CUMULATIVE IMPACT OF YOGA PRACTICE ON QUALITY OF LIFE

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ABSTRACT: The present study was conducted with two main objectives. First it aims to experiment whether the ancient system of yoga can bring about change in the quality of life of its practitioners. The second objective was to study the cumulative impact of yoga practice on Quality of Life. The study was conducted on four independent groups of yoga practitioners that varied in their length of experience in yoga practice. The first group comprised of 76 subjects (49 male and 27 female) with a mean age of 39 years (SD=9.8). All the participants in this group are novice practitioners. They have participated in the study immediately after their admission into yoga class. The second group comprised of 23 subjects (14 male and 9 female) with a mean age of 34.2 years (SD= 11.07). Their length of experience in yoga practice is 3 months. The third group comprised of 18 subjects (11male and 7 female) with a mean age of 33.83 years (SD=9.33). Their length of experience in yoga practice is six months. The fourth group comprised of 17 subjects (11 male and 6 female) with a mean age of 32.8 years (SD=9.5). Their length experience is 12 months.

All the four independent groups were administered a questionnaire on Quality of Life (WHOQOL-BREF). The results on QOL gave scores on total quality of life and separate scores on Domain 1 (dealing with physical health) Domain 2 (dealing with psychological aspects), Domain 3 (dealing with social relationships) and Domain 4 (dealing with environmental aspects).

The obtained data was statistically analyzed. The results revealed that novice yoga practitioners and short-term yoga practitioners who have three months and six months experience in yoga practice did not differ significantly on any of the quality of life scores. However, there is statistically significant difference between novice yoga practitioners and twelve months experience group. These two groups differed on the total quality of life score ($p < 0.01$), and also on all the four domains of quality of life (Domain1 $p<0.01$, Domain2 $p<0.01$, Domain3 $P<0.01$and Domain4 $p<0.01$). Statistical analysis revealed that three months experience group and twelve months experience group also differed significantly on their total quality of life scores ($p<0.05$) and all the domains of quality of life (Domain1 $p<0.01$, Domain2 $p<0.01$, Domain3 $P<0.01$and Domain4 $p<0.05$).

From the results obtained in the present study it appears that yoga practice has cumulative impact on Quality of Life. Long-term yoga practice improves quality of life in its practitioners. People who practice yoga for longer duration have a better quality of life than novice practitioners and short-term yoga practitioners as measured by WHO Quality of Life – BREF Questionnaire.

CUMULATIVE IMPACT OF YOGA PRACTICE ON QUALITY OF LIFE One common element that one finds from cave man to the civilized man in the modern society is constant striving to improve his quality of life. This striving is behind every invention that we see in the history of mankind; from the invention of cooking food, the wheel and to the modern technological development in almost every field. Quality of life does not mean the standard of living, which is based primarily on income. Instead, standard indicators of quality of life include not only wealth and employment, but also the built environment, physical and mental health, education, recreation and leisure time, and social belonging. Quality of Life (QOL) is seen as the product of the interaction of all these different factors --social, health, economic, and environmental conditions -- which cumulatively, and often in unknown ways, interact to affect both human and social development at the level of individuals and societies. It is "the notion of human welfare (well-being) measured by social indicators rather than by ""quantitative"" measures of income and production." (United Nations Glossary 2009).

One of the most commonly accepted measure of the quality of life is the individual estimation of one's happiness. The debates over quality of life and of what maximizes it started from the Antiquity. Aristotle in Eticanicomahica used for the first time the term “eudaimonia”, Greek for “happiness”. Aristotle argues that the highest good for human beings is happiness. He insists that every action performed by humans is to pursue happiness. Aristotle also argues that human action is always aimed at some end or good. This "good" may not be viewed as a good action or any good by others, but for the doer of the good action, the activity will be perceived as good and that it will bring a favourable outcome.

