

A CHAN WAY OF MINDFULNESS: THE EFFECTS OF MINDFULNESS-TRAINING BY SENSORY AWARENESS¹

by

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1 .Introduction

The concept of mindfulness, the most essential feature in Buddhist practice, is based on the Sanskrit *smriti*, which may be translated as mindfulness or as remembrance. Thich Nhat Hanh (1998, p.59) interprets mindfulness as remembering to come back to the present moment. According to Mikulas (1990, p.151) mindfulness refers to the subjective conscious experience of noticing. In the definition of Harvey (2000, p.38) mindfulness is a state of keen awareness of mental and physical phenomena as they arise within and around one. Kabat-Zinn (in: Segal et.al., 2003, p.VIII) describes mindfulness as a way of seeing that involves ‘coming back to one’s senses’ in every meaning of that phrase. Mindfulness may be defined as a meditative state, *continued into the action itself*, characterized by awareness and an attentive openness towards the present moment (Tophoff, 2003, p.123).

Mindfulness, which is one of the key elements of the Buddhist *Noble Eightfold Path*, has been made applicable to day to day human behavior in the Chinese tradition of Buddhism, i.e. Chan Buddhism (Tophoff, 2003, passim). This tradition, other than its Indian ancestor, squarely emphasizes the pragmatics of behavior. In fact, the practice

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of mindfulness can be conceived as ‘meditation-in-action’ or as ‘meditation-in-the marketplace’. Both meditation and mindfulness have to be trained.

The beneficial effects of meditation have been extensively demonstrated in the literature (e.g. Murphy&Donovan, 1999; Carrington, P., 1984; Delmonte, 1984; Kwee, 1990).

Likewise, the positive effects of mindfulness-training have been shown by a number of studies. In these studies, however, Kabat-Zinn’s method of *Mindfulness-based Stress Reduction* has been used. (Kabat-Zinn, 1982; 1987; 1993; 1996; Kabat-Zinn et al., 1985; Teasdale, 1999; 2000; Teasdale, Segal et al., 2000).

Though there are similarities between Sensory Awareness and Kabat-Zinn’s method³, there are a number of important differences. In Kabat-Zinn’s method, activities are exercised and rehearsed, such as the *body scan*, sitting meditation and *hatha yoga*. In the body scan, attention is systematically focused on separate body parts and regions. In Sensory Awareness there are no exercises, but an open-ended exploration of whatever is present in awareness. Attention is rather of a ‘free floating’ type, where letting happen and permitting of what presents itself is central. Since the work in Sensory Awareness consists of everyone’s daily, ordinary activities, generalization of the learning experiences is facilitated.

The present empirical study is directed to explore the effects of the method of Sensory Awareness as a training in mindfulness in a normal sample.

2. Method

2.1. Sensory Awareness

Sensory Awareness has been originally developed by Charlotte Selver (Selver, 1974)⁴. It is about the mindful exploration of what one experiences in what the Buddhists call ‘The four

³ Presently there is not yet a comparative study of these methods.

⁴ An extensive description of this method is offered in: Tophoff, 2000, pp.114-131; 2003, pp. 193-233.

Dignities of Man’, namely in sitting, walking, laying and standing – in other words in our ordinary day-to-day activities. The focus is on how mindful the immediacy of one’s personal experience can become, and on how we construct this experience from moment to moment. The practice of this method does not consist of exercises (which are prescribed and are to be executed), but of experiments (where the person mindfully explores his/her sensations). In such an experiment – for example – the participants may be asked to spread their arms. First, they let their arms ‘drop’, something which they may already be acquainted with from ‘relaxation-exercises’ (in Behavior Therapy). Then, again with the arms spread wide, they are asked to ‘accompany’ their arms ever so slowly downwards, attentive to the influence of gravity. Participants explore the difference between relaxation and liveliness. They discover, how they may hinder their liveliness, e.g. by blocking their breathing, or by treating their arms as an object which one can ‘drop’. In mindfully accompanying their arms downwards, participants can experience how standing indeed is a proper dignity. They come to understand that ‘letting go’ is not the same as ‘dropping’. In mindfully accompanying their arms downwards, participants can experience how standing indeed is a proper dignity. They come to understand that ‘letting go’ is not the same as ‘dropping’. In an atmosphere of acceptance, sensations, emotions, remembrances etc. may be verbalized. They are not, however, therapeutically worked through.

