PSYCHOLOGICAL CORRELATES OF EXPERIENCES OF HIGHER STATES OF CONSCIOUSNESS IN SUBJECTS PRACTISING THE TRANSCENDENTAL MEDITATION AND TM-SIDHI PROGRAMME

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Experiences of higher states of consciousness in subjects practising the Transcendental Meditation and TM-Sidhi programme were found to be positively correlated with perceptual speed, flexibility, creativity, intelligence, field independence, and psycho-motor speed.—EDITORS

Data from 103 subjects who completed a modified short form of Alexander's Higher States of Consciousness Inventory was correlated with results on psychological tests administered to the same subjects as part of a study on effects of the Transcendental Meditation and TM-Sidhi programme on age-related variables.

The following significant correlations were found:

a) Frequency of experience of transcendental consciousness was found to be significantly correlated with performance on tests of perceptual speed (\( p < .05 \)), flexibility (\( p < .05 \)), and creativity (\( p < .05 \)).

b) Frequency of clear experiences of the TM-Sidhi techniques was found to be significantly correlated with performance on tests of intelligence (\( p < .05 \)), creativity (\( p < .001 \)), field independence (\( p < .05 \)), and motor speed (\( p < .05 \)).

c) Frequency of experience of cosmic consciousness was found to be significantly correlated with performance on tests of perceptual speed (\( p < .05 \)), motor speed (\( p < .05 \)), and creativity (\( p < .05 \)).

d) Frequency of experience of unity consciousness was found to be significantly correlated with performance on a test of creativity (\( p < .01 \)).

The pattern of correlations found provides further evidence of the close relationship between the development of higher states of consciousness through the Transcendental Meditation and TM-Sidhi programme and the improved psychological performance reported in the scientific literature.

INTRODUCTION

Previous work by Orme-Johnson and Haynes (1981) established relationships between EEG coherence, creativity, clear experiences of 'pure consciousness', and clear experiences of the TM-Sidhi techniques. Orme-Johnson and Haynes conclude that their findings are consistent with the theory that a coherent state of pure consciousness is a necessary condition for successful performance of the TM-Sidhi techniques, and that TM-Sidhi experiences and creativity are both related to high alpha coherence of the EEG, which is itself a neurophysiological correlate of pure consciousness.

Alexander (1982) has recently developed the Higher States of Consciousness Inventory (HSCI), a
more formal and elaborate instrument which is designed to assess the frequency of experience of the three stabilized higher states of consciousness outlined in the Science of Creative Intelligence, of which the Transcendental Meditation programme is the practical aspect. Using the HSCI on a prison population, Alexander found that the questions and scales relating to these states possessed good convergent and discriminant validity with respect to scales relating to ‘normal’ states of consciousness, alternative conceptualisations of altered states, and other psychological measures. He also found that learning Transcendental Meditation significantly increased the reported frequency of higher states of consciousness.

In view of these findings it was considered appropriate to explore further the relationship of the HSCI with psychological measures. To this end a modified short form of the inventory was administered to subjects who were participating in a study investigating the effects of the Transcendental Meditation and TM-Sidhi programme on age-related psychological variables (Jedrczak, in press).

METHOD

SUBJECTS—Of the subjects taking part in the ageing study 137 males and females completed the questionnaire and took all the group tests (mean age 458 months; mean length of practice of Transcendental Meditation 98 months; and mean length of practice of the TM-Sidhi programme 42 months), although not all these subjects were included in the final results (see below).

INSTRUMENTS—The short form of the HSCI contains questions which only assess the fifth and seventh states of consciousness outlined by the Science of Creative Intelligence (‘cosmic consciousness’ and ‘unity consciousness’—see Alexander, 1982, for a description), along with questions concerned with other personality traits and normal experiences.

On the basis of a pilot study, and due to the large number of other measures given, it was decided to make the inventory as brief as possible. The final form used, therefore, contained all six of the statements related to each of the fifth and seventh states of consciousness, five relating to normal experience (in order to have at least a few items which everyone would be able to relate to), and three ‘misleading’ (M) questions.

The M statements are worded in a similar way to the others, and yet are logically meaningless and were never expressed as experiences by the groups involved in generating the main body of questions. They thus give some indication of a subject’s carelessness, misunderstanding of the instructions (to zero-rate all meaningless items), or tendency to endorse statements simply because they appear complex and grand.

The above twenty statements were organised into six categories: experience of self, thought, perception, when engaged in normal daily activity, dreaming, when asleep, and during deep sleep.

Subjects circled one number for each statement to represent the frequency of that experience in the previous month. Seven frequency categories, with corresponding verbal descriptions, were given, ranging from 0% (Never) to 100% (Always).