In 1990, the leading ethnographer, Robert Edgerton suggested that the term Quality of Life (QOL) was the “Shibboleth” of the 1990’s (1990; 149). The term Shibboleth implies not only the importance of the concept but also the contentious nature of the field and the potential upshot of QOL research. In public life and social sciences, the notion of QOL has come- since the 1960’s- to be a routinely invoked concept. The term appears in the discussion of everything from the relative liveability of towns, cities, and nations to the aims and effects of social policy, to the relative benefits of differing models of human services provision. This does not suggest that questions about what constitutes a life of quality, or what the characteristics, properties or attributes of such a life might be only begun in the 1960’s. As Socrates famously noted, the unexamined life is one unworthy of living (Plato, 1903).

Enhancing Quality of Life (QOL) has long been a major explicit or implicit life-style and policy goal for individuals, communities, nations, and the world (Schuessler and Fisher, 1985; Sen, 1985).

Recent research on QOL has focused on two basic methodologies of measurement. The First—termed “subjective well-being” (SWB)—focuses upon self-reported levels of happiness, pleasure, fulfilment and the like (see Diener and Lucas (1999) and Easterlin (2003)).The other utilizes so-called “objective” measurements of QOL—quantifiable indices generally of social, economic, and health indicators (UNDP, 1998)—that reflect the extent to which human needs are or can be met. For example, objective measures include indices of economic production, literacy rates, life expectancy, and other data that can be gathered without directly surveying the individuals being assessed.

Yoga system as well as all the other systems of Indian Philosophy namely Samkhya, Nyaya, Vaisesika, Uttara Mimamsa and Purva Mimamsa aimed at one common goal of enhancing Quality of Life. The sages of ancient times were deeply contemplating on methods to overcome suffering. They

envisaged an ideal state which they called in different names such as Nirvana, Kaivalya, Moksha etc. Sages of ancient times strived to transcend human suffering and reach the state of kaivalya. Out of all the system of Indian Philosophy, Yoga is the most practical system that laid down systematic procedures to enhance quality of life and reach a state that is devoid of all the suffering. Classical literature and life histories of great saints of this land suggest that Yoga has proved to be a successful method to improve quality of life.

In the modern times ever since scientific investigations have begun on the effectiveness of yoga, we find enough evidence to suggest that science has tested and attested the effectiveness of yoga as a technique for self-regulation and self-enhancement.

Scientific evidence suggests that Yoga acts as an effective intervention to lower blood pressure, reduce stress, and improve coordination, flexibility, concentration, sleep, and digestion (Barnes et al, 2004). It has also been found to be useful as a supplementary therapy for such diverse conditions as cancer (Smith & Pukall, 2009), diabetes [Aljasir, Bryson, &. Al-Shehri, 2009), asthma [Manocha, et al, 2002), and AIDS (Fritts, Crawford, Quibell et al., 2008). Some studies have specifically demonstrated potential psychological benefits of yoga in various clinical populations, including patients with depression (Uebelacker et al., 2010; Pilkington, Kirkwood, Rampes, & Richardson, 2005 and Shapiro, 2007) stress (Mohan, 1996) and anxiety (Kirkwood, et al., 2005; Gupta, S. Khera, R. P. Vempati, R. Sharma, and R. L. Bijlani, 2006).

Scientific investigations on breast cancer patients have reported that exercise and yoga can help maintain and in some cases improve quality of life in women with early-stage breast cancer (American Society of Clinical Oncology, 2007), enhance emotional well-being and mood and may serve to buffer deterioration in both overall and specific domains of QOL (Vadirajaa, 2009) and was associated with statistically and clinically significant improvements in aspects of QOL (Chandwani et al,. 2010).

