MAPPING ZAZEN MEDITATION AS A DEVELOPMENTAL PROCESS: EXPLORING THE EXPERIENCES OF EXPERIENCED AND INEXPERIENCED MEDITATORS

Anette Kjellgren, Ph.D.
Karlstad, Sweden

Susanne Taylor, M.Sc.
Karlstad, Sweden

ABSTRACT: This phenomenological study into Zen practitioners’ experiences of zazen meditation is based on eight semi-structured interviews with four experienced and four inexperienced zazen meditators. The respondents’ descriptions were analysed using a five-step Interpretative Phenomenological Analysis (IPA) process into thirteen super-ordinate themes. The phenomenological analysis revealed differences between the two groups. Some experienced meditators reported differences that might be interpreted as trait changes due to meditative practice. These included the ability to remain conscious in the dream and deep sleep state as well as greater clarity, greater serenity, and more compassion in the waking state. Supplementary quantitative data gathered by a questionnaire indicated that inexperienced meditators perceived a greater difference between meditation and a normal waking state than did experienced meditators. This finding might indicate that the experienced meditators have integrated the meditative state into their daily life as a normal state, an area warranting future inquiry.

Key words: Zen, zazen, meditation, altered states of consciousness.

INTRODUCTION

Meditation can induce many positive effects such as stress reduction, relaxation, and decreased anxiety (e.g. Ivanovski & Malhi, 2007), but it can also be associated with a spiritual path that may induce more far-reaching effects. Different meditative styles exist (see for example Naranjo & Ornstein, 1971; Shapiro & Walsh, 1984), often classified as either mindfulness or concentrative techniques – depending upon how the attentional processes are directed. Concentration approaches involves focused attention upon for example breathing or a mantra, whereas mindfulness practice (e.g. Zen meditation) involves allowing any thoughts, feelings, or sensations to arise while maintaining a specific attentional stance: awareness of the phenomenal field as an attentive and non-attached observer without judgment or analysis (Cahn & Polich, 2006).
Regular meditation practice can produce relatively short-term changes in state as well as long-term changes in traits (Austin, 1998; Cahn & Polich, 2006; Shapiro & Walsh, 1984; West, 1987). State refers to the altered sensory, cognitive, and self-referential awareness that can arise during meditation practice, whereas trait refers to the lasting changes in these dimensions that persist in the meditator irrespective of being actively engaged in meditation (Cahn & Polich, 2006; Shapiro & Walsh, 1984).

Studies show that meditative states exhibit a variety of unique phenomenological, perceptual, electrophysiological, and hormonal changes (Goleman, 1988; Shapiro, 1980; Shapiro & Walsh, 1984; Brown & Engler, 1986); that different states of consciousness are accompanied by different neurophysiological states (Cahn & Polich, 2006); that increase in alpha activity is observed when meditators are evaluated during meditating compared with control conditions (Aftanas & Golocheikine, 2001; Arambula, Peper, Kawakami, & Gibney, 2001; Dunn, Hartigan, & Mikulas, 1999; Echenhofer, Coombs, & Samten, 1992; Kamei, Toriumi, Kimura, Ohno, Kumano, & Kimura, 2000; Kasamatsu & Hirai, 1966; Khare & Nigam, 2000; Taneli & Krahne, 1987); and that the increase in alpha activity is stronger at rest in meditators than it is in non meditator controls (Aftanas & Golocheikine, 2005; Khare & Nigam, 2000; Travis, 1991; Travis, Tecce, Arenander, & Wallace, 2002). These results suggest that both state and trait alpha changes may emerge from meditation practice. Holzel and Ott (2006) raised the problem of self-selection bias in studies into meditation depth. Similarly people who engage in meditation may already show more alpha activity than people who do not meditate, a precondition that may account for certain of these findings.

One of the least researched aspects of meditation is the transcendent experiences that occur during meditation (Nagel, 1999; West, 1987). By contrast it is the physiology and the psychology of meditation (including measures such as EEG activity, pulse rate, personality traits, responses to pain, stress reduction etc.) that have received the most attention from researchers (Patrik, 1994; Shapiro & Walsh, 1984).

