

## Beneficial Effects of Yoga and Exercise on Psychological Paradigms of an Individual

Mubashir Gull<sup>1\*</sup>

### ABSTRACT

The study was conducted to examine the effects of yogic and physical exercise on self concept. One hundred twenty subjects in four groups viz. light exercise group, heavy exercise group, yoga performers group and control group were administered measure of self-concept. All the subjects are male in the age range of 26 to 58 years. Data were analyzed by simple ANOVA suitable for multi-group design. Results revealed that the control group had significantly self-concept than the exercise and yoga performing group.

**Keywords:** *Self-concept, Yoga, Mental Health, Psychological Well-Being*

Rosenberg (1979) asserts that the concept of “self” stands foremost in the ranks of confusion. The inconsistent usage of terms such as ego, identity, existential self, authentic self, phenomenal self, self-image, and self-worth have amplified the terminological confusion in this area (Rosenberg, 1979). However, over the years, one fundamental distinction has been recognized the self as object vs. the self as agent (Rosenberg, 1979; Wylie, 1974). The self can be conceived as an active agent or as an object of one’s own knowledge and evaluation (Rosenberg, 1979; Wylie, 1974). As an active agent, the self plays an instrumental role in interpreting external events and guiding behavior (Carver & Scheier, 1989; Harter & Marold, 1989; Loevinger & Blasi, 1989). According to Rosenberg (1979), the essence of the self as object can be defined as the “totality of the individual’s thoughts and feelings with reference to himself as an object’.

Researchers generally agree that self-concept represents a broader construct comprised of cognitive, affective, and behavioral components, and that self-esteem is a more limited evaluative aspect of one’s self-concept (Campbell, 1990; Fleming & Courtney, 1984; Greenwald, Bellezza, & Banaji, 1988; McGuire & McGuire, 1982). In this context, many investigators assert that self-concept can be considered descriptive whereas self-esteem is evaluative (Campbell, 1990; Fleming & Courtney, 1984; Harter, 1983).

<sup>1</sup> Research Scholar, Department of Psychology, Aligarh Muslim University, Aligarh, India

\*Responding Author

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Hassan, et. al, (2012, 2013, & 2014) have reported in their study the positive impact of yoga on psychological well-being and have also highlighted beneficial effects of yoga on Mental health.

Despite conceptual claims supporting the distinction between self-concept and self-esteem, construct validity research has not supported the discriminability of these constructs (Shepard, 1979). Some researchers have attributed this lack of distinction to the use of self-report scales comprised of items eliciting both descriptive and evaluative components (Watkins & Dhawan, 1989). In spite of the use of open-ended questions, Greenwald et al. (1988) found that self-esteem was an important aspect of self-concept scores, even when the measure of self-concept had no superficial evaluative content. Similarly, Watkins and Dhawan (1989) found that making distinction between self-concept and self-esteem is more apparent in non-Western than in Western samples (For a more thorough review of these issues, readers are referred to Byrne, 1996). Recognizing that the theoretical distinction between self-concept and self-esteem has not yet been empirically substantiated and consistent with the literature wherein the two terms are typically used interchangeably, the terms self-concept and self-esteem will be considered here as synonymous construct.

The origins of self-concept theory, and consequent research, are reputed to have been formalized by James in 1890 (Bracken, 1996; Hattie, 2000). James is noted in history for his development of the idea or philosophy of the 'self' and the development of the 'self' into a cohesive theory (Bracken, 1996). James theorized that there is a hierarchical order to the 'self' starting at the lowest tier with the 'material self, followed by the 'social self' with the 'spiritual self' being the last tier (Bracken, 1996). Current research testing James' theorized hierarchical ordering of the dimensions for self-concept has not necessarily borne out these claims (Shavelson, Hubner, & Stanton, 1976). Of probably more important, especially in current research, is James' idea that self-concept is multidimensional, meaning that multiple domains form the self-concept. Hattie, (2000) reminds us that much of James' theorizing on self-concept has been selectively ignored during the past 100 years. This is especially evident during the behaviorist's era of the 1950s to 1970s when James' key point of multidimensionality was ignored in favor of an all-encompassing global assessment of self-concept (Hattie, 2000; Marsh, 1990). Hence, despite James' historical notion that our self-concept is dynamic, multidimensional and possibly hierarchically differentiated, this area of investigation attracted few researchers while the attempt to measure self-concept as a single global entity gained favor. DeSteno and Salovey (1997), claim that during this period investigators such as Burns (1979) struggled to apply their models that were based within the framework of unidimensionality and global self-concept. Hattie (as cited in Marsh & Craven, 1997, p. 133) aptly refers to this period of self-concept research as the "dustbowl of empiricism". The hallmarks of the period of self-concept research prior to the mid 1970s were a lack of theoretical bases, poorly designed measurements, small sample sizes and incongruous results (Marsh & Craven, 1997). In spite of these methodological weaknesses, researchers relied heavily on unidimensional measures consequently producing paradoxical results. The aim appeared to be one of throwing everything into self-concept measurement in

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the hope that something significant would arise (Marsh & Craven, 1997). These problems were further complicated by the injudicious use of these measures for between construct studies whereby self-concept was related to other variables prior to addressing within construct issues. For example, self-concept measures were commonly utilized for between construct studies with other psychological and behavioral factors resulting in a compounding risk of error for interpretation. Consequently the history of self-concept research has been plagued with theoretical and methodological flaws and these issues are currently mirrored in nursing self-concept research.

