

Meditation Depth, Mental Health, and Personal Development

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Summary

The relationship between meditation depth, measured by MEDEQ (Piron, 2002), and personal development (in the sense of western psychology), measured by TPF (Becker, 1989), is investigated among 122 meditators over a period of 12 months. The main question concerns the causal effect of meditation on mental health and other characteristics of personal development (meaningfulness, self-forgetfulness, absence of symptoms, expansiveness, autonomy, self esteem, loving ability). The relevance of meditation depth for these factors and the meaning of frequency, previous experience and duration of practice for meditation depth are tested. The results support a connection between regular meditative practice and meaningfulness, self-forgetfulness, loving ability and absence of symptoms. Deeper meditating persons showed significant higher values in all 7 factors mentioned above than less deep meditators. Previous experience and frequency of practice correlate highly with meditation depth. Differences in meditation depth could not be found between the spiritual traditions that were practised.

Keywords: Meditation as spiritual practice, mental health, personal growth

Introduction

Only few empirical studies examine the connection between spirituality and mental health. Tloczynski et al. (1997) found high levels of spirituality to be associated with healthy personality characteristics as measured by the Personal Orientation Inventory (POI). There are much more studies about the wholesome effect of meditation on many physical and psychosomatic disorders and diseases (Candelent & Candelent, 1975; Gaston et al., 1991; Gelderloos et al., 1991; Gong et al., 1986; Hafner, 1982; Honesberger & Wilson, 1973; Kabat-Zinn et al. 1985, 1987; McIntyre et al., 1974; Patel & Carruthers, 1977; Shapiro & Giber, 1978; Shapiro & Walsh, 2003). In some studies, a causal effect of Meditation on mental health was found. Shapiro and Giber (1978) and Delmonte (1986) document significant effects of meditation on the reduction of fear. Majumdar (2000) found a significant effect of mindfulness meditation on wellness among patients with various disorders. Belschner and Galuska (1999) documented that people who suffered because of spiritual crisis could cope much better when they

meditated. Shapiro, Schwartz, and Bonner (1998) examined the effects of a mindfulness meditation based program on 78 medical and premedical students. Results indicated increased levels of empathy and decreased levels of anxiety and depression in the meditation group as compared to the wait-list control group. These findings were replicated when participants in the wait-list control group received the mindfulness intervention.

On the other hand there are studies that document psychic disorders connected more or less with some kind of meditation techniques. The discussion of such results seems to be very much the discussion of contraindication, disturbing variables (like unbalanced practise, way of living, prehistory of manifested or latent disorders, social background, definition and realisation of meditative practice, motivation etc.) and hindrances to meditation. The main problem I see is that meditation very often gets misused as a therapeutic intervention against pre-personal problems in terms of Wilber or becomes an instrument for unhealthy ideologies, identifications and affiliations to sects or powerful gurus (Wilber et al., 1998).

The study I present examines the relevance of meditation depth for mental health and personal development. According to theories of transpersonal psychology, deeper states of consciousness, so-called "transpersonal experiences", "self-transcendence", "contemplation" or "absorption" should correlate with mental health and personal development, although some kinds of crises, at times of higher sensibility, may arise (Assagioli, 1992).

Method

1. Groups of participants

For comparing mental health and personal development between meditating and non-meditating persons, two samples are required. The meditators were found through inquiries and notices in different meditation centres in Germany, addresses received from teachers of meditation, adverts in magazines and finally through the help of some friends who were in contact with meditators. Comparable numbers of participants in different methods were attained through selection of the meditation centres and teachers. At least 100 meditators should be found for participation. The following traditions were intended to be represented in the sample: Christian contemplation, Theravada-, Zen- and Tibetan Buddhism, Yoga and Qigong. For reasons of comparability, the study was limited to ancient traditions of meditation that are established and famous since millenniums. The meditators were asked to evaluate their meditations of the last week at home.

The process of recruiting the non-meditators took place at the same time. The similarity of age, sex, education and social level between both groups was aimed through selection of places and institutions: universities, different assemblies, conferences and public places in the city of Cologne and Bonn. For participation it was required to be free from any mental disorder. Furthermore the person should not engage in meditative or spiritual practices.

To check the comparability of age, education, and social level in both groups the Kolmogorov-Smirnov-test was applied. The same procedure was applied in the different subgroups of meditators (traditions, beginners, advanced meditators, ...) for testing their social comparability.