Finding experienced meditators for empirical studies of advanced meditative states and stages may be one of the obstacles that accounts for this lack of attention to transcendent experiences (Brown & Engler, 1980; Gifford-May & Thompson, 1994; Holzel & Ott, 2006; Nagel, 1999; Patrik, 1994). As a result, questions have been raised as to whether a statistically valid empirical study of advanced meditative states or stages is in principle possible (Nagel, 1999). Descriptive approaches however, such as phenomenology, qualitative interview, and case study may be more appropriate, as a valid descriptive study would not require a large number of experienced or advanced meditators (Nagel, 1999).

Calls for more phenomenological studies are common in the literature (e.g. Nagel, 1999, Patrik, 1994; Walsh, 1995). Given the relative lack of studies on meditation that focus specifically on meditators’ direct personal and internal descriptions of meditative experiences, it would be interesting to record and explore such descriptions from a phenomenological perspective.
Gifford-May & Thompson (1994) suggested that a future project might systematically analyse, from a phenomenological perspective, the experiences of different groups of meditators. Walsh (1995) showed that meditative, yogic, Buddhist, and shamanic states can be differentiated by phenomenological mapping. Similarly, a phenomenological study on meditation might be designed to attempt to map and understand the “general structure” of a participant’s meditative experience (Gifford-May & Thompson, 1994; Patrik, 1994; Polkinghorne, 1989; von Eckartsberg, 1986). This study is an attempt to try to perform such a mapping of the Zen meditation experience.

**Purpose of the Research**

The purpose of this study is to (a) provide a direct descriptive phenomenological record of the meditative experience of inexperienced and experienced zazen meditators (b) to attempt to cluster their accounts into a set of general structures or super-ordinate themes, (c) to use the themes to contrast and map the accounts of inexperienced and experienced zazen meditators, and then to (d) analyse the data and attempt to understand whether or not stable trait changes or stages are a part of the phenomenon of long term zazen meditation practice. If such patterns can be detected, research expectations are that they may lend some additional descriptive phenomenological evidence to the findings of previous studies cited above and that discrete stages of meditative development exist and may be part of the developmental potential of humans (Brown & Engler, 1986; Nagel, 1999; Wilber, 1999).

The reason that zazen meditators were chosen for this study is that some evidence exists that Zen meditation might be one of the primary ways to develop and permanently fix emergent traits (e.g. Wilber, 2000b). The practice of Zen emphasises sitting in zazen (sitting meditation). Whenever thoughts or feelings arise, the mind notes their emergence, allows them to come and go, and returns its attention to posture and breathing (Suzuki, 1970).

According to Japanese Zen master, Yamada (1986), the goal of Zen is to develop: (a) concentration of the mind; (b) satori-awakening and enlightenment; and (c) personalisation of satori. Satori roughly translates as a ‘flash of sudden awareness’ (Watts, 1958).

**Method**

**Participants**

Central to participant recruitment strategy was the need to engage both genuinely experienced as well as inexperienced Zen meditators. Purposive selection was used to recruit participants, based upon the length of time they had been practicing Zen meditation. The study consisted of eight participants. Their mean age was 46.75 years ($SD = 6.78$), with a range of 34–54 years. Their nationalities were Swedish (six persons), Finnish and French.
Four were “inexperienced” meditators who had been practising zazen for 1 year. Their professions were engine driver, high school teacher, artist and art teacher, dream therapist and schoolteacher. The other four were experienced meditators with respective experience of Zen meditation of: 21 years (Zen teacher and Buddhist priest); 23 years (Zen teacher and Buddhist priest); 28 years (psychologist); and 34 years (Zen Master). The experienced group of participants had a mean of 26.5 years of practising Zen ($SD = 5.80$).

Four of the inexperienced participants were recruited from a local Zen training group. This training group had formed approximately one year prior to the study. Zen trainee sessions were conducted on a weekly basis. The training group was under the guidance of an experienced Zen teacher, who was a part of the study in the experienced meditator group. The other three experienced participants were recruited from Zen centres in Sweden, and one from a Zen centre in Spain.

