

# Impact of Integrated Yoga Module on Leadership Competencies of Managers

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## Abstract

Leadership remains one of the most researched topics, but scientific mechanisms behind the phenomenon are not yet known completely. Leadership competency is considered as a trait of a leader than a process in the organizational context. The purpose of this research was to explore the impact of integrated yoga module on leadership competencies as given in Indian transformational leadership (ITL) and propose a model for the leadership phenomenon. We conducted a randomized control trial study on a total of 126 managers with 90 days of intervention (integrated yoga module (yoga group) ( $n = 63$ ) and physical exercise (PhyEx group) ( $n = 63$ ) participants). Experiments revealed that leadership competencies were affected by both integrated yoga module and physical exercise significantly ( $p < 0.001$ ). RM ANOVA results showed that yoga group showed high effect of size than physical exercise and had a consistent significant effect over repeated measures. The integrated yoga module was found to have a consistent positive impact on most of the leadership competencies with emotional and cognitive domains requiring willpower and self control, while physical exercise had a positive impact only on emotional domains of leadership competencies.

**Key words :** leadership competency, leadership phenomenon, Indian transformational leadership, willpower, integrated yoga module, physical exercise

**JEL Classification :** D23, I31, J17, M53, Z12

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Leadership has been emphasized and developed in corporate organizations to meet almost all the organizational goals. It is extensively studied with respect to leader, leader competency, and leadership development. The models of leadership are expressed as influence by leaders on followers. Institutions can facilitate the process of leadership development through training programmes based on experience of managers over the years. Avolio, Walumbwa, and Weber (2009) examined works that have been done on substitutes for leadership, servant leadership, spirituality and leadership, cross-cultural leadership, and e-leadership.

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## **New Perspectives in Leadership**

Wheatley (2011) explained the complexity of relationships that contribute to a leader's effectiveness. Studies have been conducted on partnership, followership, empowerment, teams, networks, and the role of context. Ethical and moral questions are no longer fuzzy religious concepts, but key elements in the relationship any organization has with colleagues, stakeholders, and communities. Eberly, Johnson, Hernandez, and Avolio (2013) developed a process model comprising of multi-centric structure leadership event cycles which had interaction between leader, follower, and context and explained the probable mechanisms behind the leadership process.

A unified theory of leadership was also developed with reference to transcendental meditation, which suggests that development of consciousness is a fundamental causal variable underlying the complexity of behaviours and psychological qualities associated with leadership. Harung, Heato, and Alexander (1995) explained four levels of leadership in which development of consciousness is the first and fundamental level. They further argued that world class leaders had more frequent experiences of higher states of consciousness than comparison groups. These concepts have further opened up discussions on Indian leadership recently. Reddy and Srinivasan (2015) distinguished between leader development and leadership development and its implications for the design of such training programmes - the knowing, being, and doing gap, and the need to synthesize Western and Indian approaches to leadership development.

## **Leadership Phenomenon**

We are introducing operational definition of leadership as a system phenomenon which is composed of interacting forces within and without the three integrated components of self, people, and situations, propelled by force of willpower, which results in a symbiotic state of existence for all round holistic development. We would like to focus on leadership phenomenon and its underlying system through the two major lines of thoughts. One is the structural part of the leadership system with all components as explained in the complexity leadership theory and the second is process part of the leadership system as explained in transformational leadership.

Firstly, complexity theory provides a structure of the leadership phenomenon. Consider organizations as a complex system in which effective leaders learn to manage and develop networks. They foster and cultivate interdependencies within and without the organization (Marion & Bacon, 1999). Complexity theory approaches matters more holistically. Clarke (2013) and Lichtenstein, Uhl-Bien, Marion, Seers, Orton, and Schreiber (2006) recognized the interrelatedness and systemic nature of leadership and others considered this, as opposed to leaders, a process that emerges in the interactive “spaces between” people and ideas. Complexity science was used to develop complexity leadership theory, a leadership paradigm that focuses on enabling the learning, creative, and adaptive capacity of complex adaptive systems (CAS) within a context of knowledge - producing organizations (Uhl-Bien, Marion, & McKelvey, 2007). This was further studied with the adaptive function and an interactive process between adaptive leadership and complexity dynamics that generates emergent outcomes for a firm (Uhl-Bien & Marion, 2009). Osborn (2008) further stated that complexity theory focuses leadership efforts on behaviours that enable organizational effectiveness. Experimental studies have shown that when leaders encounter tasks that are overwhelmingly complex, they act in less transformational ways because they momentarily lack the psychological resources (Doci & Hofmans, 2015).

Secondly, the transformational leadership theory explains the process behind the leadership phenomenon. Burns brought out the concept of transformational leadership. He defined transformational leadership as a relationship of mutual stimulation and elevation that converts followers into leaders and may convert leaders into moral agents (Burns, 1998). Bass and Steidlmeier (1999) stated that to be truly transformational, leadership must be grounded in moral foundations and mentioned four components as : idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration.

## **Leadership Competencies**

Hollenbeck, McCall, and Silzer (2006) expressed importance of finding a more comprehensive, integrated model of leadership effectiveness that encompasses leadership behaviours, situations, and outcomes by expansion of current competency models. There was a need for clarity about the difference between a leader's competency and leadership competency. Goleman, Boyatzis, and McKee (2001) stated that managing one's inner life is not easy and requires right emotional and behavioural chain reaction. Therefore, the primal task of leaders is not driving earnings or strategy, but driving emotions, and consequently, organizational performance in the right direction. Leader, follower, situation, and overall leadership phenomenon comprising these has been in discussion only recently. Battilana, Gilmartin, Sengul, Pache, and Alexander (2010) studied leadership competencies for implementing planned organizational change, examined the relationship between two managers' leadership competencies, and the likelihood that they would focus on three main activities associated with implementing planned organizational change as communicating, mobilizing, and evaluating.

