

Effects of some Yogic Practices on Psychological Well-Being of the Aged: An Intervention Study

Hardeo Ojha and Niranjana Prasad Yadav

T.M. Bhagalpur University, Bihar

The present study was planned to see if the psychological wellbeing of the aged can be improved by some yogic practices. As indicators of psychological wellbeing five positive traits viz., self-concept, self-efficacy, ego-strength, emotional stability and life satisfaction and five negative traits viz., anxiety, insecurity alienation, identity crisis and loneliness were selected. The yogic practices undertaken were Kapalbhathi, Anulom-Vilom, Bhramri, Tratak, Dhyan and Yognidra. Around 500 subjects who were retired officials (in the age group of 65-75 years) were randomly assigned to experimental and control groups in equal numbers. The experimental groups practiced yogic techniques for half an hour daily for six months, which was the intervention period- while the control group continued with their normal activities. The two groups were tested and retested after the intervention period on the measures of psychological wellbeing. The comparisons revealed that there was a significant improvement in the psychological wellbeing of the experimental (yoga) group- but, no difference was found in the control group. Hence, it can be concluded that yogic practices could lead to a holistic and balanced life among the aged.

Keywords: Psychological Well-being, Yogic Practices, Ageing.

To achieve psychological well being, both the hedonistic and the eudemonic aspects (Straume & Vitters, 2012) are needed and considered to be equally important. The hedonistic aspect denotes subjective well being, which constitutes of satisfaction with life and high positive affect combined with low negative affect (Diener, 1984). Positive affect indicates pleasant emotions and feelings such as joy and happiness, whereas negative affect denotes unpleasant feelings and emotions such as sadness and fear. Life satisfaction refers to a cognitive judgment process, i.e. a global assessment of one's life as a whole. The eudemonic aspect includes a sense of personal growth and development, the belief that one's life is purposeful and meaningful, a sense of self – determination, autonomy, positive social relationship and the capacity to manage one's life and surrounding world (Ryff, 1989). In a nutshell psychological well being encompasses optimal functioning, self – actualization and to flourish in life. It refers to both the desirable conditions of our existence as well as the end state of our quest (Ivtzan, Bernard, Sekhon & Gardner, 2013; Wong, 2011).

There are several personality characteristics, the presence and absence of which indicates psychological well being. However in the present research only five positive traits and five negative traits were treated as indicators of psychological well being. The positive traits that assure sufficient presence of well being include self esteem (one's feeling of competence), self-efficacy (optimistic belief about being able to cope with the stressors), ego- strength (capacity of the individual to perceive a challenging situation and to execute the response effectively), emotional stability (ability to give appropriate reactions to different situations), and life- satisfaction (to feel satisfied with life). The negative traits, the absence or minimal presence of which ensure psychological well being, comprise of anxiety (subjective experience of the individual marked by anticipated fear and uneasiness of mind), insecurity (experience of being unsafe and non belongingness to one's group), alienation (psychological state of the individual marked by feelings of estrangement from his group and society), identity crisis (a break in the sense of self which prevents the individual

from experiencing consistency and continuity with past, present and future), and loneliness (subjective feeling of lack of personal and social relationship).

Yoga is a form of discipline which has its roots in philosophy of ancient sages of India 5000 years ago (De Michelis, 2005) and has gone through several phases throughout the ages. Yoga constitutes of a crucial link with positive psychology (Singleton, 2010). Rishi Patanjali was the pioneer of the discipline of yoga and claimed that yoga controls mental conflicts, tensions and different patterns of mind and creates bliss in human life. It is a science which deals with the balanced personality promoting positive qualities and controlling negative characteristics. Yoga has both theoretical and practical aspects. It is a series of exercises including a spiritual and philosophical approach. Eggleston (2009) stated that 'Yoga is the recognition of the divine within the self outside of the body and the connection between the self and the other outside of the self' (p 966). The theoretical aspect emphasizes self-culture and the realization of the individual about the supreme self. The practical aspect involves some postural and breathing exercises. Yoga practice in America and Europe is mostly limited to its practical side (Singleton, 2010) which has never been the chief feature of Indian Yoga. Of course, through Yogic exercises we can develop the ability to relax in any situation and under any condition. We can also develop the ability to concentrate and collect all our dissipated energies and focus them on one point that leads to the combination of mental force which unfolds in different dimensions of personality.