Brief survey of scientific literature on the role of Yoga in influencing Quality of Life indicates substantial evidence to suggest that Yoga improves quality of life in diverse clinical population and it can be a useful self-regulation strategy. However there is not enough evidence to suggest the cumulative impact of yoga on Quality Of Life. It is yet to be investigated whether practice of Yoga on a regular basis improves one's quality of life and people who practice regularly on a long-term basis benefit more than short-term yoga practitioners. Research studies need to focus on issues such as this in order to study how far making yoga practice part of life style will ensures better quality of life in long term yoga practitioners. The present study specifically aims at providing scientific evidence to the ancient notion that practice of yoga refines an individual at various levels of being and brings about holistic changes in its practitioners

METHOD

PARTICIPANTS: The study was carried out on four independent groups of yoga practitioners that varied in their length of experience in yoga practice. The first group comprised of 76 subjects (49 male and 27 female) with a mean age of 39 years (SD=9.8). All the participants in this group are novice practitioners. They have participated in the study immediately after their admission into yoga class. The second group comprised of 23 subjects (14 male and 9 female) with a mean age of 34.2 years (SD= 11.07). Their length of experience in yoga practice is 3 months. The third group comprised of 18 subjects (11 male and 7 female) with a mean age of 33.83 years (SD=9.33). Their

length of experience in yoga practice is six months. The fourth group comprised of 17 subjects (11 male and 6 female) with a mean age of 32.8 years (SD=9.5). Their length experience is 12 months.

All the subjects in the four groups were randomly selected from different yoga courses of Department of Yoga, Andhra University, Visakhapatnam, Andhra Pradesh, India. All the participants in the four groups attended yoga classes regularly. They were trained in one institution.

HATHA YOGA TRAINING: In the Yoga Training program all the subjects who participated in this study except the beginners group were given instructions in yoga in a systematic order following the Bihar School of Yoga (Saraswati, 1989) by qualified yoga teachers. The students underwent one-hour practical training every day. Regularity in attendance was always emphasized to get the full benefits of the course.

The program consisted of asanas (physical postures), pranayama (breathing exercises), kriyas (cleansing procedures), mudras (gestures or attitudes), bandhas (locking postures) and relaxation. All these techniques of hatha yoga are intended to produce one-pointedness of the mind, which is essential for deep meditation. During yoga practice session, the students were instructed to pay attention to the muscle groups involved in the specific technique and also to notice the physical sensations experienced in each posture. The subtle sensations are experienced with keen observation. They were advised to avoid undue haste in reaching the final stage in any procedure. In the final stage of every asana the movement of each body part exhibits complete control of the muscles concerned.

MEASURES

WHOQOL-BREF: The World Health Organization Quality of Life (WHO QOL) project was initiated in 1991. The aim was to develop an international cross-culturally comparable quality of life assessment instrument. It assesses the individual's perceptions in the context of their culture and value systems, and their personal goals, standards and concerns. The WHOQOL instruments were developed collaboratively in a number of centers worldwide, and have been widely field-tested.

WHOQOL-BREF is an abbreviated version of WHOQOL-100 developed by the World Health Organization (WHO) QOL group with fifteen international field centers, simultaneously, in an attempt to develop a quality of life assessment that would be applicable cross-culturally.

Detailed description regarding the development of the WHOQOL-100, has been presented elsewhere (i.e. Orley & Kuyken, 1994; Szabo, 1996; WHOQOL Group 1994a, 1994b, 1995).

The WHOQOL-BREF instrument comprises 26 items, which measure four broad domains: physical health, psychological health, social relationships, and environment.Both the WHOQOL-100 and the WHOQOL-BREF have been shown to display good discriminant validity, content validity and test-retest reliability. Their sensitivity to changes are currently being assessed. Domain scores produced by the WHOQOL-BREF have been shown to correlate at around 0.9 with The WHOQOL-100 domain scores.

