PAPER 149

A PRELIMINARY STUDY INTO THE EFFECT OF TRANSCENDENTAL MEDITATION ON EMPATHY

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Research completed 1976.

Long-term practitioners of the Transcendental Meditation technique exhibited higher levels of empathy than short-term meditators and non-meditators.—EDITORS

The following is an abbreviated version of the author’s original master’s thesis presented to the Graduate Faculty of the School of Human Behavior, United States International University, in partial fulfilment of the requirements for the degree of Master of Arts in Psychology.

Thirty-eight noncounselor subjects were administered a sixty-four item questionnaire to measure empathy (Hogan Empathy Scale) just prior to instruction, and three months following regular practice of Transcendental Meditation (TM). Encouraging but nonsignificant statistical results were obtained for empathy levels for this subject sampling. A second group of seventeen nonrandomized, noncounselor, long-term meditators were also administered the Hogan Empathy Scale. Significant statistical results ($p < .001$) were obtained when comparing empathy levels of long-term practitioners of TM with both short-term meditators and nonmeditators.

INTRODUCTION

One essential trait of the psychologically healthy person is the ability to accurately substitute the sense of self, feeling, sympathy, and understanding, for the actual experience of another (10). This trait or ability has generally been called "empathy". Empathy has been defined as "that which promotes better understanding and more effective communication between persons" (6) as the basis of psychotherapy (20), and "as a mental state in which one identifies or feels himself in the same state of mind as another person" (23). Accordingly, empathy is considered to be a necessary characteristic of human relationship (21), and from the standpoint of mental health, any practice which will bring about greater empathy to individuals is to be viewed favorably.

BACKGROUND OF PROBLEM—Three problems and resultant needs have arisen from the body of empathy-related literature. The first is that most of the studies involving empathy have in some way involved the psychological counselor. Undoubtedly, the counselor is instrumental in the employment of empathy, and according to the literature, is the main avenue through which therapeutic transactions take place (16). However, the notion that it is only the psychological counselor who effectively employs empathy may be incorrect. Some studies have shown that sensitive lay people do as well as professional therapists in the treatment of emotionally disturbed persons (14). One study has shown that "counselors and noncounselors do not differ in their ability to perceptualize in empathic situations" (7). It must be recognized that not only is the empathic trait not indigenous solely to the psychological counselor, but that its functioning in the noncounselor is real and has been grossly underemphasized and understudied.

The second problem is that there has been a great
deal of conflicting and often contradictory findings reported. For instance, R. S. Dymond, considered the pioneer in the field of empathy research, has reported:

... those who have low empathic ability ... tend to be rather immature, introverted, motivated from within ... rigid and constricted ... afraid of emotion and ... not capable of forming many good emotional contacts with the outside world. Those whose empathy appears to be high ... show rather extraverted personality structures ... are in better balance and more at peace with themselves ... their emotional contact with others is wider ... they are adaptive ... sensitive to the feeling of others and display social tact. (6)

However, Sternberg (19) has offered findings that at least in part disagree with Dymond's (6). He related the growth of empathy to interpersonal contact, but not to the similarity of personality factors. He stated that there was a positive relationship between specific personality orientations with respect to blunt-aggressive and managerial-autocratic groups. He further added that there may be no empathetic differences between groups classified as high or low in self-deception or in groups classified high or low in repression. Sternberg (19) even postulated that those rated high in self-deception may even have had more empathy. Similarly puzzling conclusions have been offered by other researchers, specifically Passons, who said:

1) Open-mindedness in counselors may not be a crucial factor in empathic sensitivity,
2) cognitive-flexibility appeared to be an important variable in some cases, but not in others, and
3) positive self-concept did not appear to be related to empathic sensitivity. (17)

There is the need for clearer, more definitive relationships between empathy, its associated personality variables, the intrapersonal processes inherent in the experience of empathy, and the actual training used to increase empathy. Relevant to this is a third problem area, which indicates that most of the studies have approached empathy from the intellectual and didactic perspective, rather than from the more primary, affective, and presumably natural capabilities of the human being (14).

It is important here to introduce one variable which although functioning in a nonintellectual, nonanalytic mode, may be instrumental in producing greater empathy. Lesh (14) has shown that a mode of behavior of this type, possibly active in the practice of zazen meditation, may lead to greater empathic responses from psychological counselors as measured by a revised form of the Affective Sensitivity Test. Strictly speaking, since this is the only known piece of research to have been done connecting empathy with meditation, the exact relationship between these two variables is unknown.