Evidence of the relationship between yogic practices and psychological well being rests in several studies conducted in the past. However, it is pertinent to mention some recent ones here. Subjective well being has been found to increase as a consequence of yogic practices (Daubenmier & Hirschmann, 2006; Jadhav & Havalappanavar, 2009; Kamakhya, 2004; Kumar & Ali, 2003; Sharma, Gupta & Bijlani, 2008). In addition, Impett, Daubenmier and Hirschmann (2006) found that more frequent practices were associated with increased

positive affect. Further, certain specific asanas, mudras and pranayamas of yoga combined with cognitive behaviour therapy have proved to be effective in reducing academic stress and enhance the mental well being of children (Sharma, Srivastava, Malhotra, Singh & Singh, 2010). Gard et. al. (2012) found that four-months yoga based programs significantly predicted increase in quality of life, mindfulness and self-compassion along with decreases in perceived stress. Ojha, Purshottam and Yadav (2013) found that positive personality characteristics among aged could be improved and negative qualities could be reduced by integral yogic style of life. Ivztan and Papantoniou (2013) found that both hedonic and eudemonic happiness are related to the extent of yogic practices. It has also been observed that practice of relaxation technique – a derivative of yoga decreased the psychological discomfort and improved the quality of life among the aged (Reig-Ferrer et. al., 2014)

Ageing involves a decline in the immune functioning that renders elderly people vulnerable to physical and psychological diseases. It is a universal phenomenon, an unavoidable stage of life marked by boredom, empathy, helplessness, dependency, loneliness, insecurity, etc. Present authors (Ojha & Yadav, 2014) have revealed that in comparison to middle aged people older people (60 – 70 years) demonstrate a significant decline in positive qualities and increase in negative characteristics of personality.

Objective

The objective of the study was to see if continuous practice of six simple yogic techniques for six months for half an hour daily could improve the psychological well being of the aged (over 60 – 70 years). The techniques employed were Kapalbhathi (forceful exhalation like a bellow), Anulom – Vilom (alternate nostril breathing), Brahmari (inhalation and then exhalation with deep grunting sound like that of beetle), Tratak (gazing at a point such as black circle), Yognidra (psychic sleep which ensures complete relaxation of mind and body) and meditation (closing eyes and concentrating on a supreme power). Each technique was to be

practiced for only five minutes. Psychological well being was measured in terms of increase in positive qualities and decrease in negative qualities.

Method

Sample:

The sample consisted of 500 incidentally selected retired employees (aged 65–70 years) from five professions viz., medical, engineering, teaching, administration and banking from municipal areas of 12 towns of eastern Bihar (India). All subjects were of male sex, living in urban areas, and were from the middle income groups having above graduation level of education.

Research Design:

A pre-post experimental-control group design was followed in order to eliminate the effect of testing sensitivity, familiarity, practice and response set. An attempt was made to make both experimental and control groups homogenous with respect to age, sex, education, socio-economic status and the residential area to minimize the effects of extraneous variables. Error variance due to guessing, momentary attention, temporary fatigue and emotional state was minimized by repeated administration of the same psychological tests exactly under similar conditions. Random assignment of subjects in equal number to experimental and control group was done to make the groups homogeneous, where each group consisted of 250 subjects.

Measures:

Psychological well being was assessed by using some short scales of positive traits (indicating positive affect) and negative traits (denoting negative affect). The positive traits included self-esteem, self-efficacy, ego-strength, emotional stability and life satisfaction. The negative traits comprised of anxiety, insecurity, alienation, identity crisis and loneliness. The scales were constituted by the first author (Ojha, 2010) for a major UGC Project and their split-half and test-retest reliabilities were found to range between 0.70 and 0.79. The positive traits altogether consisted of 100 items and similarly the negative traits included 100 items.

The composite psychological well being score was derived on the basis of all 200 items. For obtaining the composite score of a subject all scores on positive trait scales were added. However in case of negative traits a different procedure was adopted. The score obtained by the individual on any of the five scales of negative traits was subtracted from its maximum possible score. For example, if the subject had obtained a score of 9 on the anxiety scale, then psychological well-being (PWB) score was $20 - 9 = 11$. In this way PWB scores were derived from negative traits and added with the total scores on positive traits and it was designated as a composite PWB score. The scores on the composite scale ranged between 0 – 200. The split – half and test-retest reliabilities of the composite scale were 0.75 and 0.73 respectively.

Procedure:

The scale was administered on the subjects individually both at the time of initial testing and final testing by a group of five trained field investigators. The subjects of experimental group practiced six yogic practices viz., Kapalbhata, Anulom – Vilom, Bhramari, Tratak, Dhyana and Yognidra for half an hour daily during the intervention period of six months. Prior training for these practices was provided to subjects of this group in camps organized at their native towns by two trained yoga instructors. The subjects of control group carried out their normal activities.

Results

In order to determine the effect of yogic practices on psychological well being the obtained scores on each scale and also the composite PWB scores of control and experimental groups were compared at two levels: intergroup comparison and intra-group comparison at two stages of testing, namely initial and final. Intergroup comparison was made to see the differences between the control and experimental groups in two sessions of testings and the intra-group comparison was made to see the extent to which the practice of yoga by the experimental group has brought about changes in their psychological well being and also whether continuance of normal activity (without practicing

yoga) during the intervention period has resulted into any change in the control group. Table 1 shows inter-group comparisons, while Table 2 shows intra-group comparisons.