2.2.Implementation

In this study, Sensory Awareness is presented in the form of a residential seminar of varying duration. In order to study the effect of duration on outcome, the seminars differed in duration from 1.5., 2, 3, and 5 days. Each day two sessions of three hours were offered. The format of each session, which was identical in all seminars, consisted of a 70-minute period of non-verbal experiments, followed by a 20-minute period of verbal sharing.

2.3. Participants

The sample (N = 68; for age and sex distribution, cf., Table I) consists of managers from three different populations:

1. Managers from different companies ('Management Mix', N = 41).
2. A retail company in Belgium ('In company-B', N = 18).
3. A retail company in the Netherlands ('In company-NL', N = 9).

Every participant attended one seminar, during the period from 2000 to 2002. The duration of the seminars varied (cf., Table II).

The 'Management Mix' group consists of managers from different fields such as information technology, consultancy, accounting, and engineering.

The seminars for the retail managers in Belgium ('In company-B') and in the Netherlands ('In company-NL') have the format of an in-company training, i.e., solely for managers from the same company. Participants in all three groups usually did not know one another beforehand.

2.4. Measures

In this study two questionnaires for measurement have been used: the *Somatic Awareness Questionnaire (SAQ)* and the *Outcome Questionnaire (OQ®- 45.2)*. The original American version of the OQ®-45.2 is presented in Appendix IV. The SAQ was developed by Gijsbers van Wijk & Kolk (Gijsbers van Wijk & Kolk, 1996; Kolk, Hanewald, Schagen, Gijsbers van Wijk, 2003) to assess 'selective attention to the body', i.e., the tendency to be aware of, or sensitive to, internal bodily processes and global bodily states not typically associated with disease, illness or emotion. The questionnaire consists of 25 statements which refer to attentiveness to common and frequently occurring physiological processes, e.g., hunger contractions in the stomach, or global bodily states such as energy level.

Items are rated on a 5-point Likert scale (from 'not at all applicable to me', to 'very much applicable to me'), with a high score indicating a high selective attention to the body. Gijsbers van Wijk & Kolk (1996:

p. 59) constructed the *SAQ* on the basis of a pool of 29 items, which they translated into Dutch, deriving from three scales, measuring virtually the same concepts. These scales were: the *Body Awareness Questionnaire (BAQ)* (Shields, Mallory, & Simon, 1989), the *Amplification Questionnaire (AQ)* (Barsky & Goodson, 1988) and the *Private Body Consciousness Scale (PBCS)* (Miller, Murphy, & Buss, 1981).

Gijsbers van Wijk & Kolk (op. cit., *ibid.*), in a first study with 490 psychology students, eliminated 4 of the 29 items, because of item-remainder correlations below 0.20, so that the current *SAQ*, used in this study, contains 17 BAQ-items, 4 AQ-items, and 4 PBCS-items. The authors mention means and standard deviations, as mean item scores, for a student sample (N = 88) of men and women respectively as 2.8 (0.13) and 2.8 (0.11).

The reliability of the *SAQ* is to be considered as high. The Cronbach α is above 0.70, which had been fixed as an acceptance threshold for internal consistency. Homogeneity and stability likewise are acceptable.

Discriminant validity was assessed by Gijsbers van Wijk & Kolk (op. cit.: pp. 62-63) by correlating the *SAQ* with other reliable and valid measures, such as the *Spielberger State-Trait Anxiety Inventory*, the *State-Trait Anger Scale*, the *Amsterdam Biographical Questionnaire* (i.e. its two subscales: ‘Neurotic Liability’, and ‘Neurotic Liability as manifested in the expression of neurotic complaints’) the *SCL-90* (a measure of clinical symptomatology) and the *Health Associations Rating Scale*. *SAQ* scores were unrelated to all personality measures, including somatic neuroticism.

The *Outcome Questionnaire (OQ®-45.2)*, (Lambert, Hansen, Umpress, Lunen, Okiishi, Burlingame, & Reisinger, 2001; Lambert, Okkishi, Finch, & Johnson, 1998) was developed as a screening and outcome assessment scale that measures progress in therapy along three dimensions:

- *Subjective Discomfort (SD)* or: “How does the person feel inside?”

- *Interpersonal Relations (IR)* or: “How does the person get along with significant others?”
- *Social Role Performance (SR)* or: “How is the person doing in important life tasks, e.g. work?”