## **Leadership & Willpower**

Bruch and Ghoshal (2004) tried to define and explain the meaning through deconstructing willpower as a capability and rather argue that a person's willpower relies on a combination of his or her energy and focus. Energy is defined to relate to a person's degree of personal commitment and involvement towards a purpose or cause, while focus signals how well the person channels his or her energy towards the desired outcome. Impact of willpower on sustained learning on a strenuous mental task was studied based on if willpower is viewed as a limited or non-limited resource (Miller, Walton, Dweck, Job, Trzesniewski, & McClure, 2012), while contemporary studies were considering it to be like a muscle which depends on glucose for power (Gailliot et al., 2007). Role of will power in leadership was explained by Karp (2015), who stated that willpower is a process phenomenon to which certain generic principles apply, and he suggested a set of strategies for leaders for developing their willpower. Willpower is also linked to leader's performance in success of a project. Only through the essential leadership element of willpower that basic skills sets can produce project success (Michael & ACP, 2013). Kugelman (2015) explained willpower from religious and psychological perspectives and how will power can be developed through training.

Willpower has diverse significations : self-control, resoluteness, and effort ; testing of the limits of endurance ; ability to influence and lead others ; a visible sign of character ; a measurable trait ; a goal of education and training. In this paper, we explore that the propelling force behind the leadership phenomenon is willpower, and integrated yoga develops this willpower.

## **How Integrated Yoga Develops Leadership Competency?**

Yoga, which originated in ancient India, is being practised as a spiritual method of enlightenment. While impact of yoga on leadership has not been sufficiently studied, there is ample scope of such a research to be conducted. Klenke (2007) introduced a model of authentic leadership that rests on a single explanatory concept - identity - which specifies three interrelated identity systems : the self-identity system, the leader-identity system, and the spiritual-identity system. The developmental processes of leader and follower self-awareness and self-regulation were emphasized by Gardner and his associates (Gardner, Avolio, Luthans, May, & Walumbwa, 2005).

Considering a leader as a living human system and conscious of self is another approach. Chakraborty (1995) mentioned the importance of experiencing one's spiritual self in Indian philosophical views and pointed out that managerial and organizational psychology for leadership is yet to grapple with the most fundamental of all the

themes: the complete model of man which places the spirit-core of SELF in the centre. He introduced the classical Indian concept of wisdom leadership called as the *rajarshi* (*raja* + *rishi*) model of the leader as the very embodiment of *satya* (truth) and *rita* (order) (Chakraborty, 1995).

Capra (1996) explained complexity science that if a living system can maintain its self-identity, it can self-organize to a higher level of complexity, a new form of itself that can deal better with the present. A living system is a network of processes in which every process contributes to all other processes. The entire network is engaged together in reproducing itself.

Yoga works in the same systemic way for development of willpower in the human system. This phenomenon and understanding of operational mechanisms behind it requires more exploration, with the help of technical instruments, which can measure human bio - energies. Yoga philosophy contains four paths like *Karma Yoga*, *Bhakti Yoga*, *Raja Yoga*, and *Jnana Yoga* (Nagendra & Nagarathna, 2004). An experimental study was conducted on the effect of optimism and belief in the law of karma on transformational leadership. Transformational leadership is significantly positively related to a leader's optimism and leader's belief in the law of karma (Chadha, Jain, & Krishnan, 2013).

Integrated yoga is essentially a combination of Swami Vivekananda's concept of four yogas - *Jnana Yoga* (Vivekananda, 2014), *Raja Yoga* (Vivekananda, 2016), *Karma Yoga* (Vivekananda, 2015b), and *Bhakti Yoga* (Vivekananda, 2015a) by which holistic development and growth of human beings are observed (Ganpat & Nagendra, 2011). Kumari, Hankey, and Nagendra (2013) studied the effect of yoga practices on emotional dynamics of managers through emotional intelligence and emotional competence.

This study is an attempt to explore the impact of integrated yoga module (IYM) on domains of leadership competencies for transformational leadership in the Indian context. Singh and Krishnan (2007) developed a scale known as the Indian transformational leadership scale, which was used in this research to measure the impact of integrated yoga on Indian transformational leadership. It contains domains like conviction in self, non-traditional, openness and nurturing, performance oriented and humane, personal touch, sensitive and conscientious. These domains have been studied in various ways in different studies.

*Conviction in self* has been studied as a basic component of the leadership triad (Leavy, 2003) and was considered as the soul of a leader (Newell, 2009). Conviction to lead has been studied by Mohler (2012) with its importance in decision making. Belief in God and religious conviction provides a framework for understanding and acting within one's environment, thereby acting as a buffer against anxiety and minimizing the experience of error (Inzlicht, McGregor, Hirsh, & Nash, 2009). *Traditional and non-traditional ways of leadership* have been compared as conservative (Howard, 1963) and its relevance to power authority was studied (Douglas, 1979). *Openness and nurturing* are found to be important for leaders with moral consciousness and self-reflection for leaders' (Branson, 2007) development to full potential for followers. Role of openness, nurturing, and generative aspects are given in complex leadership systems (Surie & Hazy 2006). Self nurturing was also studied along with spiritual practices and mindfulness in the context of leadership practice (Pipe & Bortz, 2009). Follower's cultural orientation has an effect on performance (Jung & Avolio, 1999) and goal orientation was also associated with follower's performance (Moss & Ritossa, 2007). A high positive relationship between *personal values' balance* and leadership effectiveness was found (Bruno & Lay, 2008). Leaders' *sensitivity* was considered to be a prerequisite of authentic leadership along with self-knowledge (Begley, 2006) while followers' sensitivity to transformational leadership was developed by cultivating regulatory focus. *Conscientiousness* is an essential component of leadership competency profile in project managers (Muller & Turner, 2010), while goal focused leadership enables expression of conscientiousness (Colbert & Witt, 2009).

## Research Methods

**(1) Research Design :** This research study was planned as a randomized controlled trial (RCT). Participants in one

group were given training under integrated yoga module (IYM), while participants in the other group were given training with physical exercises.

