EFFECT OF STRESS MANAGEMENT PROGRAMMES ON THE HEALTH AND PERSONALITY TRAITS OF MANAGERS—A STUDY OF MANAGERS IN A LARGE PSU IN INDIA

RABINDRA ACHARYA, BALARAM PRADHAN AND H.R. NAGENDRA

A manager’s life in the globalised world has become very stressful, especially so in India. Increasingly, they have been looking for ways and means of effective stress management; including stress management programmes. This article aims to examine the effect of the stress management programme, Self-Management of Excessive Tension (SMET) on the managers of ONGC, a large public sector unit in India. Sixty-two managers underwent a residential training on stress management for five days in S-VYASA, Bangalore, India. The sessions consisted of lectures on stress, meditation techniques, devotional sessions, and discourses on the Bhagvad Gita, along with practical stress management sessions. The effectiveness of this stress management programme was measured using the Vedic Personality Inventory (VPI), the Penn State Worry Questionnaire (PSQW) and General Health Questionnaires.

INTRODUCTION

WITH THE exponential growth of information technology, the world has become a global village. This naturally has implications for society as a whole, and in the context of business, for managers in organisations in particular.

Further, it is widely perceived that, awareness combined with speed increases the efficiency of a manager. Nagendra & Nagarathna\(^1\) pointed out that the depth of perception among managers increases their sensitivity, which leads to tension, which in turn leads to a wide range of diseases.
While elaborating on the attributes of managers, Goleman\(^2\) asserted that the one who possesses higher degrees of emotional capabilities, is an effective leader. Thus, it is clear that along with IQ and technical skills, emotional capabilities are the entry-level requirements for executive positions. Also, emotional intelligence is very important if a person has to attain the highest levels in an organisation, and is often linked to exceptional performance.

Executive and management development, among other areas, focus on the personality traits and characteristics that managers need to cope with the changing demands of managerial responsibility \(^3\). Various management research studies assert that transformational leadership has an impact on creativity for both the individual and the organisation.\(^4\) An individual’s personality plays an important role in his/her managerial performance and effectiveness. Personality variables like afflictions viz., ignorance, attachment, version, and insecurity in the mind, prevent a person from performing the leadership role to perfection.\(^5\) To enhance performance, management development training has been found to be an effective intervention in occupational health psychology, especially on the personality and health of professionals.\(^6\)

There are many theories that explain the success of managers. But as per Indian culture and philosophy, the three ‘Gunas’ of an individual define his/her qualities or “personality traits” and have been widely associated with the success and effectiveness of a person.

In a related study, Byrne\(^7\) explains how the leaders’ own psychological well-being impacts leadership behaviour. In a study of 172 leader-subordinate pairs, the leaders’ depressive symptoms, anxiety, and workplace alcohol consumption clearly predicted lower transformational leadership and higher abusive supervision.\(^8\) Excessive tension in a manager leads to

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high levels of stress, further leading to emotional imbalance. The SMET programme aids in the transformation of managers’ attitudes from negative to positive emotional well-being. Further, Adhia\textsuperscript{9} states that the intensity, with which, an organisation seeks success depends largely on the managers of that organisation. Job burnout is a physiological and psychological condition that affects both personal health and organisational effectiveness. Recently, Yoga has been acknowledged as one of the best coping strategies for stress, because of its ability to enable the individual to respond positively to stress stimuli.\textsuperscript{10} Yoga, a technique of life management, has been an intrinsic part of Indian culture for thousands of years. Yoga is believed to have evolved from the Bhagavad Gita, which expounds on the philosophy of life through the concept of various Yogas: Karma Yoga, Jnana Yoga, Bhakti Yoga and Raja Yoga, and says that following this path results in greater happiness and better performance.\textsuperscript{11}

Yoga has been seen to have a positive impact on the health of employees. Scientists and doctors have also warned that increase in stress levels leads to health problems.\textsuperscript{12} Yoga has been used as a key intervention for managing excessive stress; it improves the mental well-being of managers and subsequently enhances executive efficiency.\textsuperscript{13} More recently, the efficacy of SMET in managing the excessive stress, improving mental health and emotional stability and hence enhancing executive efficiency has been proved.\textsuperscript{14}

Yoga is way of life and is a traditional technique that enhances mental health and results in the acceleration of managerial performance in organisations. A stress management programme incorporating meditation techniques brings about better health and leads to the executive efficiency of managers.\textsuperscript{15}

The intensity of a person’s good health depends upon the \textit{Guna} that dominates his/her day to day life. While excessive \textit{Tamas} and \textit{Rajas} make people ill, dominance of \textit{Sattva} on the other hand leads to perfect health.