Yoga occupies an important place in the scheme of spiritual practices. Several health related benefits of yoga has been reported in the literature e.g. Kochar (1972) reported a significant reduction in anxiety and general hostility in a group of forty yoga performers. Udupa (1985) reported to have treated 1007 cases of various stress disorders with a combination of the practice of asana, pranayam and meditation. Michalsen et al. (2005) reported significant reduction in stress, anxiety, fatigue, depression, headache and backache in the yoga performers group as compared to the control group. Verma (2007) in her article 'Yoga and Health' concluded that yoga is a live art that promote a long healthy life. However, the ultimate goal of yoga is not just to achieve and maintain good health only rather the realization of the self. By realizing the true self, an embodiment of bliss free from the taint of sin and fear of death, mortal individual attains the highest fulfillment (Adiswaranda, 2004).

## METHODOLOGY

### *Sample*

The study was conducted on 120 working employees of Aligarh in the age range of 26 to 58 years from Aligarh selected on the basis of purposive sampling. There were thirty-five people in each of the three groups viz., light exercise group (those who were doing light exercises like brisk walking, and moderate jogging), heavy exercise group (those who were doing competitive sports as athletics, kabaddi, handball etc.); yoga performers (those who were doing yogic exercises as pranayam, kapalbhati, brahmri). Participants in all the three groups were doing these regularly for the last one-year. The fourth group was that of control group of comparable age and these were not doing any exercise or yoga. There were forty-five participants in this group. The participants included in each group were physically and mentally sound.

### *Instrument*

**Self-concept Scale:** The Self-concept Scale was developed by Rastogi (1979) and this scale has 51 items and the items rating from strongly agree to strongly disagree. The 51 scale items including the following. 5. Strongly Agree, 4. Agree, 3. Undecided, 2. Disagree, and 1. Strongly Disagree The self-concept scale has 10 constructs. Table 1 given below indicates items included in ten constructs:

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**Table 1. Construct of Self-concept \*Along with their Item Numbers\***

S.No.	Constructs	Item Numbers
1.	Health and Sex Appropriateness	6, 20, 29, 22, 34 & 46 P P N N P P
2.	Abilities	4, 8, 12, 23, 36, 38, 39 & 42 P P N N P N N P
3.	Self-confidence	7, 9, 14, 16 & 44 P P N N P
4.	Self-acceptance	2, 10, 17 & 35 P N N N
5.	Worthiness	1, 3, 19, 25, 27, 41 & 48 P N N P P N P
6.	Present, Past & Future	18, 22, 26, 31 & 40 P P N N P
7.	Beliefs and Convictions	24, 47 & 49 N P P
8.	Feeling of Shame & Guilt	5, 18, 28, 30 & 50 N N N N N
9.	Sociability	33, 37, 43 & 45 N P P N
10.	Emotional	11, 15, 21 & 51 N N N N

\*The letters 'P' or 'N' below each item show the possessiveness or negativeness of the items.

### RESULTS AND DISCUSSION

The objective of the study was to assess self concept among those doing regular exercise (light and heavy) and performing yogic exercise and control group. The data were analyzed by applying simple analysis of variance followed by post-hoc Duncans test and the result are given in Table 1 and Table 2 below:

**Table 1. Means and S.D.'s of the four groups of self concept**

	Light Exercise (G1) (n=30)	Heavy exercise (G2) (industries=30)	Yoga (G3) (N=30)	Control group (G4) (n=30)
Self-concept	X = 13.69 <sup>a</sup> α= 4.72	X= 15.03 <sup>a</sup> α= 3.3	X = 13.03 <sup>a</sup> α= 2.69	X= 9.85 <sup>b</sup> α= 4.72

**NB:** Table subscripts show significant Duncan's post-hoc comparisons similar letters indicate non-significant difference whereas different letters indicate significant difference.

**Table 2. Summary Table of ANOVA**

	Sources of Variance	Sum of Squares	Degree of Freedom	Mean Square	F
Self concept	SSB	523.513	3	174.504	10.561 <sup>***</sup>
	SB	2329.314	96	16.520	

The results (Table 2) revealed that the self concept score of the four groups differed significantly (F = 10.561, p<.01). Post-hoc mean comparison by Duncan's test (Table 1)

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revealed that the control group participants (mean = 9.85) had significantly low self concept than the light exercise (mean = 13.63), heavy exercise (mean 15.03) and yoga (mean = 13.03) performers. The light and heavy exercise groups and the yoga performers however did not differ among themselves (Table 1). Thus, the control group participants were having lower self concept than the exercise (light and high) and yoga performers. Exercise/activity helps one to maintain physical fitness as they are conscious about their self concept. Their exercise/activity seems to help them in coping with everyday problems as well as with negative feelings of despondence and sadness resulting in lowered psychological distress. Breathing exercises, kapal bhati and brahmri (yogic exercises) have also been reported to be helpful in fighting illnesses e.g., hypertension, cardiovascular disease, anxiety, depression (Kochar, 1972, Udupa, 1985, Michalsen et al. 2005, Verma, 2007) and reducing distress and results of the present study provide support to these studies.

The findings of the study can also be explained in terms of health, locus of control. It has been reported that those who have internal locus of control have sense of control over their health in that they maintain that they can maintain good health by exercise, yoga etc., whereas those who have external health locus of control may not involve themselves in such behaviors. Further studies taking health locus of control as variable and randomly assigning subjects in different groups and pre and post measurement of self concept may be more revealing.

It is concluded that who are regularly doing exercises either light or heavy or performing yogic exercises have better self-concept. However, the findings of the study need to be verified on a large sample, before being generalized.

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