PROCEDURE: QOLBREF Questionnaire was administered separately on all the four groups of subjects. Beginners Group subjects were tested immediately after they were admitted into yoga training course and before they started yoga practice. Second group was tested after three months of

experience in yoga. The third group was tested after six months of experience in yoga and finally fourth group was tested after twelve months of experience in yoga. In all the testing sessions, the subjects were tested in small groups of 3-4 subjects. Testing was done in a quiet atmosphere following the instructions laid down by the authors in the manuals of the tests. There was no time limit for completion of the questionnaire. However, they were asked not to spend too much time on any specific question and to proceed with the test spontaneously as there are no rights or wrong answers for the questionnaire. Testing procedures commenced in each session only after ensuring that all of them have understood the instructions.

After administering the questionnaire on all the subjects, the completed questionnaires were scored following the standard norms for scoring as laid down by the authors of the test.

RESULTS AND DISCUSSION: Results obtained after scoring the questionnaires are presented in the following tables. Table 1 shows the sample characteristics.

Sample Characteristics of Yoga Practitioners with Nil Experience, Three Months, Six Months and Twelve Months Experience.

	Group 1 (nil experience)	**Group 2** (3 months experience)	**Group 3** (6 months experience)	**Group 4** (12 months experience)
N	76	23	18	17
Female	27	9	7	12
Male	49	14	11	13
Age	Mean 39 yrs SD=9.8	Mean 34.2 yrs SD=11.07	Mean 33.83 yrs SD=9.33	Mean 32.8 yrs SD=9.5

The data obtained on all the four groups with varying lengths of experience in yoga for QOLBREF questionnaire are presented in table 2.

TABLE 2: Means And Standard Deviations On Quality Of Life Questionnaire Administered On Yoga Practitioners of Group 1, Group 2, Group 3 and Group 4.

VARIABLE	Group1		Group2		Group3		Group4	
	M	SD	M	SD	M	SD	M	SD
QOL Total	95.39	12.6	96.8	10.3	99.7	14.2	104.6	12.1
QOL Domain1	23.17	2.8	22.87	2.6	23.7	4.4	25.12	2.1
QOL Domain2	20.68	3.0	20.35	3.3	20.83	3.5	22.9	2.8
QOL Domain3	11.14	1.9	10.7	2.4	11.4	2.5	12.5	1.7
QOL Domain4	27.8	4.9	28.7	3.6	29.33	4.9	31.7	4.4

The novice group has obtained mean scores of 95.39 (SD =12.6) for QOL total, 23.17 (SD=2.8) for Domain 1, 20.69 (SD=3.0) for Domain 2, 11.14 (SD=1.9) for Domain 3 and 27.8 (SD=4.9) for Domain 4. The mean scores for three months experience group are 96.8 (SD=10.3) for QOL total, 22.87 (SD=2.6) for Domain 1, 20.35 (SD=3.3) for Domain 2, 10.7 (SD=2.4) for Domain 3 and 28.7 (SD=3.6) for Domain 4. The mean scores for six months experience group are 99.7 (SD=14.2) for QOL total, 23.7 (SD=4.4) for Domain 1, 20.83 (SD=3.5) for Domain 2, 11.4 (SD=2.5) for Domain 3 and 29.33 (SD=4.9) for Domain 4. The mean scores for twelve months experience group are 104.6 (SD=12.1) for QOL total, 25.12 (SD=2.1) for Domain 1, 22.9 (SD=2.8) for Domain 2, 12.5 (SD=1.7) for Domain 3 and 31.7 (SD=4.4) for Domain 4.

Table three shows the statistical significance of difference between novice group and three months experience in yoga group on total QOL scores and four domains separately.

TABLE3: Means, Standard Deviations And **t** Values Of QOL Data From Yoga Practitioners With Nil Experience And Three Months Experience.