2. Instruments of research

Along with the invitation letter and the Meditation Depth Questionnaire (MEDEQ), the “Trierer Persönlichkeitsfragebogen” (TPF) by Becker (1989) was sent to the participations. In the MEDEQ-form the tradition or way of practice, the previous experience in years, the frequency of meditations per week and the average duration of a meditation should get marked. On another sheet personal data such as age, sex and education was to be noted. The MEDEQ is a high-reliable and valid instrument with 29 items to measure Meditation Depth as a unique dimension (Piron, 2002, 2003). The scales or dimensions of the TPF are titled by the terms: Behaviour control, Mental health, Meaningfulness, Self-forgetfulness, Absence of symptoms, Expansiveness, Autonomy, Self esteem, Loving ability. According to the theory of Becker (1989) behaviour control and mental health form two independent dimensions of personality. The other named factors are not independent from mental health, but special indicators or aspects of personal maturity.

3. Questions, hypothesis and tests

The main question concerns the relevance of meditation and depth-experience for mental health and personal development. The main hypothesis supposes that regular meditation practice is leading to some increases in mental health and personal development in dependence of the experienced depth.

a) Parameters of practice and Meditation Depth: Are the previous experience, the frequency of practice, and the average duration of a meditation session useful predictors for Meditation Depth? Significant correlations were postulated (H1). Test: nonparametric correlation by Spearman ($\alpha=5\%$).

b) Development of Meditation Depth within one year: Does the Meditation Depth increase within one year of ongoing practice? A significant increase was expected (H1). Test: t-test for dependent groups (alpha=5%).

c) Differences between traditions of meditation: Are there differences in Meditation Depth between the traditions or paths of meditation? No differences were expected (H0). Test: ANOVA Variance Analysis (alpha=5%), the applied tradition as factor and Meditation Depth as dependent variable.

d) Mental health of meditators and non-meditators: Do the meditators show higher amounts in mental health, meaningfulness, self-forgetfulness, absence of symptoms, autonomy, self esteem and loving ability than non-meditators? Higher amounts were expected among meditators (H1). Test: t-tests of the scales of the TPF among meditators and non-meditators (alpha=5%).

e) Mental health of advanced meditators and beginners: Do advanced meditators show higher amounts in mental health, meaningfulness, self-forgetfulness, absence of symptoms, autonomy, self esteem and loving ability than beginners? Higher amounts were expected among advanced meditators (H1). Test: t-tests of the scales of the TPF among advanced meditators and beginners (alpha=5%).

f) Mental health of deeper and less deep meditating persons: Do deeper meditators show higher amounts in mental health, meaningfulness, self-forgetfulness, absence of symptoms, autonomy, self esteem and loving ability than less deep meditators? Higher amounts were expected among deeper meditators (H1). Test: t-tests of the scales of the TPF among deeper meditators and less deep meditating persons (alpha=5%).

g) Personal development among meditators and non-meditators: Do meditators show higher amounts in mental health, meaningfulness, self-forgetfulness, absence of symptoms, autonomy, self esteem and loving ability after one year of ongoing practice? If yes, are these increases higher than among non-meditators? Increases were predicted among the meditators (H1), but not among the non-meditators (H0). Tests: (1) t-tests of the scales of TPF among meditators to different times; (2) t-tests in the scales of TPF among non-meditators to different times

h) Meditation Depth as predictor for personal development among beginners of Meditation: Is Meditation Depth a useful predictor for personal development among beginners of meditation? A significant correlation between Meditation Depth and personal development within one year was postulated (H1). Test: Pearson-correlation-test

Results

In October 1999, 122 meditators sent their questionnaires back to the author. One year later the same persons were requested to participate for a second measurement. 104 persons responded.

Until December 1999, the questionnaires from 120 non-meditating persons were received. For the second measurement one year later 107 persons participated again.

At the first time of measurement, the average previous experience in a regular practice among the 122 meditators was 11,3 years. They practised on the average 10 times per week, with a duration of 36 minutes. The sample included 20 practitioners of Dhyana in the tradition of Raja-Yoga or Advaita-Vedanta, 17 from Theravada-Buddhism, 18 from Tibetan Mahayana/Vajrayana-Buddhism, 20 practitioners of Zen-Buddhism, 17 of the Christian Tradition and 13 of Taoist meditation or Qigong. 17 meditators could not be allocated to any special tradition, because their meditation was influenced by different religions or based on a transconfessional understanding.