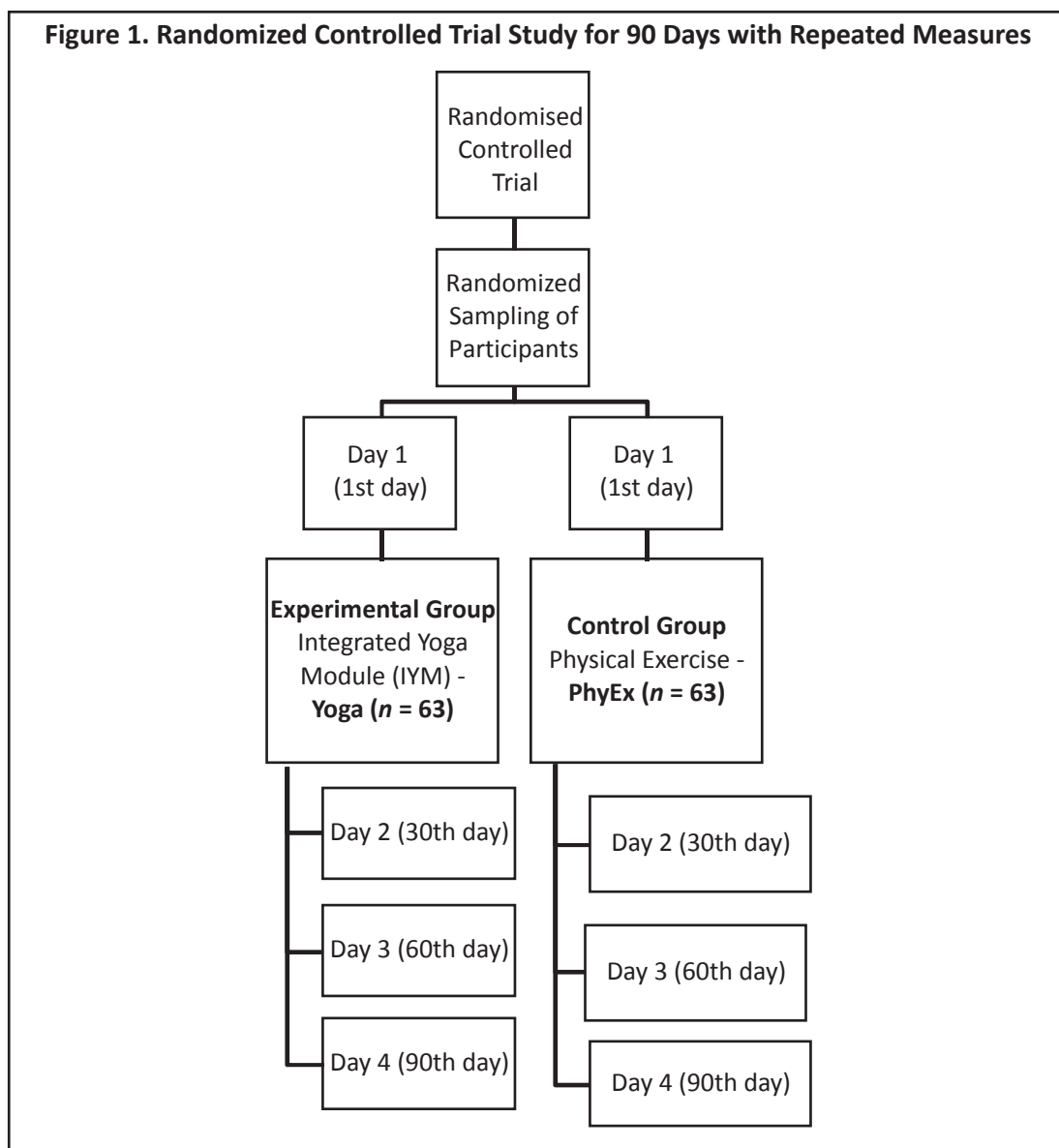
We started with the following hypotheses for our study :

⇒ **Hypothesis 1** : Integrated yoga module has an impact on leadership competencies of managers.

⇒ **Hypothesis 2** : Physical exercise has an impact on leadership competencies of managers.

**(2) Participants and Procedure** : Participants in this study were healthy managers with minimum 2 years of work experience of working in various companies. Intervention was given by trained yoga teachers and physical education teachers during August - December 2015.

**(3) Sampling** : Total participants who joined initially were 220 - 110 in the yoga group and 110 in the physical



exercise group. Data from all participants who completed all four stages of data collection cycles consecutively were included. At the end of the study, 63 participants remained in each group. Integrated yoga group had 24 women and 39 men (Age :  $M = 33.55$ ,  $SD = 6.88$ ) and physical exercise group had 19 women and 44 men (Age :  $M = 33.71$ ,  $SD = 7.49$ ) (see Figure 1).

Experimental intervention was given for 1 hour daily of integrated yoga module training sessions comprising of *Surya Namaskar*, set of *asanas*, and cyclic meditation along with informational sessions once a week on four paths of yoga namely - *Karma Yoga*, *Bhakti Yoga*, *Raja Yoga*, and *Jnana Yoga* for yoga group. Control intervention was given for physical exercises comprising of general warming up and relaxation techniques along with general health sessions for the PhyEx group.

Indian transformational leadership scale was used to measure the leadership competencies. The items in the scale were introduced at regular intervals of 1<sup>st</sup> as Day 1, 30<sup>th</sup> as Day 2, 60<sup>th</sup> as Day 3, and 90<sup>th</sup> as Day 4. The questionnaire had 41 item statements with objective choice in Likert scale - scoring is given as 1 for *strongly disagree* to 5 for *strongly agree*. The items were grouped to represent sub - dimensions of the competencies of Indian transformational leadership. These variables are listed as - (a) performance - oriented and humane, (b) openness and nurturing, (c) sensitive and conscientious, (d) personal touch, (e) conviction in self, and (f) non - traditional (Singh & Krishnan, 2007).