Variables	Quality Of Life Questionnaire Results						
	Group1		Group2				
	M	SD	M	SD	df	t	Sig. (2-tailed)
QOL Total	95.39	12.6	96.8	10.3	97	-0.494	0.622
QOL Domain1	23.17	2.8	22.87	2.6	97	0.459	0.647
QOL Domain2	20.68	3.0	20.35	3.3	97	0.458	0.648
QOL Domain3	11.14	1.9	10.7	2.4	97	1.034	0.304
QOL Domain4	27.8	4.9	28.7	3.6	97	-0.821	0.413

Comparative scores of Group1 and Group 2 on QOL total, Domain 1, Domain2, Domain 3 and Domain 4 indicate that novice group and the group with three months experience in yoga did not differ significantly on any of the scores.

Means, standard deviations and **t** values of QOL data from yoga practitioners with no experience in yoga practice and six months experience in yoga practice are presented in table 4.

TABLE 4: Means, Standard Deviations And **t** Values Of QOL Data From Yoga Practitioners With Nil Experience And Six Months Experience.

Variables	Quality Of Life Questionnaire Results						
	Group1		Group3				
	M	SD	M	SD	df	t	Sig. (2-tailed)
QOL Total	95.39	12.6	99.67	14.24	92	-1.258	0.21
QOL Domain1	23.17	2.8	23.72	4.38	92	-0.668	0.50
QOL Domain2	20.68	3.0	20.83	3.47	92	-0.182	0.85
QOL Domain3	11.14	1.9	11.44	2.55	92	-0.569	0.57
QOL Domain4	27.8	4.9	29.33	4.88	92	-1.199.	0.23

Comparative scores of Group1 and Group 3 on QOL total, Domain 1, Domain2, Domain 3 and Domain 4 indicate that novice group and the group with six months experience in yoga did not differ significantly on any of the scores.

Means, standard deviations and **t** values of QOL data from yoga practitioners with no experience in yoga practice and twelve months experience in yoga practice are presented in table

TABLE 5: Means, Standard Deviations And **t** Values Of QOL Data From Yoga Practitioners With Nil Experience And Twelve Months Experience.

Variables	Quality Of Life Questionnaire Results						
	Group1		Group4				
	M	SD	M	SD	df	t	Sig. (2-tailed)
QOL Total	95.39	12.6	104.59	12.1	91	-2.73	0.008
QOL Domain1	23.17	2.8	25.12	2.1	91	-2.71	0.008
QOL Domain2	20.68	3.0	22.88	2.8	91	-2.73	0.008
QOL Domain3	11.14	1.9	12.53	1.7	91	-2.81	0.006
QOL Domain4	27.8	4.9	31.65	4.37	91	-2.99	0.004

Comparative scores of Group1 and Group 4 on QOL total, Domain 1, Domain2, Domain 3 and Domain 4 indicate that novice group and the group with twelve months experience in yoga differed significantly on all the scores. On QOL total data group 1 scored a mean of 95.39 (SD=12.6) and group 4 scored a mean score of 104.59 (12.1) and the t value is -2.73 which is significant at 0.01 level. Mean values of Group 1 and group 4 on Domain 1 are 23.17 (SD=2.8) and 25.12 (SD=2.1) The difference between the two means is found to be significant at 0.01 level (t value= -2.71). Mean values of Group 1 and group 4 on Domain 2 are 20.68 (SD=3.0) and 22.88 (SD=2.8) The difference between the two means is found to be significant at 0.01 level (t value= -2.73). Mean values of Group 1 and group 4 on Domain 3 are 11.14 (SD=1.9) and 12.53 (SD=1.7) The difference between the two means is found to be significant at 0.01 level (t value= -2.81). Mean values of Group 1 and group 4 on Domain 4 are 27.8 (SD=4.9) and 31.65 (SD=4.37). The difference between the two means is found to be significant at 0.01 level (t value= -2.99).

Means, standard deviations and **t** values of QOL data from yoga practitioners with three months experience in yoga practice and six months experience in yoga practice are presented in table 6.

TABLE 6: Means, Standard Deviations And **t** Values Of QOL Data From Yoga Practitioners With Three Months And Six Months Experience.