Items are rated on a 5-point Likert scale, ranging from ‘never’ to ‘always’, according to the applicability to the person. The *OQ* yields a *Total Score*, and *SD*-, *IR*-, *SR*-scores respectively. In line with common practice in this study only the total scores will be used. The higher the score, the more pathology in the individual. Lambert and coworkers present means and standard deviations of the total score of 45.19 and 18.57 in a normal sample (N = 815) (Lambert et al., 1996, 2001, p. 6). These authors present high test-retest reliability scores and highly acceptable Cronbach’s α ’s, on internal consistency in the total score as well as in the three individual domain scores. They show concurrent validity for the *OQ* and its individual domains with different criterion measures as being significant beyond the 0.01 level of confidence (op. cit.: p.11).

As a research version of the *OQ*®-45.2, de Jong (1991) devised a Dutch translation⁸, which also has been used in this study. In a normal population (N = 90) the mean and standard deviation of the total scores were: 39.07 (SD 14.94). As to internal consistency, Cronbach α ’s were satisfactory in a pilot study of students.

⁸ A Dutch translation of the *OQ*-45.2 is available at the American Professional Credentialing Services LLC at apcs@oqfamily.com

2.5. Procedure

The *SAQ* as well as the *OQ* were sent by mail to the future participants of the seminar Sensory Awareness after they had registered, with the request to complete both forms 2 days before the beginning of the seminar. After the seminar had ended, they were requested to complete these forms again 2 days later, and to return them by mail to the trainer.

3. Results

Table I: Participants: Age and Sex Distribution

Subjects	N	Range	Mean	S.D.
Women	20	25-56	40.5	9.70
Men	48	25-57	41	7.15
Total	68	25-57	41	7.74

Table I shows both groups of about the same age.

Table II: Participation and Seminar Duration (N=69)

Seminar	Duration (days)	Duration (sessions)	Mix	In company-B	In company-NL
1	1.5	3	9		
2	2	4			9
3	3	6	16		
4	3	6	16		
5	5	10		9	
6	5	10		9	

In this study data from six different seminars have been used. Each participant attended once. For calculations, the four different durations have been summed up in three different groups: Group 1 (1.5 and 2 days); Group 2 (3 days); Group 3 (5 days).

Table III: SAQ-scores and Seminar Duration

Duration	SAQ-I (Means, SD)	SAQ-II (Means, SD)	N
1	3.23 (.43)	3.18 (.46)	15
2	3.17 (.44)	3.42 (.42)	30
3	3.14 (.45)	3.28 (.56)	17
Total sample	3.19 (.45)	3.32 (.47)	62 ⁹

Table III shows SAQ results before and after seminar participation for three different duration groups. The scores are rendered as mean-item scores to make comparison possible with the earlier-mentioned data of the student sample of Gijsbers van Wijk & Kolk (1996: p. 65). In our sample, the SAQ-I scores start much higher.

ANOVA with repeated measures showed that there were no significant differences on SAQ-scores between the three duration groups: $F(2,59) = .29, p = .75$.

Overall post SAQ-scores were significant higher than the pre-scores: $F(1,59) = 9.26, p = .003$.

Inspection of the interaction showed a difference between Group-1 and Groups 2 and 3. The differences between pre- and post-scores for Group-2 were significant larger than for Group-1: $t(43) = 3.53, p < .001$.

Groups 2 and 3 did not differ significantly in differences between pre- and post-scores.

⁹ 6 cases rejected because of missing data: 3 participants did not complete the questionnaire before the seminar; 3 participants did not complete the SAQ correctly, i.e. by missing one or several items.

Table IV: OQ®-45.2 scores and Seminar Duration

Duration	OQ-I (Means, SD)	OQ-II (means, SD)	N
1	43.70 (15.63)	42.32 (16.08)	16
2	55.28 (20.47)	46.23 (18.23)	31
3	45.13 (16.57)	43.08 (21.48)	17
Total sample	49.69 (18.91)	44.42 (18.45)	64 ¹⁰

Table IV shows the results of OQ®-45.2 before and after the seminar. The over all tendency of these results is the same as the outcomes of the SAQ. The results are rendered in total-scores to make comparison possible with the data of the normal population presented by de Jong (2000: p. 5), which have been mentioned in section 4.2.2. Our sample's base rate is considerably higher. The data from Lambert et al. (1999: p. 6) of a much larger, normal, community sample (cf., Section 4.2.2) are more in agreement with our results.

Again an ANOVA was conducted, showing no significant difference through time between the three groups: $F(2,61) = 1.37, p = .26$. Overall post OQ-scores were significant lower than pre OQ-scores: $F(1,61) = 6.16, p = .016$.