PURPOSE OF THE STUDY—The purpose of this study was to investigate the relationship between TM and empathy, focusing on the noncounseling population. The objective was to determine if a difference exists between the levels of empathy as a result of practicing TM. Derived from this are the following hypotheses, stated in the null form:

H01: There is no significant difference in empathy levels between subjects who practice TM and those who do not practice TM, as measured by the Hogan Empathy Scale.
H02: Any effect that TM might have on empathic ability will not be demonstrable through the noncounselor.
H03: Any effect that TM might have on empathic ability will not be equally demonstrable for males and females.
H04: Males and females differ in their limits of change along the lines of empathy as a function of practicing TM.

THEORETICAL FRAMEWORK—It is assumed in this study that personality factors, while retaining their importance in testing, may or may not be totally explanatory with respect to empathy, which surely exists within the boundaries of these personality factors, but may be found in a state which is "pre-existent" with respect to the specific trait. The relationship between empathy and some very general characteristics may be known, although it is unclear why specific traits may be sometimes correlated positively and at other times be negatively correlated with empathy. It is disturbing to note that no known author, other than Lesh (14), has postulated that empathy may be linked not directly with personality traits, but rather to a general process within awareness itself, which when ultimately diversified, may manifest itself as the previously examined personality traits.

It is here that the literature on TM comes into focus. TM is a simple and easily practiced technique involving the use of normal mental processes. Those
who practice the technique say:

... that TM induces a wakeful state of deep relaxation, certain concomitant physiological and biological changes, and that it influences behavioral changes in the practitioner outside of the meditative state. (13)

It has been proposed that TM may give rise to a "fourth state of consciousness"; that is, measurements taken on subjects while practicing TM showed that cardiac output, respiration, blood lactate, galvanic skin response (GSR), and electroencephalographic (EEG) functions, were markedly different in the TM-induced "state" than in the normal states of consciousness—waking, dreaming, and sleeping (22).

Theoretically, TM may produce that state of awareness wherein empathy flourishes, that is, the state of "relaxed wakefulness" produced by TM may be related to the empathic ability. Also, TM has been linked with an increased capacity to regress in the service of the ego (4). The capacity for "adaptive regression" is also correlated with empathy (2, 11). It may be true that TM might indirectly increase one's empathic capability by directly increasing one's skill in adaptive regression.

This relationship becomes plausible when it is alleged that zazen meditation increases empathy (14), and that the technique of zazen meditation is also highly correlated with the capacity for adaptive regression (15). Further support is offered in the findings of Akishige and Kasamatsu (1) who have indicated that zazen meditation causes in practicing subjects certain physiological changes such as decreased oxygen intake, altered EEG patterns, decreased cardiac output; all of which resemble the changes shown in subjects during the practice of TM.

METHOD

RESEARCH APPROACH—To most effectively investigate the effects of the independent variable, TM, upon the dependent variable, empathy, in the case of noncounselors, a quasi-experimental approach was employed. This approach was chosen because this study is only a preliminary research endeavor and also because it easily fits the research situation required to investigate the experimental treatment. The nature of this study also dictates that a less rigorous research design be used to investigate the relationship between the independent and dependent variables, meditation and empathy, respectively. Accordingly Campbell and Stanley's (3) second research design, the One-Group Pretest-Posttest comparison has been selected. The following is a schematic representation of the One-Group Pretest-Posttest design:

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PRETEST</th>
<th>TREATMENT</th>
<th>POSTTEST</th>
</tr>
</thead>
<tbody>
<tr>
<td>E₁</td>
<td>O₁</td>
<td>X₁</td>
<td>O₂</td>
</tr>
</tbody>
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In addition comparisons were made between E₁ at pretest (O₁) and posttest (O₂) and a second experimental group E₂, who were administered the test once only.