The Kolmogorov-Smirnov-tests did not reveal any significant differences in age, education and social level between the meditators and non-meditators or between any other subgroups examined below. So the similarity regarding these variables is supported. In both groups, the meditators and the control group, higher education and social level is more represented.

Parameters of practice and Meditation depth

The connections between the parameters of practice and Meditation Depth were calculated as nonparametric correlation by Spearman. To both times of measurement the postulated correlations proved to be significant ($p=.05$). The connection between the previous experience of practice and meditation depth showed the highest correlation (see Table 1 and 2).

Table 1: Correlations between parameters of practice and Meditation Depth ($t_1, n=122$)

	previous experience	frequency per week	average duration	Meditation Depth
previous experience	1.000	.558 **	.391 **	.768 **
frequency per week	.558 **	1.000	-.010	.509 **
average duration	.391 **	-.010	1.000	.347 **
Meditation Depth	.768 **	.509 **	.347 **	1.000

** significant ($p=0.01$)

Table 2: Correlations between parameters of practice and Meditation Depth (t₂, n=104)

	previous experience	frequency per week	average duration	Meditation Depth
previous experience	1.000	.557 **	.300 **	.679 **
frequency per week	.557 **	1.000	.002	.552 **
average duration	.300 **	.002	1.000	.241 *
Meditation Depth	.679 **	.552 **	.241*	1.000

* significant (p=0.05), ** significant (p=0.01)

The parameters of practice are not independent from one another. The correlation between previous experience and frequency of meditation amounts $\rho=.56$ (sign.: $p=.001$) to both times. Previous experience and average duration correlate significantly ($p=.01$) on $\rho=.39$ (t₁) and $\rho=.30$ (t₂). Between frequency and duration no connection was found (t₁: $\rho = -.01$; t₂: $\rho = .00$). Based on this data it can be concluded that advanced meditators, practising since several years, meditate deeper, more frequently and usually in longer durations than meditators with less experience in terms of years.

Development of Meditation Depth within one year

Within one year a development in Meditation Depth among the 104 meditators was found to be highly significant ($p<0.0005$). This result again supports the meaning of regular practice for Meditation Depth.

Table 3: t-test for dependent groups, Meditation Depth, t₁ and t₂

time of measurement	mean	standard deviation	t	df	Average difference	significance
t ₁ (n=104)	62.56	30.73	9.69	103	12.15	.000
t ₂ (n=104)	74.71	26.88				

Differences between traditions of meditation

The influence of the applied method or tradition on Meditation Depth was tested by variance analysis for one factor at both times of measurement. No significant effect was found (see Tables 4 and 5), although the means and increases of Meditation Depth differ between the various groups (Table 6).

Table 4: Variance Analysis, the applied tradition as factor and Meditation Depth as dependent variable at t_1

	Sum of squares	df	Mean of F squares	F	Significance
between the groups	4212.387	6	702.065	.760	.603
within the groups	106289.645	115	924.258		
Total	110502.033	121			

Table 5: Variance Analysis, the applied tradition as factor and Meditation Depth as dependent variable at t_2

	Sum of squares	df	Mean of F squares	F	Significance
between the groups	2537.554	6	422.926	.571	.753
within the groups	71875.792	97	740.988		
Total	74413.346	103			

Table 6: Meditation Depth in different groups (traditions) of meditation

Group of Meditation)	t_1		t_2		Difference of Means (t_2-t_1)
	Mean	Standard deviation	Mean	Standard deviation	
Yoga (t_1 : n=20; t_2 : n=18)	61.05	27.37	77.56	21.06	16.51
Zen (t_1 : n=20; t_2 : n=17)	54.90	32.81	68.00	28.92	13.10
Theravada (t_1 : n=17; t_2 : n=13)	65.24	30.84	68.38	32.15	3.14
Vajrayana (t_1 : n=18; t_2 : n=15)	68.83	24.54	74.87	29.75	6.04
Christian Contemplation (t_1 : n=17; t_2 : n=13)	73.76	29.62	83.85	20.82	10.09
Taoistic Med. / Qigong (t_1 : n=12; t_2 : n=11)	59.67	34.14	75.55	23.97	15.88
No declaration (t_1 : n=18; t_2 : n=17)	66.28	33.69	75.59	30.83	9.31

Mental health of meditators and non-meditators

The comparison between the group of meditators (n=122) and the control group (n=120) shows highly significant ($p=.005$) differences in all factors except meaningfulness and autonomy. The meditators have higher amounts in mental health, self-forgetfulness, freedom of symptoms, expansiveness, self esteem and loving ability than the non-meditators. In behaviour control the non-meditators scored higher.