The difference between pre- and post-scores for Group-2 looks much larger than the difference in both other groups. Due to the amount of variance in the OQ-scores within the groups these differences are just marginally significant. Comparing the difference within Group-2 versus the difference in Group-1: $t(47) = 1.96, p = .055$, and analog Group-2 versus Group-3: $t(46) = 1.82, p = .07$.

¹⁰ 4 cases rejected because of missing data: 3 cases not completed before seminar, 1 case incorrectly completed.

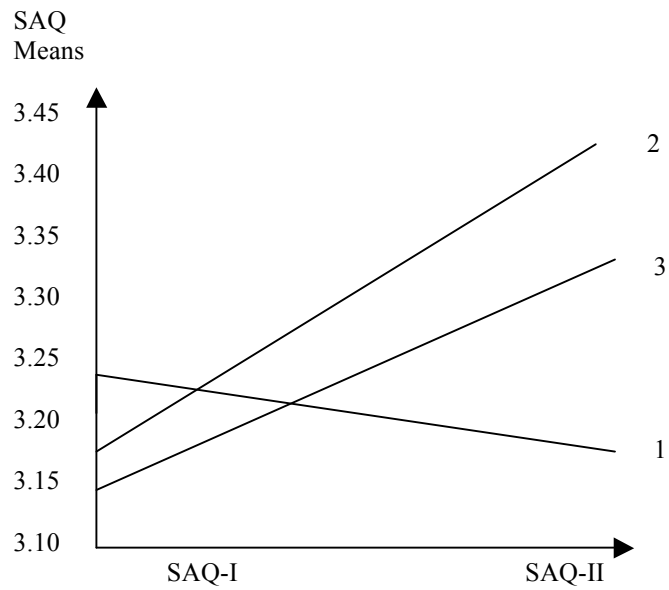


Fig.1: SAQ: Duration and Rate of Change

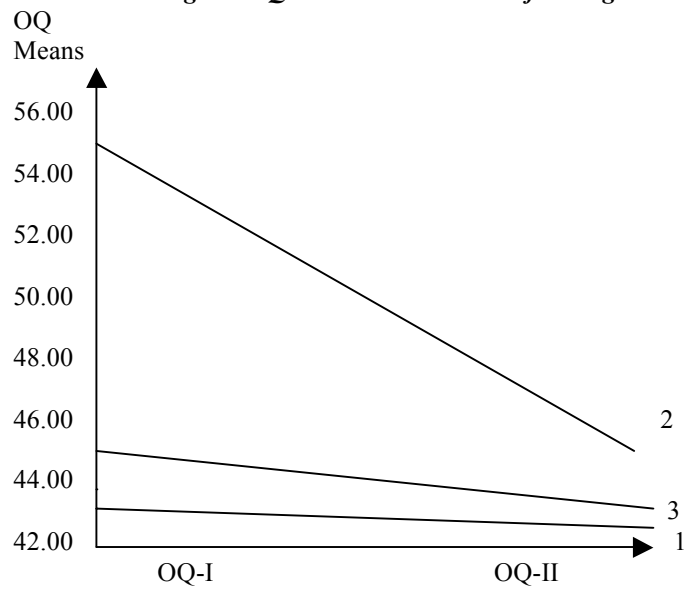


Fig. 2: OQ@-45.2: Duration and Rate of Change

The graphs in Figs. 1 and 2 illustrate the afore-mentioned data. They show the interaction-effect between the three groups as to their SAQ and OQ scores. A high SAQ-score indicates a high selective attention to the body. The lower the OQ-score the less pathology, i.e., the better the person feels inside, as to his interpersonal relations and his social role performance. The difference between Group-1 and Groups 2 and 3 is obvious for the SAQ-scores. For the OQ-score the pattern is not very clear.

Finally, we posed the question whether it was the age of the participants or the seminar duration which was accountable for the changes. In considering the spread of age in relation to duration of the seminar and to the results of SAQ and OQ-scores, the hypothesis was formed that the differences between pre- and post-seminar measurements in the total sample were not based on seminar duration but rather on age of the participants.

In order to test this hypothesis, an ANOVA was conducted with age as a second between factor. As to age, participants were split into two groups: Age-1 ≤ 40 ; Age-2 > 40 per each of the three durations.