\textsuperscript{9}Ibid.
An individual has the freedom to choose any of the above *Gunas*, and thereby determine the quality of his/her life also.\(^{16}\) A detailed description of the *Gunas* and their predominance in determining an individual’s personality is given in the Bhagavad Gita.

With this background, the present study aims to examine the effect of the stress management programme SMET, on the personality traits of the managers of ONGC, a large public sector organisation in India.

**Methodology**

The sample size was calculated using a general power analysis programme G\(^*\) power 3.1.\(^{17}\) The Cohen’s effect size (\(e\)) was calculated as 0.61 using Sattva Guna of the previous study carried out by Deshpande, Nagendra & Raghuram,\(^{18}\) fixing alpha as 0.05 and power of the study as 0.95. Hence, a sample size of 62 managers (\(n=62\)) was chosen for the current study.

All the 62 managers participating in the five-day SMET programme in S-VYASA were from ONGC. More details about the participants are given in Table 1A. For the current study, both male and female participants were included based on the clinical screening conducted by a residential medical officer of the same institute. Participants who were not willing to volunteer for the research study, those having prior exposure to Yoga, or those with auditory deficits, and neurological or psychological illnesses were excluded from the research. The trial of this research was approved by the Institutional Ethical Committee. All the participants were provided with all the details about this research, and their consent for participation was obtained.

**Study Design and Intervention Adopted**

The present study was designed as a single armed pre-post study, wherein the subjects were interviewed on record both before and after the five day SMET intervention.

\(^{16}\)Ibid.


Cyclic Meditation (CM), consisting of a set of eight techniques practiced cyclically, is a key process in SMET, and was practiced for 30 minutes every day. CM is very different from any other form of meditation. It comprises a set of physiological stimulations (Yogic postures) followed by relaxation techniques, i.e. the Instant Relaxation Technique (IRT), the Quick relaxation Technique (QRT) and the Deep Relaxation Technique (DRT). The CM process is given here in a pictorial format and more details about the structure of the SMET programme are given in Table 1B. As explained above, the SMET has multiple components/dimensions. The details of SMET are provided in Fig. 1.

### TABLE 1B: SMET PROGRAMME DETAILS

<table>
<thead>
<tr>
<th>SMET Theory</th>
<th>SMET Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theory</td>
<td>Practice session</td>
</tr>
<tr>
<td>1. Introduction to SMET</td>
<td>Cyclic Meditation</td>
</tr>
<tr>
<td>2. Concept and Physiology of Stress</td>
<td></td>
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<tr>
<td>3. Stress and its Release</td>
<td></td>
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<td>4. Executive Growth</td>
<td></td>
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<td>5. Group Dynamic</td>
<td></td>
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<tr>
<td>6. SMET and Yoga Therapy Research</td>
<td></td>
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<tr>
<td>7. Integrated Approach of Yoga therapy</td>
<td></td>
</tr>
<tr>
<td>8. Pranayama and Health</td>
<td></td>
</tr>
<tr>
<td>9. Yoga for Mastery over Emotion (Bhakti Yoga)</td>
<td></td>
</tr>
<tr>
<td>10. Action in Relaxation (Karma Yoga)</td>
<td></td>
</tr>
<tr>
<td>11. Concept and Basis of Yoga (Happiness Analysis)</td>
<td></td>
</tr>
</tbody>
</table>

**Variables Studied**

For the purpose of the study, three critical variables, namely, VPI, PSWQ and GHQ were adopted. These instruments are briefly explained below.

**The Vedic Personality Inventory (VPI)**

In 1998, Wolf developed an inventory to assess three personality constructs called *gunas*, based on their description in the ancient Indian scriptures called the Vedas. Hence, this inventory was named as VPI and it measures the three gunas viz., *Sattva*, *Rajas* and *Tamas*. VPI has 15 items for the *Sattva guna*, 19 for *Rajo guna* and 22 for *Tamo guna*. VPI has good internal consistency and reliability, with Cronbach’s alpha ranging from 0.850 for *Sattva*, 0.915 for *Rajas* and 0.699 for *Tamas*. In terms of
discriminant validity, all but one facet had significant differences.\textsuperscript{19}