The standard instructions ask subjects not to include experiences during the period of meditation, so three further questions were added to refer to experiences during the Transcendental Meditation and TM-Sidhi programme—one relating to transcendental (pure) consciousness, the fourth state of consciousness described by the Science of Creative Intelligence, and two relating to clarity of experience of the TM-Sidhi techniques. All were rated in terms of the same frequency categories given above.

Group-administered tests representing seven age-related abilities were also given: Non-verbal intelligence (Digit Symbol Task of the Wechsler Adult Intelligence Scale, Wechsler, 1955); Visual Memory (Shape Memory, Ekstrom et al., 1976); Creativity (Fluency Score for Unusual Uses of Cardboard Boxes, Torrance, 1974); Field Independence (Hidden Figures Test, Ekstrom et al., 1976); Flexibility (Composite score of the two flexibility measures from the Opposites Test of the Test of Behavioral Rigidity, Schaie and Parham, 1975); Perceptual Speed (Matching objects, Ekstrom et al., 1976); and Motor Speed (Crossing Lines, Botwinick and Storandt, 1973; and Psychomotor Speed variable from the Test of Behavioral Rigidity).

ANALYSIS—The numbers circled by subjects were summed to yield a total frequency score for each
category of experience of consciousness: transcendental consciousness, cosmic consciousness, unity consciousness, and clarity of experience of the TM-Sidhi techniques, along with a total for the M statements.

An intercorrelation matrix was then calculated for these variables and all the experimental measures, using the Pearson correlation coefficient. Due to the near-zero correlations of the consciousness variables with the independent variables used in the main study (particularly age), it was not considered necessary to use partial correlations or multiple regression.

A number of subjects were excluded from this analysis due to having high M scores. The format of the HSCI is modelled on the Defining Issues Test, a reliable and widely used measure of moral reasoning. Rest (1979), the author of the DIT, advocates excluding increasing percentages of high M scorers (M questions are also contained in the DIT) until the most satisfactory pattern of internal consistency and relationships with experimental measures is obtained. The logic for this strategy is that high M scorers will tend to produce an unreliable pattern of scores for the reasons outlined above. A similar idea is also recommended for many personality inventories. Following this procedure, a criterion score of greater than two was used for exclusion, which left 103 valid response sheets.

For exploratory purposes, an estimate of the average scores of the consciousness variables with reference to each other was obtained by multiplying the mean transcendental consciousness score by six and the mean TM-Sidhi experience score by three, there being six questions for the cosmic consciousness and unity consciousness categories, two for the TM-Sidhi experience category, and one for the transcendental consciousness category.

RESULTS

The intercorrelation matrix for the consciousness variables is given in Table 1, and the correlations of each of these variables with all the experimental measures is given in Table 2. All the correlations are in a positive direction, and similar to those obtained with the full sample. The main features of the results are:

a) The consciousness variables are all very significantly intercorrelated with each other. Two pairs of variables emerge which are more highly correlated with each other than with the members of the other pair: (i) cosmic consciousness and unity consciousness, and (ii) transcendental consciousness and clarity of Sidhi experiences;

b) Frequency of experience of transcendental consciousness is significantly correlated with performance on tests of perceptual speed, flexibility, and creativity. The correlations with performance on tests of intelligence and motor speed (Lines, and Opposites Test) tend to significance;

c) Frequency of clear experiences of the TM-Sidhi techniques is significantly correlated with performance on tests of intelligence, creativity, field independence, and motor speed (Opposites Test), tending to significance with memory and perceptual speed;

d) Frequency of experience of cosmic consciousness is significantly correlated with performance on tests of perceptual speed, motor speed, and creativity, and tends to significance with field independence and non-verbal intelligence;

e) Frequency of experience of unity consciousness is significantly correlated with performance on the test of creativity, and tends to significance with motor speed (Lines);

f) When the above transformation on the mean scores is carried out, the new means are:

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<td>Cosmic</td>
<td>9.95</td>
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<tr>
<td></td>
<td>Unity</td>
<td>7.85</td>
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<td>Experience of</td>
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**TABLE 1**

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<td>.41***</td>
<td>.46***</td>
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<td>.48***</td>
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<td>.42***</td>
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***p < .001
TABLE 2
CORRELATIONS OF CONSCIOUSNESS VARIABLES WITH GROUP TESTS
(N = 103)

