation group on aggression variable it was 20.25 ± 2.08. Mean and standard deviation values for Hatha yoga and relaxation group on fixation was 22. 96 ± 2.00, for aerobics and relaxation group on fixation variable it was 25.22± 1.96, for general relaxation group on fixation variable it was 27.04 2.45. Mean and standard deviation value for Hatha yoga relaxation group on regression variable was 25.57 ± 2.70, for aerobics and relaxation group on regression variable it was 29.06 ± 2.74, for general relaxation group on regression variable mean and standard deviation values was 31.42 ± 3.12. Mean and standard deviation value for hatha yoga relaxation group on resignation variable was 20.96 ± 2.04. For aerobics and relaxation group on resignation value it was 22.83 ± 1.84, for general relaxation group on resignation variable mean and standard deviation value was 23.95 ± 2.26. Mean and standard deviation value of hatha yoga relaxation group on total level of frustration was 88.32 ± 5.35, for relaxation and aerobics group on total level of frustration variable mean and standard deviation value was 97.38 ± 6.25. Mean and standard deviation for general relaxation group on total level of frustration variable was 103.38 ± 7.78. These initial statistics (presented in table-3) suggest that the Hatha yoga and relaxation group was better than the other two groups on all the variables of reaction to frustration. Similarly the aerobics with relaxation group was better than the general relaxation group on all the five reaction to frustration variables.

Table 4: Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Observed Power[d]
Intercept	Pillai's Trace	1.00	4355.674[b]	4	74.00	0.00	0.996	1.00
	Wilks' Lambda	0.00	4355.674[b]	4	74.00	0.00	0.996	1.00
	Hotelling's Trace	235.44	4355.674[b]	4	74.00	0.00	0.996	1.00
	Roy's Largest Root	235.44	4355.674[b]	4	74.00	0.00	0.996	1.00
Type of activity/relaxation method used	Pillai's Trace	0.49	6.059	8	150.00	0.00	0.244	1.00
	Wilks' Lambda (Ʌ)	0.51	7.298[b]	8	148.00	0.00	0.283	1.00
	Hotelling's Trace	0.94	8.571	8	146.00	0.00	0.320	1.00
	Roy's Largest Root	0.93	17.505[c]	4	75.00	0.00	0.483	1.00

a. Design: Intercept + type of activity/relaxation method used

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

d. Computed using alpha = .05

Table-4 presents four lines of data, each of which represents a calculation for multivariate significance (we are concerned only with the outcomes reported in the 'Type of activity/relaxation method used'; we ignore 'Intercept'). Wilks' Lambda (ʎ) was the best option here as we have three groups. That line of data is highlighted in yellow in table-4. We have a significant multivariate effect for the combined dependent variables of reaction to frustration in respect of the type of activity/relaxation method adopted: ʎ= 0.51, F (8, 148) = 7.298, $p < .001$).

Table 5: Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Observed Power[f]
Corrected Model	Aggression	59.692[a]	2	29.846	8.873	0.00	0.187	0.967
	Fixation	205.051[b]	2	102.526	22.86	0.00	0.373	1
	Regression	430.017[c]	2	215.008	26.795	0.00	0.41	1
	Resignation	113.840[d]	2	56.92	13.778	0.00	0.264	0.998
	Total Level of Frustration	2850.973[e]	2	1425.487	34.752	0.00	0.474	1
Intercept	Aggression	31177.29	1	31177.29	9269.101	0.00	0.992	1
	Fixation	48971.75	1	48971.75	10919.29	0.00	0.993	1
	Regression	64080.04	1	64080.04	7985.75	0.00	0.99	1
	Resignation	39715.68	1	39715.68	9613.358	0.00	0.992	1
	Total Level of Frustration	723001.3	1	723001.3	17626.28	0.00	0.996	1
Type of activity/relaxation method used	Aggression	59.692	2	29.846	8.873	0.00	0.187	0.967
	Fixation	205.051	2	102.526	22.86	0.00	0.373	1
	Regression	430.017	2	215.008	26.795	0.00	0.41	1
	Resignation	113.84	2	56.92	13.778	0.00	0.264	0.998
	Total Level of Frustration	2850.973	2	1425.487	34.752	0.00	0.474	1
Error	Aggression	258.995	77	3.364				
	Fixation	345.336	77	4.485				
	Regression	617.871	77	8.024				
	Resignation	318.11	77	4.131				
	Total Level of Frustration	3158.414	77	41.018				
Total	Aggression	32119	80					
	Fixation	50201	80					
	Regression	65857	80					
	Resignation	40842	80					
	Total Level of Frustration	740029	80					
Corrected Total	Aggression	318.687	79					
	Fixation	550.388	79					
	Regression	1047.887	79					
	Resignation	431.95	79					
	Total Level of Frustration	6009.388	79					

a. R Squared = .187 (Adjusted R Squared = .166)
b. R Squared = .373 (Adjusted R Squared = .356)
c. R Squared = .410 (Adjusted R Squared = .395)
d. R Squared = .264 (Adjusted R Squared = .244)
e. R Squared = .474 (Adjusted R Squared = .461)
f. Computed using alpha = .05