SUBJECTS—a) Experimental Group E₁. The following procedures were used to select subjects for experimental group E₁. Each week, an introductory lecture on TM is given by the Students International Meditation Society (SIMS). At the end of the lecture, those persons interested in learning the technique of TM indicate their interest to the lecturer. At this time those persons were contacted by the researcher. It was explained that the researcher was conducting an experiment in the area of meditation, and that subjects were needed to take a simple 15–25 minute paper and pencil test just before receiving instruction in TM. It was explained to respondents that certain requirements such as minimum age and long-term availability needed to be met. Chosen subjects were then telephoned (if possible) and invited to participate in the experiment. During this second contact testing considerations such as "time," "place," etc., were discussed. The above procedure took place at the end of every weekly introductory lecture until a statistically appropriate number of invited experimental group subjects had been obtained.

Seventy-six noncounselor subjects took the test prior to their instruction into the technique of Tran-
scendental Meditation. Of those 76 people, 38 were randomly selected and invited to participate in the experiment. All 38 who were contacted a second time, agreed to participate in the experiment. This group became experimental group E1 (see table 1).

b) Experimental Group E2. In a study on the effects of Transcendental Meditation on psychological health, Hjelle (11) concluded that experienced meditators (average time meditating = 22.63 months) scored higher than did short-term meditators (time meditating = less than 3 months), who in turn scored higher than nonmeditators on a measure of self-actualization (18). Because of this finding, it was thought that experienced meditators might score higher on a measure of empathy than short-term meditators, who in turn would be expected to score higher than nonmeditators.

It was therefore decided to include for comparison in this study a second experimental group E2, consisting of long-term practitioners of TM. Subjects in this group were seventeen noncounselor volunteers from a meeting of teachers of Transcendental Meditation (see table 2) held at the SIMS center. The teachers were told that the experimenter was doing research on practitioners of TM and that subjects who had been meditating regularly for a long period of time were needed to fill out a questionnaire (see table 2).

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>X AGE (YEARS)</th>
<th>RANGE (YEARS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>9</td>
<td>26.66</td>
</tr>
<tr>
<td>Females</td>
<td>8</td>
<td>27.25</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>26.94</td>
</tr>
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INSTRUMENTATION—The 64-question, 15–25 minute test for empathy was developed by Robert Hogan (12) because he first questioned the concept of empathy, and sought to determine if it was simply a construct created by academicians or if it in fact had real operational and heuristic value. Using the Q-sort technique, Hogan had two groups of subjects (laymen and psychologists) describe the "highly empathic" man. The correlation among the subjects' definitions, those of Dymond (5) and a standard dictionary was .86. It appeared that various diverse groups of people held similar views about this trait.

Next, several groups of subjects (including military men, research scientists, and student engineers) at the University of California, Berkeley, were given the same Q-sort task. The results of this testing were compared to scores on the California Psychological Inventory (CPI), Minnesota Multiphasic Personality Inventory (MMPI), and the Gough Total Social Acuity Index (8). Correlations were modest, tending to be positive for the CPI and Gough test, and negative for the MMPI (as would be expected given its orientation). Thirty-four questions were then factor-analyzed from the CPI, 25 were taken from the MMPI, and 8 items were extracted from experimental testing devices used at the University of California Institute of Personality Assessment and Research (IPAR). The resultant 64 questions (32 True, 32 False) comprised the Hogan Empathy Scale. Construct validity measured with similar empathy tests ranged from correlations of .51 to .60. Two-month test-retest reliability was .84.

TESTING—For experimental group E1, subjects, testing took place at the SIMS center, San Diego, California. The 64-question paper and pencil questionnaire (Hogan Empathy Scale) was given to subjects prior to their instruction into the technique of TM, on successive Saturdays, for a period of approximately eight weeks. Upon completing the questionnaire, subjects were allowed to return to the main waiting room to participate in the normal TM instruction procedures. Total time spent in testing ranged from 15 to 25 minutes.

Three to four months after the pretest, subjects received by mail a posttest questionnaire packet. In it, subjects found (a) the identical information given to them at the time of the pretest (only this time it was in the form of a written introduction); (b) a personal data sheet, which when completed and returned allowed this researcher to compare pretest-posttest data on both a group and an individual basis; (c) specific questionnaire instructions (again identical to the ones given at the time of pretesting); (d) the questionnaire; (e) a questionnaire answer sheet, and (f) a stamped, self-addressed envelope which could be used to return the personal data sheet and answer sheet to this experimenter.

For experimental group E2, testing took place at the SIMS center at a meeting of teachers of Transcendental Meditation. Instructions were included in the questionnaire packet so that these subjects re-
receiued the identical pretest information as the nonmeditating and short-term meditators used as subjects in the first part of this experiment.