Table 7: Means and t-tests of the scales of the TPF among meditators and non-meditators (standard deviations s. brackets)

Scales	Means among meditators (n=122)	Means among non-meditators (n=120)	Difference of Means	t	df	p
Behaviour control	46.2 (8.60)	50.8 (8.54)	-4.65	4.216	240	.000
Mental health	53.7 (9.03)	50.2 (8.98)	3.57	3.082	240	.002
Meaningfulness	51.2 (10.02)	50.6 (10.06)	.59	0.459	240	.646
Self-forgetfulness	56.7 (10.56)	49.3 (10.23)	7.41	5.547	240	.000
Absence of symptoms	54.5 (9.04)	50.0 (9.48)	4.44	3.728	240	.000
Expansiveness	53.5 (9.57)	50.1 (8.99)	3.40	2.851	240	.005
Autonomy	52.1 (10.47)	51.2 (8.17)	.87	0.718	240	.474
Self esteem	57.0 (11.23)	51.5 (9.26)	5.53	4.183	240	.000
Loving ability	52.6 (8.61)	49.3 (7.94)	3.33	3.122	240	.002

Mental health of advanced meditators and beginners

The next question concerns mental health and the other wholesome qualities among advanced meditators in comparison to beginners. The criterion for selection in two groups was a maximum previous experience of three years for the beginners and a minimal experience of 18 years for the advanced. These numbers mark the quarters of previous experience in that group of 122 meditators. Again the t-test for independent samples was applied (Table 8). In each group there were 34 meditators. The results show significant differences in all dimensions. In mental health, meaningfulness, self-forgetfulness, absence of symptoms, expansiveness, and loving ability the differences were highly significant ($p < 0.005$).

Table 8: Means and t-tests of the scales of the TPF among advanced meditators and beginners (standard deviations s. brackets)

Scale	Means among advanced meditators (n=34)	Means among beginners of meditation (n=34)	Difference of Means	t	df	p
Behaviour control	44.1 (7.64)	49.0 (7.64)	4.86	2.406	66	.019
Mental health	58.2 (8.42)	48.9 (10.24)	9.29	4.084	66	.000
Meaningfulness	56.5 (9.50)	46.0 (11.59)	10.52	4.092	66	.000
Self-forgetfulness	61.7 (10.11)	50.7 (9.93)	11.01	4.529	66	.000
Absence of symptoms	60.3 (8.17)	49.4 (9.09)	10.84	5.170	66	.000
Expansiveness	57.4 (9.28)	48.7 (9.56)	8.76	3.825	66	.000
Autonomy	54.4 (7.39)	47.1 (14.14)	7.36	2.689	50	.010
Self esteem	63.6 (10.36)	50.5 (10.94)	13.07	5.056	66	.000
Loving ability	55.8 (10.09)	48.9 (8.21)	6.97	3.122	66	.003

A comparison with Table 7 leads to interesting questions: How is it to understand that in some scales the beginners of meditative practice score lower than the non-meditators? In meaningfulness and autonomy the non-meditators score surprisingly higher than the non-meditators. This fact is to be discussed below.

Mental health of deeper and less deep meditating persons

The next question concerns differences in mental health and the other wholesome qualities between deeper and less deep meditators (Table 9). The criterion for selection in two groups is the median in Meditation Depth.

Table 9: Means and t-tests of the scales of the TPF among deeper and less deep meditating persons (standard deviations s. brackets)

Scales	Means of deeper meditators (n=61)	Means of less deep meditators (n=61)	Average difference	t	df	p
Behaviour control	44.6 (8.31)	47.7 (8.67)	-3.17	-2.063	120	.041
Mental health	57.2 (7.47)	50.3 (9.20)	6.86	4.522	120	.000
Meaningfulness	54.3 (8.98)	48.1 (10.13)	6.15	3.550	120	.001
Self-forgetfulness	60.9 (10.05)	52.5 (9.40)	8.35	4.741	120	.000
Absence of symptoms	57.3 (8.39)	51.6 (8.81)	5.75	3.690	120	.000
Expansiveness	56.6 (8.81)	50.4 (9.37)	6.15	3.732	120	.000
Autonomy	54.4 (8.05)	49.8 (12.05)	4.62	2.491	120	.014
Self esteem	61.4 (10.43)	52.6 (10.28)	8.75	4.666	120	.000
Loving ability	55.4 (8.36)	49.7 (7.93)	5.68	3.851	120	.000

Again all of the differences are significant. Deeper meditating persons score higher in mental health and wholesome qualities than less deep meditating practitioners. The scores of the less deep meditating persons are much the same like those of the non-meditating control group.