Table-5 suggests that all the five dependent variables differed significantly in respect of the independent variable (Type of relaxation method used): Aggression: F (2, 77) = 29.846, p = .000;Fixation: F (2, 77) = 102.526, p = .000; regression: F (2, 77) = 215.088, p = .000;Resignation: F (2, 77) = 56.92, p = .000; Total level of frustration: F (2, 77) = 1425.487, p = .000.

Table 6: Post hoc Test showing Multiple Comparisons on method of Relaxation used

Tukey HSD							
Dependent Variables			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Aggression	Hatha Yoga Relaxation	Aerobics & Relaxation	-1.4366*	0.478	0.01	-2.58	-0.29
		General Relaxation	-2.1310*	0.529	0.00	-3.40	-0.87
	Aerobics & Relaxation	Hatha Yoga Relaxation	1.4366*	0.478	0.01	0.29	2.58
		General Relaxation	-0.6943	0.518	0.38	-1.93	0.54
	General Relaxation	Hatha Yoga Relaxation	2.1310*	0.529	0.00	0.87	3.40
		Aerobics & Relaxation	0.6943	0.518	0.38	-0.54	1.93
Fixation	Hatha Yoga Relaxation	Aerobics & Relaxation	-2.2615*	0.552	0.00	-3.58	-0.94
		General Relaxation	-4.0833*	0.611	0.00	-5.54	-2.62

	Aerobics & Relaxation	Hatha Yoga Relaxation	2.2615*	0.552	0.00	0.94	3.58
		General Relaxation	-1.8218*	0.599	0.01	-3.25	-0.39
	General Relaxation	Hatha Yoga Relaxation	4.0833*	0.611	0.00	2.62	5.54
		Aerobics & Relaxation	1.8218*	0.599	0.01	0.39	3.25
Regression	Hatha Yoga Relaxation	Aerobics & Relaxation	-3.4931*	0.739	0.00	-5.26	-1.73
		General Relaxation	-5.8571*	0.818	0.00	-7.81	-3.90
	Aerobics & Relaxation	Hatha Yoga Relaxation	3.4931*	0.739	0.00	1.73	5.26
		General Relaxation	-2.3641*	0.801	0.01	-4.28	-0.45
	General Relaxation	Hatha Yoga Relaxation	5.8571*	0.818	0.00	3.90	7.81
		Aerobics & Relaxation	2.3641*	0.801	0.01	0.45	4.28
Resignation	Hatha Yoga Relaxation	Aerobics & Relaxation	-1.8744*	0.530	0.00	-3.14	-0.61
		General Relaxation	-2.9881*	0.587	0.00	-4.39	-1.59
	Aerobics & Relaxation	Hatha Yoga Relaxation	1.8744*	0.530	0.00	0.61	3.14
		General Relaxation	-1.1137	0.574	0.13	-2.49	0.26
	General Relaxation	Hatha Yoga Relaxation	2.9881*	0.587	0.00	1.59	4.39
		Aerobics & Relaxation	1.1137	0.574	0.13	-0.26	2.49
Total Level of Frustration	Hatha Yoga Relaxation	Aerobics & Relaxation	-9.0657*	1.670	0.00	-13.06	-5.08
		General Relaxation	-15.0595*	1.849	0.00	-19.48	-10.64
	Aerobics & Relaxation	Hatha Yoga Relaxation	9.0657*	1.670	0.00	5.08	13.06
		General Relaxation	-5.9939*	1.810	0.00	-10.32	-1.67
	General Relaxation	Hatha Yoga Relaxation	15.0595*	1.849	0.00	10.64	19.48
		Aerobics & Relaxation	5.9939*	1.810	0.00	1.67	10.32

Based on observed means.
The error term is Mean Square (Error) = 41.018.
*. The mean difference is significant at the .05 level.

Since we had three groups for our independent variable, post hoc test was being used to explore the source of the significant difference. Table-6 presents the post hoc tests using the Tukey HSD outcome.