Table V: SAQ-scores (pre/post), Seminar Durations and Age

FACTOR	CODE	SAQ 1 (MEANS, SD)	SAQ 2 (MEANS, SD)	N
DURATION	1			
AGE	1	3.04 (.16)	3.17 (.21)	4
AGE	2	3.30 (.49)	3.18 (.53)	11
DURATION	2			
AGE	1	3.15 (.48)	3.47 (.48)	14
AGE	2	3.18 (.42)	3.38 (.37)	16
DURATION	3			
AGE	1	3.04 (.56)	3.18 (.63)	12
AGE	2	3.38 (.24)	3.51 (.26)	5

The hypothesis that age should have an influence on the change in SAQ-scores has to be rejected. There was no influence of age at all, while all previously mentioned results could be maintained.

Table VI: OQ Scores (pre/post), Seminar Duration and Age

FACTOR	CODE	OQ 1 (MEANS, SD)	OQ 2 (MEANS, SD)	N
DURATION	1			
AGE	1	50.00 (7.53)	42.25 (9.00)	4
AGE	2	41.60 (17.28)	41.35 (18.06)	12
DURATION	2			
AGE	1	54.36 (18.40)	44.60 (19.91)	15
AGE	2	56.15 (22.81)	47.77 (17.02)	16
DURATION	3			
AGE	1	43.87 (16.57)	44.33 (23.64)	12
AGE	2	48.16 (18.07)	40.06 (17.11)	5

OQ-scores show similar results. The hypothesis that age should have an influence on the change in OQ-scores has to be rejected, while all previously mentioned results could be maintained.

4. Discussion

In selecting the measurement instruments for this study, the *Somatic Awareness Questionnaire* has been chosen, because it seemed relatively close to measuring the crux of mindfulness, i.e., the manager's awareness of what is happening within his body, and because of its psychometrical qualities of reliability and validity, in a Dutch-speaking sample. The *Outcome Questionnaire* likewise measures how a person feels inside, as well as his relationships and social role. This questionnaire has also been selected as to the question of whether it would support the SAQ findings.

As the results of the empirical study clearly show, managers change significantly, in the sense of improvement, after participation at a Sensory Awareness seminar of longer duration, on the dimension of awareness of bodily processes and wellbeing, as well as on positive feelings about interpersonal relations and social role. Both instruments, on every occasion, point into the same direction.

Our sample shows our SAQ base rate scores higher than SAQ scores in a normal population in the literature. The fact that participants in this study show a greater degree of awareness of bodily processes may have contributed to their motivation to attend the

seminar. As to the OQ-results, the picture is different and dependent on which population is used for comparison. Compared to the normal sample of de Jong (2000: p. 5), participants in our study had higher total-score base rates. Compared, however, to the large normal sample of Lambert (1999: p. 6) our results match with their sample. Within this perspective, it is worthwhile to note, that our sample still improves on both measures, even with higher base-rates.

In this study, no differences were shown between the *three groups of managers*: ‘Incompany-B’, ‘Incompany-NL’ and ‘Managers-Mix’. There were, however, important differences as to the factor ‘duration’ of a seminar. Seminars of short duration (1.5 or 2 days) do not lead to significant changes. The changes occur in seminars lasting 3 to 5 days. This finding corresponds with our impression that participants, who are not used to this type of seminar, need time not only to get acquainted with the approach but also to grasp and internalize the experiences and to ‘see’ and recognize its applicability to their professional lives. The question as to if and how these experiences are translated into measurable changes in managerial behavior over a longer period of time after the seminar has to be the focus of a future experimental study.

The notion that female participants might be more aware of their bodily functioning, or that they might change differently over time compared to their male counterparts, was not confirmed in our results. As to the measures, no significant *sex differences* have been found.

As to the factor of *age*, it could be hypothesized that older managers, based on personal experience with aging or a beginning decrease of physical functioning, would be more aware of their bodily states than younger ones. In that case, higher base rate SAQ scores would have to be expected in the older participants. In this study, however, age had no influence on change in any of our instruments. Younger and older managers profit equally from participation in the seminar.

Based on these results, it is worthwhile to consider participation of managers in a Sensory Awareness seminar of longer duration, be it as part of a training process for trainees and starting managers, or for senior managers in a process of continuing education.

In a future experimental study, longitudinal effects must first be measured, and then a comparison made between experimental and control groups.

5.Summary

bodily functioning. As a consequence it was expected that (1) he is more content about his relationships and (2) feels better functioning in his job. Using psychometrically reliable and valid measuring instruments, results showed significant changes, in the sense of improvement, in all of the above-mentioned categories. The factor of seminar duration is of significance for the effectiveness of this method, while factors such as sex, age of type of company are not.

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