\textbf{Penn State Worry Questionnaire (PSWQ)}

The PSWQ is a 16-item self-reported questionnaire that evaluates traits of pathological worry. Each item describes a characteristic aspect of worry. It has a rating scale wherein ratings are made on a 5-point Likert type scale from 1 = ‘not at all typical of me’ to 5 = Very typical of me.’ This self-report measure has demonstrated good internal consistency and good test-retest reliability.\textsuperscript{20}

\textbf{General Health Questionnaire (GHQ)}

The General Health Questionnaire (GHQ) contains 28 items in four 7-item sub-scales: A-somatic symptoms, B-anxiety, C-social dysfunction, and D-severe depression. The test examines recent mental status, and identifies possible psychiatric disturbances. It has no thresholds for individual sub-scales. Hence, the total of all sub-scales was used. All items


have a four point scoring system: ‘better than usual’, ‘same as usual’, ‘worse than usual’, and ‘much worse than usual’, scored: 0-0-1-1.21

Data Analysis

Data were analysed using the ‘paired t-test’ to examine the effect of SMET intervention within the group.

Results

Based on the variables elaborated above, the results of the study are detailed below:

Effect on Personality Traits: There were significant improvements in the sub-scale of personality through the VPI score, i.e. Tost-Sattva’ compared to Tre-Sattva’ (p<0.001) with a percentage difference of -6.97 per cent; ‘Post-Rajas’ compared to Tre-Rajas’ (p<0.001) by 4.45 per cent and Tost-Tamas’ compared to Tre-Tamas’ (p<0.001) by 4.45 per cent. These findings indicate that following the SMET programme, Sattva guna in managers was higher than Rajas and Tamas. Mean ± SD scores of Pre and Post personality traits are given in Table 2.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre</th>
<th>Post</th>
<th>N</th>
<th>ES</th>
<th>Percentage</th>
<th>P_Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sattva</td>
<td>46.23±6.43</td>
<td>49.45±6.44***</td>
<td>62</td>
<td>-0.690</td>
<td>-6.97</td>
<td>0.001</td>
</tr>
<tr>
<td>Rajas</td>
<td>30.09±3.25</td>
<td>28.75±3.37***</td>
<td>62</td>
<td>0.428</td>
<td>4.45</td>
<td>0.001</td>
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<td>Tamas</td>
<td>30.09±3.25</td>
<td>28.75±3.37***</td>
<td>62</td>
<td>0.428</td>
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Legend: VPI= Vedic Personality Inventory
***p< 0.001, paired t-test; post score compared with respective pre score.

Effect of SMET on Worry

The instrument, Penn State Worry Questionnaire (PSWQ) measured the impact of SMET on the ‘worry’ of the managers. It was observed that ‘worry’ scores post-SMET were lower than the pre-SMET worry scores (p<0.001) with a percentage difference of 9.27 per cent.

Findings indicated that ‘Worries’ in managers was lower following the SMET programme. Mean ± SD scores of Pre and Post personality traits are given in Table 3.

Effect of SMET on General Health

For the impact of SMET on the health of the managers, the General Health Questionnaire (GHQ-28) was used. The results revealed that there

EFFECT OF STRESS MANAGEMENT PROGRAMMES

RABINDRA ACHARYA, et. al

were significant improvements in the post-SMET total GHQ scores from the pre-SMET total GHQ score (p < 0.001), with a percentage difference of 83.94% on four domains of GHQ; post-SMET somatisation compared to pre-SMET somatisation’ (p<0.001) had a difference of 86.73 per cent post-SMET anxiety when compared to re-SMET anxiety (p<0.001) had a difference of 83.67 per cent, post-SMET social dysfunction when compared to pre-SMET social dysfunction(p<0.001) had a difference of 90.38 per cent and post-SMET depression when compared with pre-SMET depression (p=0.167) was lesser by 61.54 per cent.

It was quite evident from these findings that symptoms such as distress, anxiety and depression in the managers were lower following the SMET programmes. Mean ± SD scores of Pre and Post personality traits are given in Table 4.