Personal development among meditators and non-meditators

After a period of one year, as mentioned above, the TPF and MEDEQ were sent to the participants again. From the 122 meditators 104 sent their sheets back to the author. This surprisingly high return of about 85% maybe in part due to the short format of 30 items only.

Table 10 shows the differences among meditators between the two times which were highly significant ($\alpha < 0.001$) in the factors meaningfulness, self-forgetfulness, absence of symptoms and loving ability. In behaviour control, mental health, expansiveness, autonomy and self esteem no significant difference was found.

Table 10: Means and t-tests in the scales of TPF among meditators at different times (standard deviations in brackets)

scale	Means of meditators at t ₁ (n=104)	Means of meditators at t ₂ (n=104)	Difference of Means	t	df	p
Behaviour control	46.2 (8.54)	45.6 (7.93)	0.56 (3.43)	1.649	103	.102
Mental health	53.5 (9.14)	53.9 (8.90)	0.40 (3.90)	1.056	103	.293
Meaningfulness	51.1 (10.22)	53.2 (9.17)	2.08 (4.59)	4.630	103	.000
Self-forgetfulness	56.6 (10.90)	58.4 (9.19)	1.85 (4.92)	3.844	103	.000
Absence of symptoms	54.5 (9.20)	56.5 (9.07)	1.98 (3.45)	5.859	103	.000
Expansiveness	53.6 (9.70)	54.1 (9.26)	0.47 (3.58)	1.351	103	.180
Autonomy	52.7 (10.24)	52.6 (8.99)	0.02 (4.26)	0.058	103	.954
Self esteem	56.6 (11.45)	57.0 (9.84)	0.39 (6.24)	0.636	103	.526
Loving ability	52.6 (8.82)	54.3 (8.34)	1.69 (3.71)	4.633	103	.000

A personal development in the control group of non-meditators was not expected. Six of the seven postulated H0-hypothesis could get supported (Table 11). So the influence of meditation on some aspects of personality is supported.

Table 11: Means and t-tests in the scales of TPF among non-meditators at different times (standard deviations in brackets)

Scale	Means of meditators at t ₁ (n=107)	Means of meditators at t ₂ (n=107)	Difference of Means	T	df	p
Behaviour control	51.1 (8.69)	50.2 (8.31)	.92 (2.96)	3.220	106	.002
Mental health	50.2 (9.05)	50.0 (8.87)	0.17 (3.40)	0.522	106	.603
Meaningfulness	50.7 (10.28)	51.5 (8.74)	0.80 (4.37)	1.885	106	.062
Self-forgetfulness	49.3 (10.58)	49.5 (9.72)	0.15 (2.81)	-0.550	106	.583
Absence of symptoms	49.9 (9.81)	50.2 (9.73)	0.23 (3.00)	0.788	106	.432
Expansiveness	49.9 (9.30)	49.5 (8.86)	0.38 (2.71)	1.432	106	.155
Autonomy	51.1 (8.30)	51.2 (7.87)	0.12 (3.43)	0.357	106	.722
Self esteem	51.6 (9.50)	52.6 (9.18)	1.01 (3.12)	3.349	106	.001
Loving ability	49.3 (8.10)	48.2 (7.64)	1.04 (3.49)	3.077	106	.003

In Self esteem a significant increase is found. However there are significant decreases to the second time in behaviour control and loving ability. These uncontrolled effects demonstrate the inconsistency of dimensions that are conceptualised as personal factors.

Meditation Depth as predictor for personal development among beginners of Meditation

Furthermore, the connection between Meditation Depth (as measured at the first time) and personal development (within one year) was investigated in the group of beginners. Therefore, a Pearson-correlation-test was done. The correlations

between Meditation Depth and the increases (or decrease in case of behaviour control) on every special Personality factor was tested (Table 12). The only significant correlation was found between Meditation Depth and the increase in absence of symptoms. This correlation amounts 0.54 and is significant on $\alpha=0.05$.