Variables	Quality Of Life Questionnaire Results						
	Group2		Group3				
	M	SD	M	SD	df	t	Sig. (2-tailed)
QOL Total	96.8	10.3	99.67	14.24	39	-0.74	0.46
QOL Domain1	22.87	2.6	23.72	4.38	39	-0.78	0.44
QOL Domain2	20.35	3.3	20.83	3.47	39	-0.46	0.65
QOL Domain3	10.7	2.4	11.44	2.55	39	-1.02	0.31
QOL Domain4	28.7	3.6	29.33	4.88	39	-0.5	0.62

Comparative scores of Group2 and Group 3 on QOL total, Domain 1, Domain2, Domain 3 and Domain 4 indicate that group with three months experience in yoga and the group with six months experience in yoga did not differ significantly on any of the scores.

Means, standard deviations and **t** values of QOL data from yoga practitioners with three months experience in yoga practice and twelve months experience in yoga practice are presented in table 7.

TABLE 7: Means, Standard Deviations And **t** Values Of QOL Data From Yoga Practitioners With Three Months And Twelve Months Experience.

Variables	Quality Of Life Questionnaire Results						
	Group2		Group4				
	M	SD	M	SD	df	t	Sig.(2-tailed)
QOL Total	96.8	10.3	104.59	12.1	38	-2.19	0.035
QOL Domain1	22.87	2.6	25.12	2.1	38	-2.93	0.006
QOL Domain2	20.35	3.3	22.88	2.8	38	-2.6	0.013
QOL Domain3	10.7	2.4	12.53	1.7	38	-2.75	0.009
QOL Domain4	28.7	3.6	31.65	4.37	38	-2.5	0.020

Comparative scores of Group2 and Group 4 on QOL total, Domain 1, Domain2, Domain 3 and Domain 4 indicate that subjects in group2 and the group with twelve months experience in yoga differed significantly on all the scores. On QOL total data group 2 scored a mean of 96.8 (SD=10.3) and group 4 scored a mean score of 104.59 (12.1) and the t value is -2.19 which is significant at 0.05 level. Mean values of Group 1 and group 4 on Domain 1 are 22.87 (SD=2.6) and 23.72 (SD=4.38). The difference between the two means is found to be significant at 0.01 level (t value= -2.93). Mean values of Group 2 and group 4 on Domain 2 are 20.35 (SD=3.3) and 22.88 (SD=2.8). The difference between the two means is found to be significant at 0.01 level (t value= -2.6). Mean values of Group 2 and group 4 on Domain 3 are 10.7 (SD=2.4) and 12.53 (SD=1.7). The difference between the two means is found to be significant at 0.01 level (t value= -2.75). Mean values of Group 2 and group 4 on Domain 4 are 28.7 (SD=3.6) and 31.65 (SD=4.37). The difference between the two means is found to be significant at 0.05 level (t value= -2.5).

Means, standard deviations and **t** values of QOL data from yoga practitioners with three six months experience and twelve months experience in yoga practice are presented in table 8.

TABLE 8: Means, Standard Deviations And **t** Values Of QOL Data From Yoga Practitioners With Six Months And Twelve Months Experience.

Variables	Quality Of Life Questionnaire Results						
	Group3		Group4				
	M	SD	M	SD	df	t	Sig. (2-tailed)
QOL Total	99.67	14.24	104.59	12.1	33	-1.1	0.28
QOL Domain1	23.72	4.38	25.12	2.1	33	-1.95	0.24
QOL Domain2	20.83	3.47	22.88	2.8	33	-1.915	0.06
QOL Domain3	11.44	2.55	12.53	1.7	33	-1.472	0.15
QOL Domain4	29.33	4.88	31.65	4.37	33	-1.475	0.15

Comparative scores of Group3 and Group 4 on QOL total, Domain 1, Domain2, Domain 3 and Domain 4 indicate that subjects with six months experience and the group with twelve months experience in yoga did not differ significantly on any of the scores.