Table 1 indicates that there is no significant difference ($p > 0.05$) between the control and experimental groups at the initial stage of testing either in the mean score of any factor or in the composite score of psychological well being. This homogeneity helped to pan out the effect of independent variable i.e. yogic

practice. Further, Table 1 also reveals that during post testing after the intervention period the mean scores of experimental group with respect to positive factors increased, while with respect to negative factors it decreased. Also, the composite psychological well-being score enhanced, thereby making all the differences significant ($p < 0.01$) between the control and experimental groups. This was the key to the effect of yogic practice.

Table 1. Inter-group Comparison between Experimental and Control Groups on Positive and Negative Indicators as well as Composite Psychological Well Being (PWB) during Pre and Post Testing Sessions

PWB Factors	Pre - Testing			Post - Testing		
	Control Gr.	Experimental Gr.	t	Control Gr.	Experimental Gr.	t
	Mean and SD (in parenthesis)	Mean and SD (in parenthesis)		Mean and SD (in parenthesis)	Mean and SD (in parenthesis)	
Positive						
Self - Esteem	11.04 (3.44)	11.00 (3.45)	0.13	11.12 (3.54)	15.06 (3.27)	13.13*
Self – Efficacy	11.08 (2.89)	11.28 (3.24)	0.74	10.75 (3.22)	13.64 (3.62)	9.32*
Ego – Strength	8.84 (3.41)	9.05 (3.44)	0.68	9.02 (3.41)	10.54 (2.90)	5.43*
Life Satisfaction	11.27 (3.28)	11.04 (3.75)	0.73	11.11 (3.29)	13.66 (3.35)	8.59*
Emotional Stability	8.25 (3.63)	8.52 (3.71)	0.82	8.50 (3.52)	10.27 (2.54)	6.56*
Negative						
Anxiety	7.52 (3.71)	7.47 (3.86)	0.19	7.56 (3.61)	5.88 (3.23)	5.42*
Insecurity	9.80 (3.54)	9.98 (3.67)	0.56	10.10 (3.40)	8.53 (3.69)	4.59*
Alienation	9.60 (3.45)	9.71 (3.31)	0.37	9.60 (3.22)	6.74 (3.04)	10.21*
Identity Crisis	7.87 (3.98)	7.60 (4.10)	0.75	8.07 (4.16)	5.70 (4.23)	6.40*
Loneliness	6.06 (3.78)	6.20 (4.19)	0.39	6.20 (3.69)	4.55 (3.30)	5.32*
Composite PWB	109.63 (35.11)	109.93 (36.78)	0.93	109.07 (34.80)	131.77 (29.87)	7.8*

* $p < 0.01$

Table 2. Intra-group Comparison between Pre and Post Testing of Control and Experimental Groups on Positive and Negative Indicators as well as Composite Psychological Well Being (PWB)

PWB Factors	Pre - Testing			Post - Testing		
	Control Gr.	Experimental Gr.	t	Control Gr.	Experimental Gr.	t
	Mean and SD (in parenthesis)	Mean and SD (in parenthesis)		Mean and SD (in parenthesis)	Mean and SD (in parenthesis)	
Positive						
Self - Esteem	11.04 (3.44)	11.12 (3.54)	0.03	11.00 (3.45)	15.06 (3.27)	15.18*
Self – Efficacy	11.08 (2.89)	10.75 (3.22)	1.43	11.28 (3.24)	13.64 (3.62)	8.13*
Ego – Strength	8.84 (3.41)	9.02 (3.41)	0.72	9.05 (3.44)	10.54 (2.90)	5.76*
Life Satisfaction	11.27 (3.28)	11.11 (3.29)	0.62	11.04 (3.75)	13.66 (3.35)	9.03*
Emotional Stability	8.25 (3.63)	8.50 (3.52)	0.96	8.52 (3.71)	10.17 (2.54)	6.73*
Negative						
Anxiety	7.52 (3.71)	7.56 (3.61)	0.15	7.47 (3.86)	5.88 (3.23)	5.68*
Insecurity	9.80 (3.54)	10.10 (3.40)	0.74	9.98 (3.67)	8.53 (3.69)	5.18*
Alienation	9.60 (3.45)	9.60 (3.22)	0.00	9.71 (3.31)	6.74 (3.04)	11.56*
Identity Crisis	7.84 (3.98)	8.04 (4.10)	0.71	7.60 (4.16)	5.70 (4.23)	5.62*
Loneliness	6.06 (3.78)	6.20 (3.69)	0.52	6.20 (4.19)	4.55 (3.30)	5.50*
Composite PWB	109.63 (35.11)	109.07 (34.80)	0.18	109.93 (36.78)	131.77 (29.87)	7.21*

* p < 0.01

From Table 2 it may be observed that the mean scores of control group between pre and post phases of testing did not differ significantly ($p > 0.05$) in respect of any of the positive or negative factors as well as the composite psychological well being. Hence, it may be asserted that normal activity during the intervention period of six months did not bring any significant change in psychological well being of the control group. However in case of experimental group there was a significant ($p < 0.01$) increase in positive factors and

significant ($p < 0.01$) decrease in negative factors from pre to post phase of testing. Besides, the composite PWB score also got a significant enhancement ($p < 0.01$). This too, validates that yogic practices for six months lead to the enhancement of psychological well being.