Table 12: Correlations between Meditation Depth and personal development among beginners of meditation (n=21)

Personal development in the following scales between t_1 and t_2	Correlations with Meditation Depth at t_1
Mental health	.13
Meaningfulness	.24
Self-forgetfulness	-.11
Absence of symptoms	.54 *
Expansiveness	.20
Autonomy	.07
Self esteem	.01
Loving ability	.18

* significant ($p=0.05$)

Discussion and conclusions

The data of this study supports the main hypothesis that regular meditation practice is leading to some increases in wholesome personality aspects while the essential mediator variable might be Meditation Depth. In accordance with all other studies that support an effect from meditative practice on mental health, a significant increase in meaningfulness, self-forgetfulness, loving ability and absence of symptoms indicates a personal development among meditators within one year controlled by non-meditators that did not develop comparatively. The meditators scored significantly higher than the control group in mental health, self-forgetfulness, absence of symptoms, expansiveness, self esteem and loving ability.

Meditators with more years of previous practice in comparison to those with less previous experience and the deeper meditating persons in comparison to less deeper meditators score significantly higher in:

- 1) *mental health*: They are more satisfied with themselves and their lives, more resistant against stress, have better skills in coping, are more self-confident, possess a stronger will, worry less, are more active and more productive.
- 2) *meaningfulness*: They have a fuller life, filled with interesting activities and contents, feel freer from negative emotions like powerlessness, helplessness, anxiety, dejection, guilt, and are more connected in their social relationships.

- 3) *absence of symptoms*: They feel more often or more constantly well with their body, having less symptoms, possess a stronger power of concentration, are more resistant against diseases and are more vigorous.
- 4) *self-forgetfulness*: They are less busy with brooding about themselves or the previous life, less worried about their future, less anxious, and more present in the “here and now”.
- 5) *autonomy*: They are more independent and feel more confident in making decisions and solving problems, take more responsibility for their life, are more convinced in their own self-efficacy, live more self-regulated than controlled by others.
- 6) *self esteem*: They are more confident being a loveable or likeable person, stronger in their self confidence, more often carefree, light and well-balanced, more satisfied with themselves and more calm.
- 7) *loving ability*: They are more interested in the well-being of others, more generous in their expression of love, more sensitive for others, more often ready to help, more considerate and feel more connected with their social environment.

Furthermore, the higher amount in expansiveness among the meditators, being not postulated, mean they enjoy a higher level of energy and have a better access to their will.

A surprisingly point to discuss are the higher amounts in autonomy and meaningfulness among non-meditators in comparison to beginners of meditation. For some of the beginners a personal deficit might be a motivation to start some practice on a spiritual path. In other cases, people who start to meditate feel not a lack in personal needs, but suffer because of a “metapathology” in terms of Maslow, “noetic neurosis” in the sense of Frankl or “spiritual crisis” in terms of Assagioli. Therefore a measured lack of sense or feeling of emptiness could be a consequence of realising that there is indeed not much sense in their daily life or environment. Some people wish to find a sense of life through meditation, so they have a good reason to start practising.

Self-forgetfulness is the next highest score behind self esteem among the advanced meditators. Interestingly, the beginners of meditation show the highest amount in this dimension in opposite to the control group of non-meditators. This may be caused by a selection effect. More self-centred people might not feel any motivation to start with a practice of meditation or they cannot continue because of their many thoughts circling around their person. Another possible conclusion is that self-forgetfulness probably is the most sensitive dimension in the first year of regular meditation practice.

The last result gives support to the value of Meditation Depth as a predictor for ones increase in wellness and health. But it is also to mention that the MEDEQ should not be misused for making negative prognostic statements re-

garding the personal development because of only one meditation exercise. Even if there would be significant evidence for the influence of Meditation Depth on an increase in all other wholesome personality factors in a sample of 100 or more meditators who are just in the first year of practice, it would be wrong to conclude that there would not be any positive influence of further meditation on the personal development in a case of low Meditation Depth.

Finally, the limits for generalisation must be discussed. A selection effect cannot be excluded, because the applied design is a field study. The questionnaires were brought to some meditation centres in Germany and the meditation teachers and friends gave them to others, so it is not known who did not agree with this investigation and was neglected and for what reasons. All persons of the sample had one common characteristic: They were meditators with a regular practice feeling motivated to participate and agreed with the way of investigation. Maybe the meditators form a special group of "metamotivated" persons in terms of Maslow. Only 18 people redeemed the second investigation. This is a study about people who meditate regularly and continuously in different traditions and with previous experience between six months and 35 years.

Further studies should examine Meditation Depth and personal development in several contexts and groups of practitioners with more participants.

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