Analysis of the results presented above indicates that novice group and the group with three months experience in yoga did not differ on Quality Of Life overall score and scores on Domain 1 dealing with physical health that includes aspects such as Activities of daily living Dependence on medicinal substances and medical aids Energy and fatigue Mobility Pain and discomfort Sleep and rest Work Capacity etc., Domain 2 dealing with psychological aspects including issues related to bodily image and appearance, Negative feelings, Positive feelings, Self-esteem, Spirituality, Religion, Personal, beliefs, thinking, learning, memory and concentration. Domain 3 dealing with social support which includes matters such as personal relationships, social support and sexual activity. Domain 4 dealing with environmental aspects such as Financial resources Freedom, physical safety and security Health and social care: accessibility and quality Home environment Opportunities for acquiring new information and skills Participation in and opportunities for recreation / leisure activities Physical environment (pollution / noise / traffic / climate) Transport The results also indicate that novice subjects and subjects with six months experience in yoga also did not did not differ in any of these aspects of quality of life. When we observe the results obtained by novice practitioners and practitioners with twelve months of experience, it is evident that on all aspects of quality of life such as physical health, psychological aspects, social support and environmental aspects there is statistically significant difference between these two groups. Yoga practitioners with twelve months experience have gained significantly better quality of life than people with no experience in yoga. The results indicate that holistic approach of yoga helped them improve in all the aspects of quality of life as measured by QOLBREF.

Analysis of results presented in table 6 indicates that yoga practitioners with three months experience and six months experience did not differ significantly on any aspect of quality of life. Subjects with three and six months experience also did not show any better quality of life than novice practitioners. This indicates that regular yoga practice gives cumulative impact on its practitioners to improve their quality of life. It also indicates that such cumulative impact requires long term practice in order to consolidate the impact on its practitioners. This may be noted in the significant improvement in the quality of life indicators of practitioners with twelve months experience. Yoga aims bring about control in physical, psychological and spiritual aspects of human nature. It requires systematic training of body and mind through various yogic practices.

Comparison of yoga practitioners with three months and twelve months shows that subjects with twelve months experience performed better than subjects with three months experience in all the aspects of quality of life. On overall quality of life scores and Domain 4 dealing with environmental aspects the difference was significant at 0.05 ($t=2.19$ and 2.5 respectively). On Domains 1, 2 and 3 the difference was significant at 0.01 level ($t=2.93$, 2.6 and 2.75 respectively). Again these results also indicate that regular yoga practice gives cumulative impact on its practitioners to improve their quality of life. This also indicates that three months yoga practice is not sufficient to bring about deeper and more state changes in one's quality of life. Refinement of different layers of human existence requires regular and systematic practice. This view is also supported by the comparison of results obtained by yoga practitioners with six months and twelve months. These two groups did not differ significantly on any aspect of quality of life.

The above discussion indicates that regular practice of yoga refines personality and brings about holistic changes. However it requires regular and long term practice in order to bring about significant changes in one's quality of life. Various techniques of yoga are designed to refine different

aspects human life. For example Yogic kriyas are designed to remove gross impurities from human body. Yogic asanas are designed to improve functioning of every organ. By quick removal of toxins from every cell and ample nourishment of each cell physical health is ensured. Yogic asanas also help in improving internal awareness and also the ability to relax the mind. Various pranayama techniques bring about refinement in both body and mind. Other yogic techniques such as bandhas and mudras enhance the benefit obtained by yogic kriyas, asanas and pranayama techniques. Thus regular yoga practice brings about holistic changes in its practitioners. The above discussion also indicates the benefits obtained by yoga practice on regular basis have a cumulative impact and it brings about trait changes in long term practitioners. Quality of Life is a holistic parameter which consists of various dimensions. Yoga with its holistic approach has beneficial impact to improve quality of life in its practitioners.

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