1. Table-5 and 6 shows that on aggression variable, the Hath yoga relaxation group was having significantly less severe reaction to frustration as compared to aerobics and relaxation group (p = .01) and the general relaxation group (p = .00). There was no significant difference between aerobics and relaxation group vs general relaxation group (p=0.38) on aggression.
2. On fixation variable Hatha yoga relaxation group showed significantly less severe reaction in comparison with aerobics and relaxation group (p = .00) and general relaxation group (p = .00). There was significantly lower fixation level among aerobics and relaxation group than general relaxation group (p=0.01).
3. On regression variable Hatha yoga relaxation group showed significantly less severe reaction than aerobics and relaxation group (p = .00) and same as for the general relaxation group (p = .00). There was significantly lower regression level among aerobics and relaxation group than general relaxation group (p=0.01).
4. On resignation variable Hatha yoga relaxation group showed significantly less severe reaction than aerobics and relaxation group (p = .00) and lesser than general relaxation group (p = .00). There was no significant difference on resignation level between aerobics and relaxation group and general relaxation group (p=0.13).
5. Total value of level of frustration variable of Hatha yoga relaxation group was significantly less than the aerobics and relaxation group (p = .00) and also significantly less than the general relaxation group (p = .00). There was also significant lower total frustration level among aerobics and relaxation group as compared to general relaxation group (p=.00).

Very limited closely related studies were found upon literature review. To quote two of the most suitable ones, Parthasarathy S *et al*. (2014) [4] in their study on Effect of Integrated Yoga Module on Selected Psychological Variables among Women with Anxiety Problem found that the selected yoga and asanas decreased anxiety and frustration scores but treatment with an integrated yoga module resulted in significant reduction of anxiety and frustration in women, and yoga as an integrated module significantly improved anxiety scores in young women with proven anxiety without any ill effects.

In contrast to the present study, Vollbehr NK *et al*. (2018) [6] in their study entitled "Hatha yoga for acute, chronic and/or treatment-resistant mood and anxiety disorders: A systematic review and meta-analysis found eighteen studies, fourteen in acute patients and four in chronic patients. Most studies were of low quality. For depression outcomes, hatha yoga did not show a significant effect when compared to treatment as usual, an overall effect size of Cohen's d -0.64 (95% CI = -1.41, 0.13) or to all active control groups, Cohen's d -0.13 (95% CI = -0.49, 0.22). A sub-analysis showed that yoga had a significant effect on the reduction of depression compared to psycho education control groups, Cohen's d -0.52 (95% CI = -0.96, -0.08) but not to other active control groups, Cohen's d 0.28 (95% CI = -0.07, 0.63) Regarding anxiety, hatha yoga had no significant effect when compared to active control groups, Cohen's d -0.09 (95% CI = -0.47, 0.30). The I2 and Q-statistic revealed heterogeneity amongst comparisons. Qualitative analyses suggest some promise of hatha yoga for chronic populations. The researchers further said that the ability to draw firm conclusions is limited by the notable heterogeneity and low quality of most of the included studies. With this caveat in mind, the results of the this meta-analysis suggest that hatha yoga does not have effects on acute, chronic and/or treatment-resistant mood and anxiety disorders compared to treatment as usual or active control groups. However, when compared to psycho education, hatha yoga showed more reductions in depression. The researchers said it is clear that more high-quality studies are needed to advance the field.

Conclusion

Main effect of type of method/technique being practiced on frustration level is highly significant means that the 3 groups differ in their frustration level. In summary, the multivariate

analyses indicated that the Hatha yoga group differed significantly in respect of frustration level; those dependent variables were not too highly correlated. Subsequent univariate analyses showed that there were significant effects for type of relaxation method adopted on level of frustration and (separately) in respect of scores. Tukey post hoc analysis suggested that Hatha yoga group were significantly less frustrated than aerobics and general relaxation groups, and that aerobics group was significantly less frustrated than general relaxation group but the frustration response was not better than that of Hatha yoga group. Below is the graphical representation of scores of all the 3 groups (independent variables) on 5 levels of frustration.

References

1. Dixit BM, Srivastava DN. Reactions to Frustration Scale. National Psychological Corporation, Agra 2004.
2. Freud S. New Introductory Lectures on Psycho-analysis. New York, Norton, 1933.
3. Kisker GW. The disorganized personality. McGraw-Hill 1964.
4. Parthasarathy S, Jaiganesh K, Duraisamy. Effect of Integrated Yoga Module on Selected Psychological Variables among Women with Anxiety Problem. West Indian Med J 2014;63(1):78-80. doi:10.7727/wimj.2012.054
5. Stagner R. Psychology of Personality, (3rd Ed.) New York: McGraw Hill, 1961.
6. Vollbehr NK, Bartels-Velthuis AA, Nauta MH, *et al*. Hatha yoga for acute, chronic and/or treatment-resistant mood and anxiety disorders: A systematic review and meta-analysis [published correction appears in PLoS One 2019;14(5):e0216631. PLoS One 2018;13(10):e0204925. Published 2018 Oct 1. doi:10.1371/journal.pone.0204925