## Analysis and Results

**(1) Data Analysis :** Indian transformational leadership questionnaire has six domains of Leadership. Each domain was analyzed separately. Data analysis was conducted using SPSS software. Descriptive analysis of mean and standard deviation [Table 1] indicate the differential effects of physical exercise and integrated yoga module. Yoga group has increased mean and reduced standard deviations indicating better effect of integrated yoga module on leadership competencies.

**Table 1. Descriptive Analysis Showing Mean and SD Values**

| Domains of Leadership           | Group | N = 63 | 1st Day | 30th Day | 60th day | 90th day | Total         |
|---------------------------------|-------|--------|---------|----------|----------|----------|---------------|
| Conviction in Self              | PhyEx | Mean   | 14.14   | 14.43    | 14.81    | 14.56    | 14.484        |
|                                 |       | SD     | 3.926   | 3.206    | 2.878    | 3.232    | 3.311         |
|                                 | Yoga  | Mean   | 13.98   | 15.29    | 15.94    | 16.22    | <b>15.357</b> |
|                                 |       | SD     | 3.391   | 2.679    | 2.124    | 2.317    | 2.628         |
| Non - Traditional               | PhyEx | Mean   | 14.19   | 14.38    | 14.52    | 14.70    | 14.448        |
|                                 |       | SD     | 3.975   | 3.240    | 2.810    | 3.145    | 3.293         |
|                                 | Yoga  | Mean   | 14.14   | 14.41    | 14.60    | 14.68    | <b>14.460</b> |
|                                 |       | SD     | 2.934   | 2.407    | 2.159    | 2.263    | 2.441         |
| Openness and Nurturing          | PhyEx | Mean   | 14.68   | 14.33    | 13.94    | 14.75    | 14.425        |
|                                 |       | SD     | 3.136   | 2.634    | 2.494    | 2.383    | 2.662         |
|                                 | Yoga  | Mean   | 13.78   | 15.40    | 15.97    | 16.11    | <b>15.313</b> |
|                                 |       | SD     | 2.992   | 3.119    | 2.590    | 2.522    | 2.806         |
| Performance Oriented and Humane | PhyEx | Mean   | 14.14   | 14.02    | 14.37    | 14.19    | 14.179        |
|                                 |       | SD     | 3.340   | 3.490    | 3.259    | 2.950    | 3.260         |
|                                 | Yoga  | Mean   | 14.11   | 15.24    | 16.00    | 15.71    | 15.266        |
|                                 |       | SD     | 3.547   | 3.330    | 2.834    | 2.926    | 3.159         |

Table is contd. on next page

|                                    |       |             |       |       |       |       |               |
|------------------------------------|-------|-------------|-------|-------|-------|-------|---------------|
| <b>Personal Touch</b>              | PhyEx | <i>Mean</i> | 14.81 | 15.37 | 15.48 | 15.32 | 15.242        |
|                                    |       | <i>SD</i>   | 3.560 | 3.018 | 2.799 | 3.141 | 3.129         |
|                                    | Yoga  | <i>Mean</i> | 14.54 | 15.73 | 15.33 | 16.25 | <b>15.464</b> |
|                                    |       | <i>SD</i>   | 2.895 | 2.350 | 1.992 | 2.207 | 2.361         |
| <b>Sensitive and Conscientious</b> | PhyEx | <i>Mean</i> | 13.49 | 13.81 | 14.13 | 14.06 | 13.873        |
|                                    |       | <i>SD</i>   | 3.058 | 2.856 | 2.624 | 2.705 | 2.811         |
|                                    | Yoga  | <i>Mean</i> | 13.43 | 14.16 | 14.76 | 14.83 | <b>14.294</b> |
|                                    |       | <i>SD</i>   | 3.004 | 2.707 | 2.153 | 2.247 | 2.528         |

\*PhyEx- Physical Exercise, Yoga- Integrated Yoga Module (IYM), *SD* - Standard Deviation

**Table 2. Univariate Tests<sup>a</sup> - Yoga Group with Greenhouse - Geisser Correction**

| Domains of Leadership                  | Type III Sum of Squares | <i>df</i> | Mean Square | <i>F</i> | Sig. | Partial Eta Squared |
|----------------------------------------|-------------------------|-----------|-------------|----------|------|---------------------|
| <b>Conviction in Self</b>              | 187.381                 | 2.002     | 93.598      | 23.874   | .000 | .278                |
| <b>Non Traditional</b>                 | 10.889                  | 1.885     | 5.778       | 1.546    | .218 | .024                |
| <b>Openness and Nurturing</b>          | 216.107                 | 1.333     | 162.127     | 30.615   | .000 | .331                |
| <b>Performance Oriented and Humane</b> | 130.679                 | 1.826     | 71.557      | 8.693    | .000 | .123                |
| <b>Personal Touch</b>                  | 98.679                  | 1.943     | 50.784      | 13.887   | .000 | .183                |
| <b>Sensitive and Conscientious</b>     | 79.921                  | 2.194     | 36.421      | 11.740   | .000 | .159                |

<sup>a</sup>. Computed using alpha = .05

**Table 3. Univariate Tests<sup>a</sup> - PhyEx Group with Greenhouse - Geisser Correction**

| Domains of Leadership                  | Type III Sum of Squares | <i>Df</i> | Mean Square | <i>F</i> | Sig.        | Partial Eta Squared |
|----------------------------------------|-------------------------|-----------|-------------|----------|-------------|---------------------|
| <b>Conviction in Self</b>              | 14.524                  | 1.811     | 8.021       | 2.202    | .120        | .034                |
| <b>Non Traditional</b>                 | 8.774                   | 2.530     | 3.468       | 1.443    | .236        | .023                |
| <b>Openness and Nurturing</b>          | 26.234                  | 2.196     | 11.949      | 5.589    | <b>.004</b> | .083                |
| <b>Performance Oriented and Humane</b> | 3.948                   | 2.648     | 1.491       | 1.527    | .214        | .024                |
| <b>Personal Touch</b>                  | 16.552                  | 2.366     | 6.995       | 5.165    | <b>.004</b> | .077                |
| <b>Sensitive and Conscientious</b>     | 15.746                  | 2.182     | 7.215       | 4.827    | <b>.008</b> | .072                |

a. Computed using alpha = .05

Repeated measures analysis of variance (ANOVA) have indicated that main effect of integrated yoga module (IYM) and physical exercise intervention on leadership competency variables is significant. As Mauchly's test of sphericity is not met, *F* statistics in univariate tests were used with Greenhouse - Geisser correction for analysis. Independent analysis of repeated measures in *F* statistics with 'tests of within - subjects effects' reveals following information on of each domain of yoga group with integrated yoga module (IYM) [Table 2] and physical exercise group [Table 3].