Data Collection

The present study is based on the philosophy initiated by Edmund Husserl at the beginning of the twentieth century (Giorgi & Giorgi, 2003). It employs phenomenological interpretative analysis (IPA) and the application of semi-structured interviews (Giorgi & Giorgi, 2003). IPA is intellectually connected to hermeneutics and theories of interpretation. Different interpretative stances are possible, and interpretative phenomenological analysis combines an empathic hermeneutics with a questioning hermeneutics (Smith & Osborn, 2003 p. 51). An interview guide consisting of three main issues with appropriate questions related to each area was constructed (Appendix 1). The three issues included (a) general questions regarding meditation experiences, (b) questions regarding states of consciousness, and (c) one question regarding the implications of meditation for society and mankind. In each case, the whole interview was tape-recorded (with agreement from the participants). All the tape-recorded interviews were then transcribed and the resulting transcriptions include all words, pauses, laughs etc. in 86 pages of printed raw data.

As a supplement to the phenomenological research, quantitative data were gathered using the EDN (Experienced Deviation from Normal State questionnaire). Although most phenomenological studies do not usually include quantitative data, it was felt that their inclusion could enhance the study, by offering a small set of quantitative results that might support some of the findings of the qualitative study. Generally speaking, in terms of methodology, quantitative studies focus on fostering intersubjective agreement among researchers, while qualitative studies focus on ‘fidelity to the phenomenon’ but can have problems with intersubjective agreement (Giorgi & Giorgi, 2003). “In any case, both biases have some legitimation and they ought to be able to coexist with each another. Arbitrary exclusion of one of these positions by the other is the great error that should be avoided” (Giorgi & Giorgi, 2003, p. 49). To gather these supplementary quantitative data the
EDN ( Experienced Deviation from Normal State questionnaire) was used, and analysed using SPSS 14.0. This questionnaire consists of 29 questions (Appendix 2) whereby each question is responded to on a VAS-scale (0–100). All the points obtained from these 29 questions were averaged to provide an “index of experience” (0–100). These values reflect the total experience of deviation from normal states. Cronbach’s alpha for EDN was 0.92 in the present study. The EDN tests have been extensively used in connection with flotation-tank research, for example: Kjellgren, Sundequist, Norlander & Archer (2001) and Kjellgren (2003). Typical EDN values after an individual’s first experience of sensory isolation in the flotation-tank are around 30 EDN points and thereafter about 40 points on subsequent occasions. By comparison, the experience of resting on a bed in a dark, quiet room scores 15 EDN points (Kjellgren, Sundequist, Sundholm, Norlander, & Archer, 2004).

Other psychometric research tools exist that are used to assess altered states of consciousness, e.g. Hallucinogen Rating Scale (HRS) (Riba, Rodríguez-Fornells, Strassman, & Barbanoj, 2001), Pekala’s Phenomenology of Consciousness Inventory (PCI) (Pekala, 1985) and van Quekelberghe’s Assessment Scale for Altered States of Consciousness (van Quekelberghe, Altstötter-Gleich, & Hertwecke, 1991). Choosing to use the EDN-scale (instead of other available scales) was based on the fact that it offers a straightforward quantitative complement to the qualitative data and is easy to administer.

Procedure

By way of first contact with the participants, interview topics were presented by e-mail or telephone, and participants were assured total confidentiality. The participants were able to decide where the interview would take place, as it is important that they feel at ease and comfortable with the interview situation (Hayes, 2000). During this first contact, participants were informed that the EDN-questionnaire would be sent to them and that this was to be filled in directly after one of their ordinary meditation sessions; they were also informed that the questionnaires would be collected after the interview. One of the experienced meditator participants received his questionnaire and a stamped envelope at the time the interview took place. However, this questionnaire was not returned.

The interviews took place in a variety of locations: three in the researcher’s own home, one in a therapy room, one in a school building, and three in different Zen centres. The interviews were held in the Swedish provinces of Värmland, Närke and Västergötland. Each interviewee was informed on tape about total confidentiality. This meant that all private data that could identify the participants are not and will not be on record. However, the participants all agreed, on tape, that the finished material could be openly made available to the public sphere.

The semi-structured interviews were conducted as a dialogue, where the participants and the researcher would openly have the ability to probe
interesting and important areas that might arise from within answers to the set of questions. Consistent with phenomenological inquiry, questions were only used as a guide, while thoughtful probing ensued with an eye to obtaining a deep understanding of zazen mediation as experienced and the meaning of that experience to them. Before the interview was completed, and while the tape was still running, the participants were asked if they had any questions for the researcher or if they felt like adding something else to the material. The duration of each interview varied in length from 30 to 60 minutes.