TABLE 4: MEAN±SD OF PRE AND POST SCORES OF GENERAL HEALTH QUESTIONNAIRES SELF-REPORTED QUESTIONNAIRE

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<tr>
<td>GHQ Somatisation</td>
<td>0.98±1.78</td>
<td>0.13±0.34***</td>
<td>62</td>
<td>0.470</td>
<td>86.73</td>
<td>0.001</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0.98±1.59</td>
<td>0.16±0.52***</td>
<td>62</td>
<td>0.545</td>
<td>83.67</td>
<td>0.001</td>
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<tr>
<td>Social Dysfunction</td>
<td>0.52±1</td>
<td>0.05±0.22***</td>
<td>62</td>
<td>0.500</td>
<td>90.38</td>
<td>0.001</td>
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<tr>
<td>Depression</td>
<td>0.26±0.89</td>
<td>0.1±0.3</td>
<td>62</td>
<td>0.177</td>
<td>61.54</td>
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<tr>
<td>Total GHQ</td>
<td>2.74±3.92</td>
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Legend: GHQ = General Health Questionnaire
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Linking the data of Tables 2, 3 and 4, it was amply evident that SMET has a very high positive impact on the Sattvic gunas of the respondents, reducing the Tamasic and Rajasic gunas. SMET also helped in reducing the worries of the participants, thus positively impacting their overall general health.
DISCUSSION

In the present study, significant improvements were observed both in the personality traits and on the four domains of general health, viz. somatisation, anxiety and depression, social dysfunction and psychological well-being of the managers of ONGC.

The observations of this study regarding the personality traits of managers are aligned with those of similar previous studies wherein a transformation in personality was reported by Ganpat and Nagendra,\(^{22}\) in executives and college students following one month of Transcendental Meditation\(^{23}\) and in volunteers practicing yoga.\(^{24}\) Similar findings on triguna personality using long term yoga intervention on college and university students were reported.\(^{25}\)

Adding strength to the findings of this study that somatization, anxiety and depression significantly reduced following the SMET programme in managers, are the results of a Yoga training programme wherein somatization scores and those related to mental health indicators, such as anxiety, depression, anger, and fatigue in healthy women were found to be greatly reduced after their completion of the programme.\(^{26}\) More recently, inhabitants between the age group of 20-67, from two villages of a highly earthquake prone area in Southern Iceland showed significant improvements in their stress levels and some stress-related symptoms such as sleep, concentration, well-being, quality of life, depression and anxiety after receiving the Yoga intervention.\(^{27}\)

The SMET programme has significantly helped in reducing anxiety scores;\(^{28}\) has improved physiological responses\(^{29}\) and also enhances the

\(^{22}\)Ganpat and Nagendra, op. cit., 2011
quality and quantity of sleep.\textsuperscript{30} The practices of yoga viz., meditation, controlled breathing and calming down the mind also guided the workers and the executives to clear their minds (\textit{Chitta}) and made them sensitive about issues such as interacting with their co-workers and helping them also to transform into better individuals, without any expectation.\textsuperscript{31}

Appropriate environment, circumstances, experiences and the training of an individual can give him/her the capacity and the ability to be an effective leader, regardless of the inborn personality traits and characteristics. When leadership becomes a set of behaviours and competencies that anyone can develop, then the larger picture is certainly much more optimistic, democratic and inclusive.\textsuperscript{32}

**CONCLUSION**

The findings of this study prove that SMET practices transform the personality traits in managers by reducing anxiety, depression and somatization and improving their psychological well-being.

**IMPLICATIONS AND SCOPES FOR FUTURE RESEARCH**

The present results have particular relevance for managers. The positive influence of personality traits (\textit{Tamas}, \textit{Rajas} and \textit{Sattava}) can help managers overcome many conflicts without hampering their personal or professional growth. A manager whose personality is more \textit{Sattva Guna} oriented handles strains better and is, therefore less stressed, and therefore contributes more to his organisation by being more efficient and productive. Dominance of the \textit{Sattva Guna} calms the mind and enhances the decision making process. Influence of \textit{Sattva} makes a manager cope better with any situation without any worry or anxiety. This premise is well supported by the results of the present study. Thus, it is very clear that the personality of an individual plays a key role in terms of how he/she handles work related psychological and occupational stress. In this context, the findings of this study that SMET can help in reducing stress in managers and thereby enhance their productivity and leading to the growth of the organisation is significant.

The size of the samples in this study size was not sufficient enough to substantiate the findings of the research and a control group would have improved the standard and quality of the study. Nevertheless, these findings have implications for policy makers and for researchers to investigate further in this area.


\textsuperscript{32}C.M.Bligh, “Personality Theories of leadership. Encyclopedia of Group processed and Inter Group Relations”. 2009 SAGE Publications, 2011.