*F* statistics data is presented as below :

**(i) Conviction in Self :**

**Yoga group :**  $F(2.002, 93.598) = 23.874, p < 0.001$ , Effect size ( $\eta^2$ ) = 0.278.

**Table 4 . Tests of 'Within Subject Effects' for Yoga and PhyEx**

| Within Subjects Effect | Group | Wilks' Lambda in Multivariate <sup>a,b</sup> |          |                      |                 |      |                     |
|------------------------|-------|----------------------------------------------|----------|----------------------|-----------------|------|---------------------|
|                        |       | Value                                        | <i>F</i> | Hypothesis <i>df</i> | Error <i>df</i> | Sig. | Partial Eta Squared |
| Leadership             | Yoga  | .487                                         | 8.250    | 18.000               | 512.431         | .000 | .213                |
| Leadership             | PhyEx | .754                                         | 2.989    | 18.000               | 512.431         | .000 | .090                |
| Leadership             |       |                                              |          |                      |                 |      |                     |
| GROUP <sup>c</sup>     |       | .759                                         | 5.894    | 18.00                | 1038.518        | .000 | .088                |

a. Design: Intercept

Within Subjects Design: leadership

b. Tests are based on averaged variables.

c. Design: Intercept + GROUP

**PhyEx Group :**  $F(1.811, 8.021) = 2.202, p < .120$ , Effect size ( $\eta^2$ ) = 0.034.

**(ii) Non - Traditional :**

**Yoga group:**  $F(1.885, 5.778) = 1.546, p < .218$ , Effect size ( $\eta^2$ ) = 0.024.

**PhyEx group:**  $F(2.530, 3.468) = 1.443, p < .236$ , Effect size ( $\eta^2$ ) = 0.023.

**(iii) Openness and Nurturing :**

**Yoga group:**  $F(1.333, 162.127) = 30.615, p < .001$ , Effect size ( $\eta^2$ ) = 0.331.

**PhyEx group:**  $F(2.196, 11.949) = 5.589, p < .004$ , Effect size ( $\eta^2$ ) = 0.083.

**(iv) Performance Oriented and Humane :**

**Yoga group:**  $F(1.826, 71.557) = 8.693, p < 0.001$ , Effect size ( $\eta^2$ ) = 0.123.

**PhyEx group:**  $F(2.648, 1.491) = 1.527, p < .214$ , Effect size ( $\eta^2$ ) = 0.024.

**(v) Personal Touch :**

**Yoga group:**  $F(1.943, 50.784) = 13.887, p < 0.001$ , Effect size ( $\eta^2$ ) = 0.183.

**PhyEx group:**  $F(2.366, 6.995) = 5.165, p < .004$ , Effect size ( $\eta^2$ ) = 0.077.

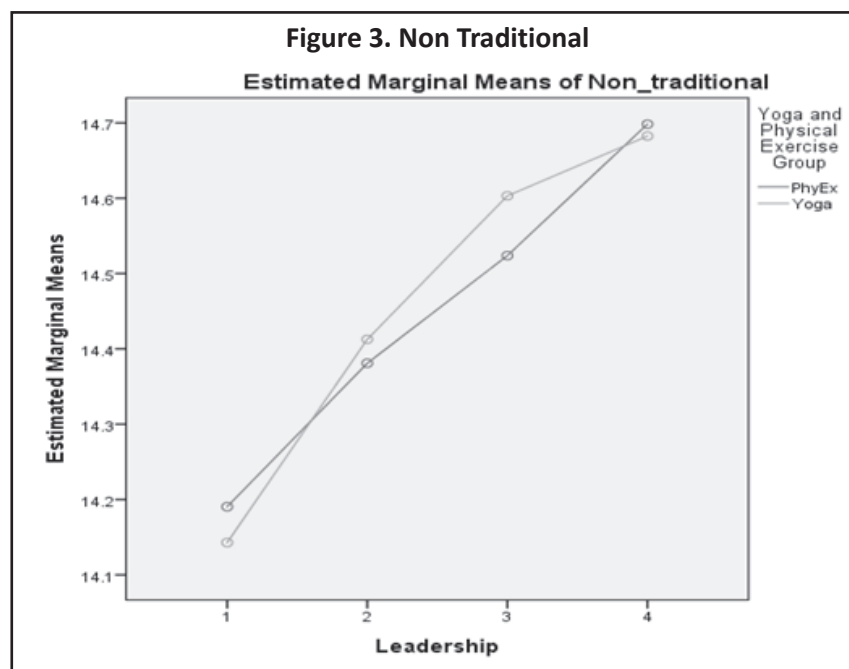
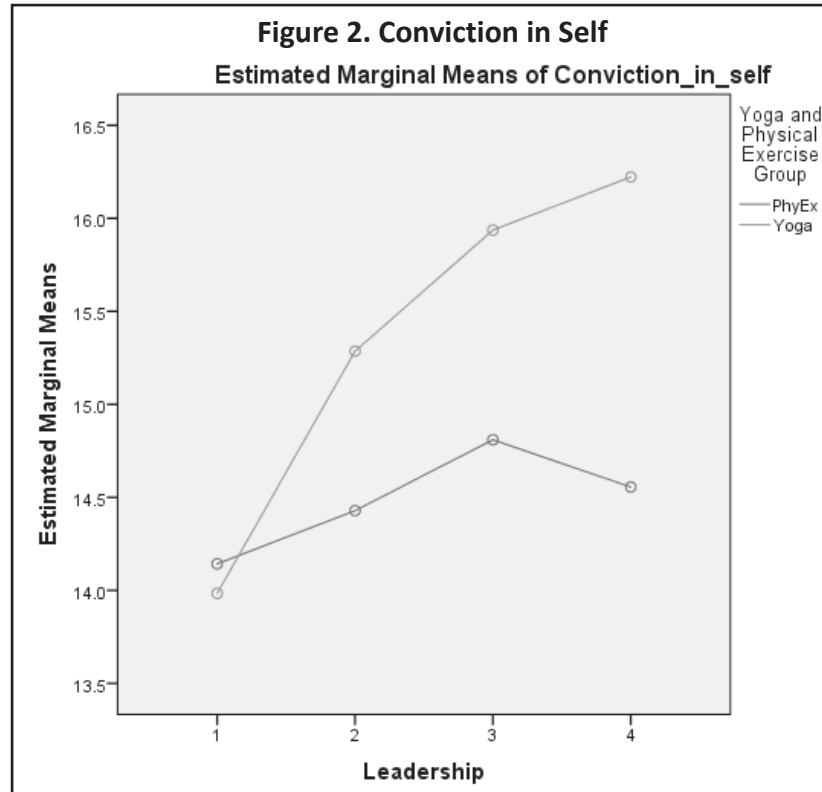
**(vi) Sensitive and Conscientious :**