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<tbody>
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<td>Digit Symbol</td>
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<td>.17+</td>
<td>.02</td>
<td>.24*</td>
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<td>Line Crossing</td>
<td>.17+</td>
<td>.14</td>
<td>.18+</td>
<td>.11</td>
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<td>Perceptual Speed</td>
<td>.20*</td>
<td>.23*</td>
<td>.13</td>
<td>.18+</td>
</tr>
<tr>
<td>Hidden Figures</td>
<td>.08</td>
<td>.18+</td>
<td>.05</td>
<td>.21*</td>
</tr>
<tr>
<td>Shape Memory</td>
<td>.03</td>
<td>.13</td>
<td>.00</td>
<td>.19+</td>
</tr>
<tr>
<td>Psychomotor Speed (</td>
<td>.18+</td>
<td>.22*</td>
<td>.11</td>
<td>.24*</td>
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<tr>
<td>Opposites Test)</td>
<td></td>
<td></td>
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<tr>
<td>Flexibility</td>
<td>.22*</td>
<td>.08</td>
<td>.09</td>
<td>.15</td>
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<td>Fluency</td>
<td>.24*</td>
<td>.39***</td>
<td>.30**</td>
<td>.39***</td>
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</table>

*p < .1  **p < .05  ***p < .001

DISCUSSION

The number of significant and near significant correlations are intriguing, particularly when one considers the difficulties involved in a study of this type. These include different types of interpretation of the questions and different subjective criteria used by subjects, the errors inherent in the nature and administration of the experimental tests, and the basic problem of eliciting information about subtle and intricate processes.

Although the values of the correlations are not as high as those given by Orme-Johnson and Haynes (1981), this is to be expected in view of the much greater number of subjects in the present study, and the fact that the full range of scores was included, rather than using the method of taking extreme groups.

Frequency of clear experiences of the TM-Sidhi techniques showed the most consistent correlations with the experimental measures. The correlations with performance on tests of memory, field independence, creativity, and intelligence are particularly interesting, because in the main ageing study (Jedrczak, in press) partial regression coefficients for length of practice of the TM-Sidhi programme significantly predicted improved performance on all four measures. Orme-Johnson and Granieri (1977) also found that learning the TM-Sidhi programme significantly increased scores on the last three measures, and they discuss the hidden figures task (field independence) in relation to the different components involved in the performance of the Sidhis.

The relatively small number of reports of unity consciousness led to a more highly skewed distribution. This fact, combined with the possibility that subjects might be less certain about their experiences in this category, may clarify why this variable was not correlated with more of the experimental measures.

The only measure that correlated significantly with all the consciousness variables was creativity. This would tend to support the suggestion of Orme-Johnson and Haynes (1981) that fluency is a very useful variable to use in studying the correlates of consciousness.

The correlation between frequency of experiencing transcendental consciousness and clear experiences of the Sidhis replicates the findings of Orme-Johnson and Haynes (1981), while the transformed means can be seen as consistent with their contention that successful performance of the TM-Sidhi techniques is based on the experience of pure awareness.

The inspection of the transformed means is also consistent with the development sequence in the fourth, fifth, and seventh states of consciousness predicted by the Science of Creative Intelligence—the latter stages, being more advanced, are reported less frequently.

All the studies that have been performed to date on the changes brought about by the Transcendental Meditation and TM-Sidhi programme have been interpreted as expressions of the growth of consciousness brought about through the release of stress and the refinement of the physiology.

The present results, when taken in conjunction with previous research, indicate that a direction can be taken towards assessing the growth of consciousness more directly in its own terms, and that these measurements also correlate with other experimental measures. These findings complement the large body of subjective reports of experiences of higher states of consciousness gathered at Maharishi European Research University (Orme-Johnson, 1977).

It would also be fruitful to examine particular individuals who describe experiences of higher states of consciousness. Cunningham (1978), for instance, found that subjects on an advanced course who reported the experience of a higher state of consciousness during a perceptual-motor co-ordination (maze-tracing) task noticed a superior level of performance during these times.
He also discusses two case studies. In the first it was possible to determine the point at which the experience faded more precisely; during the period of the experience (of cosmic consciousness) the error rate was $2^{1/2}$ times lower than the remainder of the maze, while in a second individual who experienced unity consciousness for the whole run the error rate was two standard deviations below the mean of the rest of the experimental group. Farrow and Hebert (1982) also found very interesting physiological and EEG changes in one advanced subject, and Orme-Johnson and Granieri (1977) give examples of particular experiences of the TM-Sidhi techniques.

Finally, it can be predicted that a stronger relationship between higher states of consciousness and various parameters of performance are likely to emerge as these stages, postulated to involve quantum improvements on all levels of the individual, become more established in the population of meditators, and the Higher States of Consciousness Inventory becomes more refined.

This study replicates the work of Orme-Johnson and Haynes (1981) with respect to the relationship between pure consciousness and clarity of experience of the TM-Sidhi techniques, and between these variables and creativity, and has extended the range of findings to include measures of cosmic consciousness and unity consciousness and a wider range of experimental variables.

ACKNOWLEDGEMENTS

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REFERENCES