Discussion

In every individual there is a presence of positive and negative psychological traits, but the preponderance of positive traits over negative traits should be treated as an obvious sign of psychological well being. Therefore, it was examined whether or not the preponderance

of positive traits over negative traits increased as a consequence of yogic practice. For this, the sum of mean scores on negative traits was subtracted from the sum of mean scores on positive traits (EP - EN) and the resultant score was treated as a preponderance score. It was found that the preponderance score in case of control group slightly decreased from 9.66 to 9.10, while in case of experimental group it heavily increased from 9.93 to 32.31. This made it clear that psychological well being improves as a consequence of yogic practices.

In the positive factors i.e. self-esteem, self-efficacy, ego-strength, life-satisfaction and emotional stability, the direction of change was positive, which meant improvement was present in positive affective states. In contrast to this negative factors i.e. anxiety, insecurity, alienation, identity crisis and loneliness, the direction of change was reverse or negative which meant a reduction in negative affective states. Hence preponderance of positive affects over negative affects was established.

As a consequence of yogic practice the practitioner slowly and gradually realises the futility of his negative emotions which consequently lead him to develop a changed mindset resulting in a reduction of his distress, discomfort and displeasure. Yoga offers an opportunity for reconstruction of personality. Yoga helps the individual to withdraw the sensation from their objects lying in the lower chamber (unconsciousness) and pass them into the middle chamber (sub consciousness). When the person connects through yoga one after another, all the deep rooted past impressions come to the surface (consciousness) and slowly but surely depart from there (Saraswati, 1997). In addition how the positive emotions build lasting benefits for the individual can be explained by "The broken and build theory" of Frederickson (2001). According to this theory, positive emotions build lasting benefits for the individual undoing the adverse effects of negative emotions by extending cognitive functioning through more creative, flexible and efficient pattern of thinking and with the passage of time the broadened positive emotions build a range of positive resources, which could help the

practitioner become healthier, socially integrated and resilient.

The findings of this study are consistent with those of several previous researches referred earlier. The independent effect of each practice has also been proved by some previous studies. For example, breathing exercises such as Anulom-Vilom, Bhramari and Kapalbhathi have been found effective in bringing positive change in mood and improving affective states (Wood, 1993). Gupta, Kumar, Kumari and Deo (2010) found that a three month regular practice of alternate nostril breathing (Anulom-Vilom) reduced anxiety and depression among the senior citizens. Remarkable positive change in subjective well being and reduction in anxiety level has been noted as a consequence of yognidra practice regularly for one hour for a period of three months (Kamakhya, 2004). Bhushan (2006) found that the practice of yognidra for one hour regularly for one month substantially increased the level of sattwaguna (positive aspects) and significantly decreased the level of rajas and tamas gunas (negative aspects) of personality. In some studies the effects of meditations such as Transcendental (Kumar & Ali, 2002), Preksha (Gaur & Sharma, 2009) and Shaktipad (Singh & Kaur, 2007) on personality transformation have also been evidenced.

Implication and Limitations

The research has revealed that yoga improves the psychological wellbeing of the senior citizens. Yoga prevents the deteriorating physical and psychological condition of senior citizens and promotes their psychological wellbeing. Hence the aged people should be encouraged and trained to undertake some simple yogic practices like Kapalbhathi, Anulom-Vilom, Bhramari, Tratak, Meditation and Yognidra regularly and daily even for a short period of half an hour so that they are physically fit, mentally alert and socially adaptive for the rest of their life.

However, there are certain limitations of the study. Psychological wellbeing is a broad domain. The present research has undertaken only some indicators. Therefore, future research studies should be planned to include all major

factors of hedonistic and eudemonic aspects of psychological wellbeing.

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Hardeo Ojha, Ph.D., Former Prof. & Head, University Dept. of Psychology, T.M. Bhagalpur University, Bhagalpur- 812007 (India) Email Id- hardeoojha@gmail.com

Niranjana Prasad Yadav, Ph.D., Senior Asst. Professor, Dept. of Psychology, T.N.B. College, Bhagalpur, T.M. Bhagalpur University, Bhagalpur- 812007 (India) Email- niranjan.pd.yadav@gmail.com

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