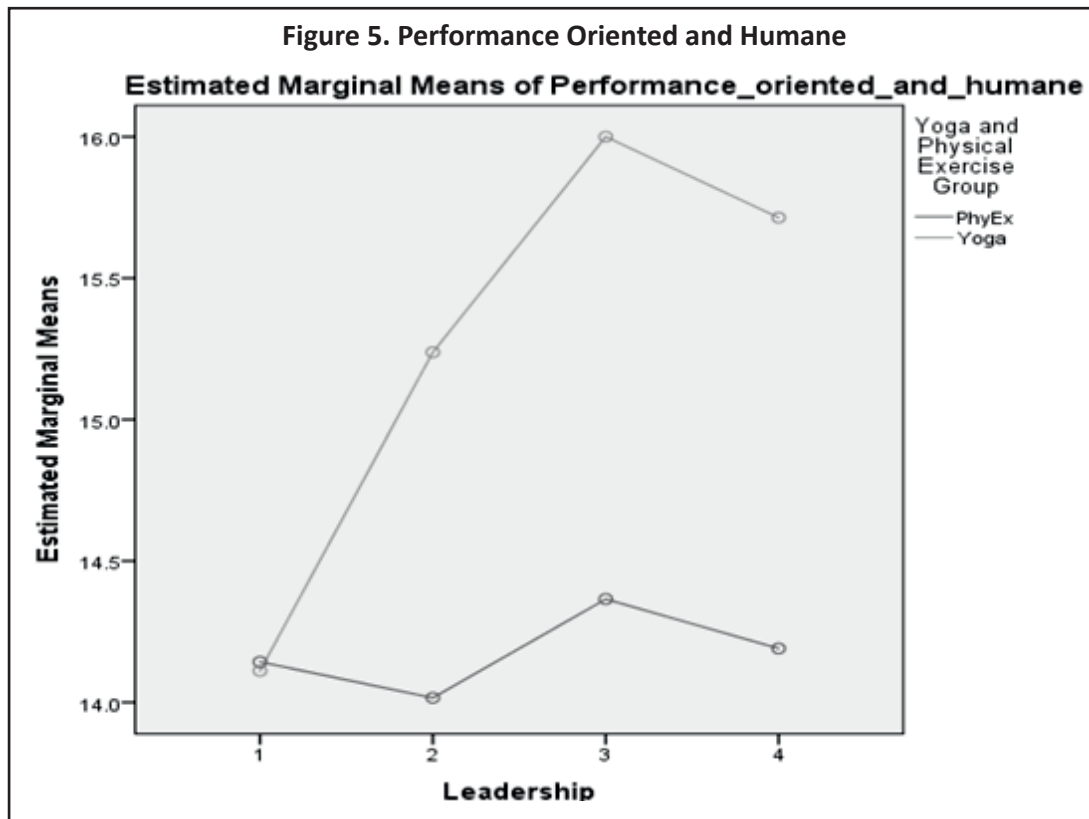
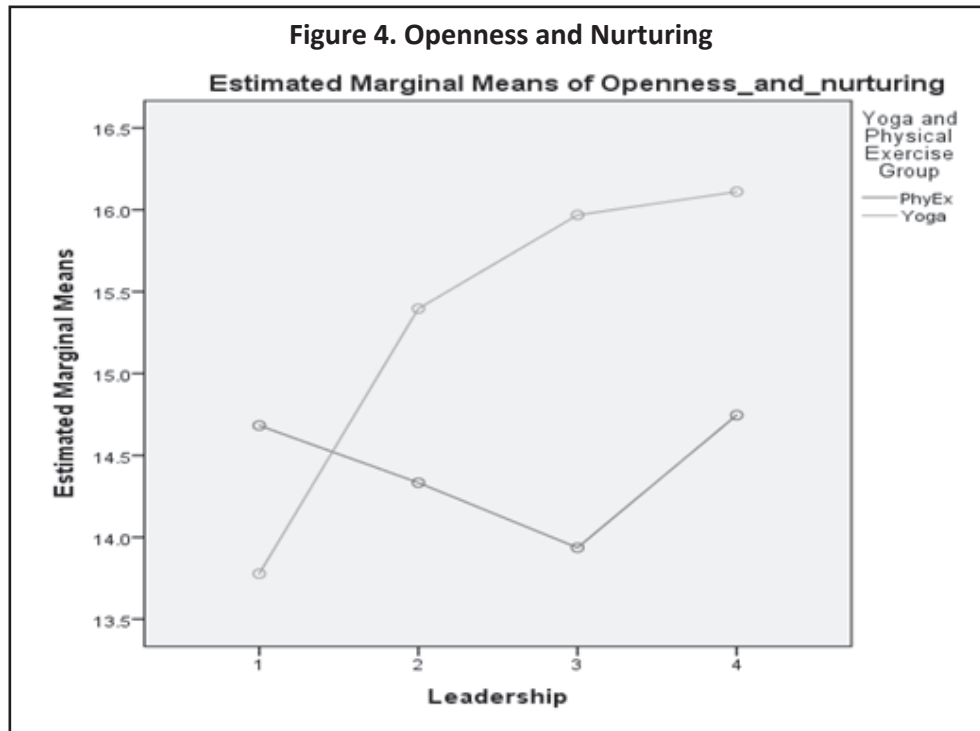
**Yoga group:**  $F(2.194, 36.421) = 11.740, p < 0.001$ , Effect size ( $\eta^2$ ) = 0.159.