RESULTS

DATA ANALYSIS—After the passing of 3–4 months (experimental time) the thirty-eight subjects of experimental group E1, who had taken the Hogan Empathy Scale (HES) prior to learning Transcendental Meditation, were again administered the HES (via the mail). All thirty-eight subjects responded. The data in collated form is contained in table 3.

The test for significance using parametric data with two samples is the \( t \)-test. The \( t \)-test score measuring overall pretest-posttest differences was 1.638 (\( df = 37 \)), which was significant only at the .20 level of confidence. Further, correlation \( t \)-test scores measuring male-male and female-female pretest-posttest differences were also calculated. The \( t \)-score for comparing male to male pretest-posttest difference was 1.329 (\( df = 17 \)), which was significant at the .30 level of confidence. The same \( t \)-test calculated for female to female pretest-posttest differences yielded .913 (\( df = 19 \)), which was significant at the .40 level of confidence.

In addition, a \( t \)-test for comparing two independent samples, males (\( N = 18 \)) versus females (\( N = 20 \)) was run on both the pretest and posttest scores. The \( t \)-score for pretest data comparing male and female differences was 1.065 (\( df = 36 \)) which was only significant at the .30 level of confidence, males being slightly higher in empathy levels than females. The \( t \)-score for posttest data comparing male and female differences was 1.755 (\( df = 36 \)), which was significant at the .10 level of confidence, males again being slightly but not significantly higher in empathy levels than females.

It appeared that overall some gain in empathic levels was evinced as a function of practicing TM, but that this gain was not significant at the .05 level of confidence. Therefore, for noncounseling meditators practicing TM for 3–4 months, the first three null hypotheses were accepted at the .05 level of confidence. The fourth null hypothesis was rejected.

The data for experimental group E2 who were tested on the HES once only is contained in table 4.

A \( t \)-test was calculated comparing this second group of Ss (Group E2) with the pretest Ss (E1, O1) empathy scores. The \( t \)-score was 5.363 (\( df = 53 \)) which was significant to the .001 level of confidence (fig. 1). This indicated that experienced meditators may demonstrate significantly higher levels of empathy than nonmeditators as measured by the HES.

A \( t \)-test was also calculated comparing Group E2 Ss with the posttest Ss (E1, O2). As expected, the \( t \)-value was less than that obtained when comparing Group E2 subjects’ scores with the pretest subjects’ scores; but, unexpectedly, it was still highly sig-
sificant. The calculated t-score was 4.328 (df = 53) which, again, was significant at the .001 level of confidence (fig. 1). This indicated that experienced meditators may show higher empathy levels than short-term meditators.

In addition, a t-test was calculated comparing males and females in the Group II subjects. The resulting t-score was .2397 (df = 15). This was significant only at the .90 level of confidence, indicating that in this sample of long-term meditators there was virtually no difference in the levels of empathy as a function of gender.

Therefore, regarding the comparison of noncounseling long-term meditators (time meditating = 60.764 months) with nonmeditators and short-term meditators (time meditating = 3–4 months), all the null hypotheses were rejected at the .05 level of confidence.

CONCLUSION

In conclusion, empathy scores, as measured by the Hogan Empathy Scale, were higher in short-term meditators than in nonmeditators, but these obtained scores were not significant at the .05 level of confidence. Empathy scores obtained from a sample of long-term practitioners of TM indicated that experienced meditators were significantly more empathic than nonmeditators (p < .001) and that these long-term meditators were also significantly more empathic than short-term meditators (p < .001). These results indicated that the increase in demonstrated levels of empathy may be cumulative as a function of practicing Transcendental Meditation.

Despite the limitations of the experimental design, very positive and highly significant t-scores were obtained when comparing long-term meditators with short-term meditators and with non-meditators (meditators who were administered the HES prior to their instruction into TM). It is fair to state that these statistics point to conclusions which agree both specifically and generally with (a) conclusions derived from studies performed, using subjects practicing other kinds of meditation, and (b) conclusions from studies that can be related inferentially to this experiment, using subjects practicing TM (as mentioned above in the discussion of psychological health, decreased anxiety, empathy, and so on). Based upon these criteria, it is appropriate that further studies be initiated to measure the relationship(s) between TM and empathy, and that in these studies particular emphasis be placed upon rigorous experimental design.

REFERENCES