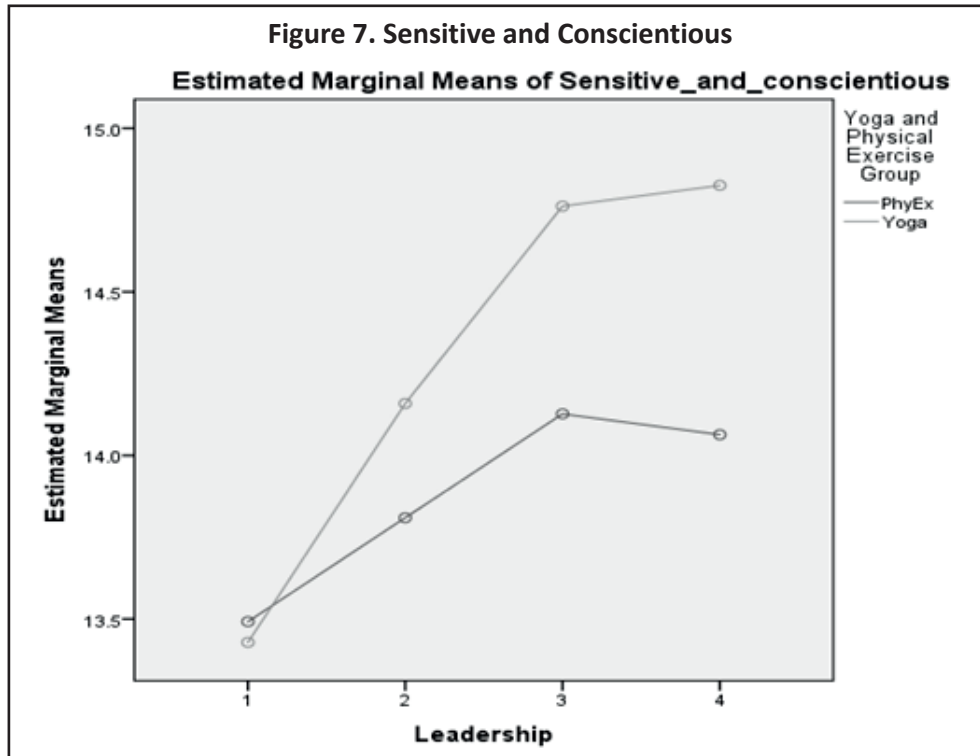
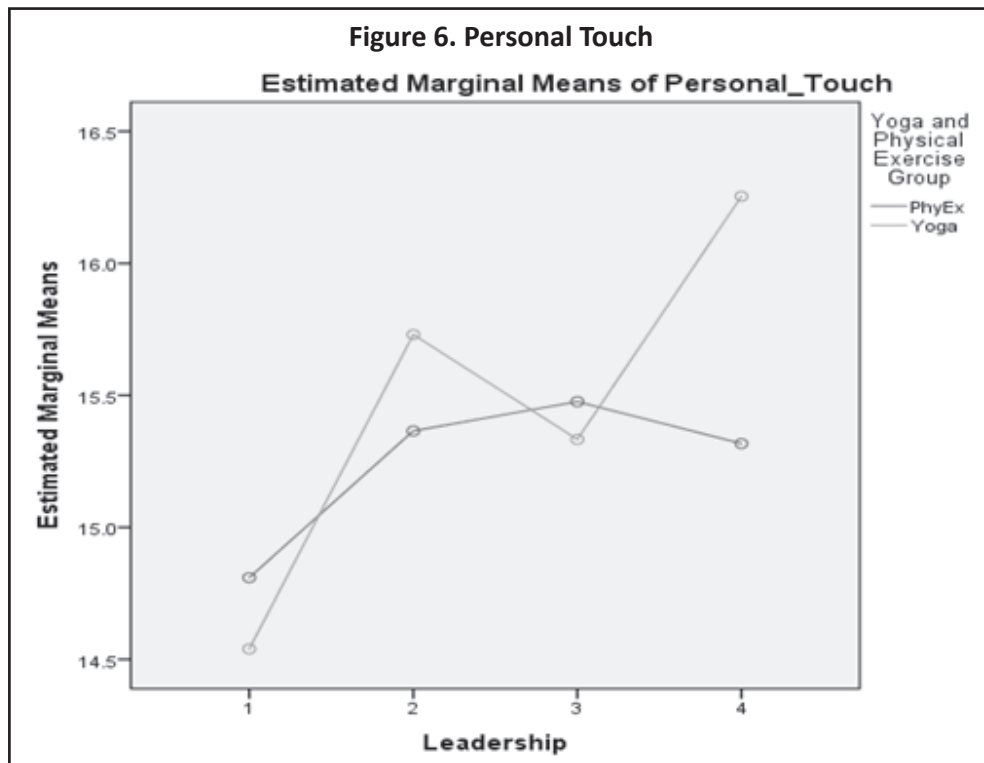
**PhyEx group:**  $F(2.182, 7.215) = 4.827, p < 0.008$ , Effect size ( $\eta^2$ ) = .072.

Further multivariate analysis was used to detect repeated - measures effects as shown in Table 4 for overall leadership competencies. Effects are significant with each measure as given by Wilks' Lambda values compared independently 'within' each group and are found to be significant with  $p < 0.001$ . However, the effect size calculations as partial Eta squared values are showing the difference. Yoga group has effect size ( $\eta^2$ ) = 0.213 while PhyEx group has effect size ( $\eta^2$ ) = 0.090 indicating that integrated yoga module has higher impact compared to physical exercise. Multivariate analysis using design - Intercept + GROUP is significant ( $p < 0.001$ ) with effect size ( $\eta^2$ ) = 0.088 indicating effect on two groups.

**(2) Multivariate Analysis of Within Subject Effects for Integrated Yoga Module – IYM (Yoga) and Physical Exercise (PhyEx) :** To differentiate between the effects of repeated measures taken within the duration of one month each (i.e. 1<sup>st</sup> Day pre and 30<sup>th</sup> Day, 60<sup>th</sup> Day, and 90<sup>th</sup> Day post tests), pair-wise analysis was taken into consideration. It is found that yoga has shown significant changes in repeated measures for all domains except







non-traditional way of leadership, while physical exercise does not have significant changes for all domains of leadership. All six domains are analyzed for between groups effects in four measurements, that is, pre experimental data on Day 1 (1<sup>st</sup> Day), and post data on Day 2 (30<sup>th</sup> Day), Day 3 (60<sup>th</sup> day), Day 4 (90<sup>th</sup> Day) and graphs were plotted separately. The graphical analysis – RMANOVA for each domain of Indian transformational leadership plotted for yoga group and PhyEx group are depicted in Figures 2 - 7 to measure the effects on each domain with estimated marginal means.

Visual analysis indicates that the effects of physical exercise are significant but not consistent, while integrated yoga module (IYM) has significant and consistent effects. Graphs also represent the periodic effects and indicate that effects of yoga during the first month were much higher than effects of yoga in the second and third months, and the effect reduces further during the last month of intervention.

## Discussion

Repeated measures analysis of variance (ANOVA) and subsequent *F* statistics analysis indicates that the effect of integrated yoga module (IYM) is significant in domains of conviction in self, openness and nurturing, performance oriented and humane, personal touch, and sensitive and conscientious. Effect of physical exercise is significant only in domains of openness and nurturing, personal touch, sensitive and conscientious, indicating that emotional aspects of leadership phenomenon are affected by physical exercise also and effect is not significant in domains of conviction in self, performance oriented and humane, indicating physical exercise does not affect the cognitive domains requiring discipline through self control and willpower. Effect on non - traditional way of leadership is not significant in both the groups. Some of the domains in both the groups indicate the consistent high impact over first three months but low effect in the last month. In other words, integrated yoga module and physical exercise groups both affect the leadership competency domains. Hence, Hypothesis 1 is partially accepted and Hypothesis 2 is rejected. Hence, it is concluded the integrated yoga module has a consistent positive impact on most of the leadership competencies of managers, while physical exercise has consistent positive impact on only few of the leadership competencies of managers.

## Managerial Implications and Conclusion

At this stage, it is worth considering the managerial implications of the leadership phenomenon in organisations or societies at large. Management and leadership have been studied as levels of growth. Managers are developed as leaders and often effective leaders are also efficient managers. Leadership is about influencing people to make big things happen. Management is a process of organizing people to get things done. They are different skills, but equally critical to success in today's workplace. The key is to know which approach works best in which situation (McLeod, 2012). The behaviors identified in this study as enhancing perceptions of trust in leaders are demonstrated by managers who behave ethically, positively influence organizational culture, treat employees fairly and consistently, encourage employee growth and development, and promote work-life balance (Gordon, Gilley, Avery, Gilley, & Barber, 2014).

Yoga based techniques may be helpful for working professionals in moving and managing feelings of anger and frustration. The study examines the effect of yoga on working professionals in reducing aggression and counterproductive work behavior, thereby increasing organizational performance (Dwivedi, Kumari, Akhilesh, & Nagendra, 2015). Gentry and Sparks (2012) conducted a study in 40 countries and analyzed whether certain leadership competencies were universally endorsed by managers across countries (supporting convergence) as being important for success in organizations, or if the importance of the leadership competencies were dependent upon certain cultural dimensions (supporting divergence). Recent research on the skills, knowledge, abilities, and

other characteristics that define effectiveness of senior executives were examined and integrated in a comprehensive and systematic way by Zaccaro (2001).

We examine, through this research, a leadership phenomenon which is not dependent on any leader, follower, or context. It is an integrated, interactive, complex, and adaptive system of three components - self as leader, people as his/her followers, and situations as context. These components are propelled by force of willpower of both self and people, mutually developing each other while making favourable changes in organizational or social situations. Furthermore, we consider that willpower is a state of energy balance in the human system which can be developed through regular training of body-mind complex. This energy balance is attained and enabled through integrated yoga practices based on Indian yoga philosophy. Leadership competencies refer here as indicators of behavioural changes resulting from practice of willpower by leaders. These competencies are very well represented in the Indian transformational leadership questionnaire.

The integrated yoga module (IYM) works by enhancing willpower and self control in a better way than physical exercise, and hence, we can see more effect through yoga. Physical exercise may help you with better mental health ; hence, emotional domains show good impact.

## **Limitations of the Study and Scope for Further Research**

Initially, the study was confronted with availability of senior managers for a 90 day long intervention. Hence, junior managers from multiple organizations were included. In this research, we did not use any instruments to measure information of human life science or bio energy which specifically indicate energy balance in human system and willpower as it is too wide an area to be covered under the scope of a research in management domain. Moreover, a better holistic model of leadership based on ancient Indian traditional knowledge of yoga philosophy needs to be conceptualized with multidisciplinary studies of management sciences and life sciences. This model can be supported with appropriate measurement tools to explore the real life leadership phenomenon.

Senior managers from only one organization can further strengthen and validate the phenomenon. Variety of experimental conditions like advanced yoga practices with long term studies can be carried out to verify the sustaining effects. Instrumental measurements along with traditional leadership scales will also improve our understanding of the underlying mechanism of how yoga works for development of leadership competency.

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