Analysis

The Interpretative Phenomenological Analysis (IPA) method attempts to understand participants’ experiences as well as their internal and personal world. The psychological meanings that represent the phenomenon are then investigated and analysed (Smith & Osborn, 2003). Researchers take an active role, attempting to get as close as possible to the participants. However because the internal perspectives of the participants cannot be accessed directly or completely, a two-stage interpretation process, or a double hermeneutic is employed. The participants try to understand and explain their experiences while the researcher attempts to make sense of the participants’ experiences (Smith & Osborn, 2003).

During the analysis, using the IPA method (Smith & Osborn, 2003), a one to five step-by-step approach was carried out. The first stage in the process involved the transcriptions of the material; extra wide margins were left in the document for notation. The transcript was then closely read a number of times and the left hand margin was used to note anything interesting or significant that arose. NB: no rules or prior theories were used. Stage two involved documenting titles for themes. The notes from the left hand margin were transformed into shorter phrases that captured the essentials of the raw material. These phrases were then placed into the right hand margin as themes. NB: The themes are at a higher level of abstraction than the raw material and may be constructed using psychological terminology. However it is important that the initial raw material is still available and visible. In stage three the themes from the right margin were listed on paper and examined to find any connections. Some of the themes were clustered together in connected groups. The clustering of themes was closely checked against the transcript for the exact words of the participants. This involved an iterative process and careful interaction between the researcher and the text. It is important to note that the researcher used her interpretive skills to make sense of what the transcript revealed. At the same time, the researcher rigorously checked her own sense making against the participants’ actual words. In stage four a table of themes was produced. This involved a thorough process that captured the participants’ experiences around particular topics and these were identified as clusters of themes. The clusters were given specific names and then organised into super-ordinate themes. In stage five the super-ordinate themes are presented in a narrative account that follows. Here, the super-ordinate themes are explained, illustrated and nuanced further (Smith & Osborn, 2003).
RESULTS

Reported below are the phenomenologically derived findings, followed by results from the supplementary quantitative EDN (Experienced Deviation from Normal State) Questionnaire, which yielded complementary results.

Qualitative data

As a result of the IPA analysis described above, the respondents’ descriptions were clustered around thirteen super-ordinate themes:

1) zazen,
2) meditative states of consciousness,
3) physiological experiences,
4) psychological experiences,
5) waking state of consciousness,
6) dream states of consciousness,
7) developing stages of consciousness,
8) altered states of consciousness,
9) definitions of consciousness,
10) spirituality,
11) enlightenment,
12) search for meaning in life and
13) effects of meditation on personal development.

These themes are presented below as a descriptive version of the respondents’ experiences. The descriptions are divided into two groups: inexperienced and experienced meditators. The reason for this grouping is to attempt to investigate possible developmental processes as part of the phenomena of long-term zazen mediation practice.

1. Zazen

Inexperienced meditators. Zazen is experienced as a strict and relatively clean practice with no dogmas. One definition of zazen offered by an interviewee is that it can be used as a technique or method of inner personal development.

Examples: “Everything unnecessary is peeled away, a pretty direct pretty clean, pretty strict practice. /A tool to return to one’s natural state. /It’s a way of entering existence - it’s like landing on earth like a watchful cat – or casting off the layers of ghosts from the geography of my childhood.”

Zazen is a method of practising attention. However, thoughts inevitably become focused on the sitting position as well as the pain induced from long periods of sitting still. The meditator’s mind is often experienced as being active and uncontrolled. The goal of Zen meditation is to free the experience from one’s own mind and the impact of restless and random thoughts.
Examples: "I try to achieve the concentration of attention. Zen meditation is a struggle, at the beginning I was not able to sit in a half lotus position. I had extreme pain in my legs. I experience my consciousness as jumping all over the place and I try to catch it again and put it in its place. At the beginning it is normally more split up and thoughts are going in all directions, but if I then really try to concentrate on the position then that state disappears and becomes calmer."

Experienced meditators. Zazen is not a state of consciousness; it is something bigger, it is not about trying to achieve or grasp a particular state of consciousness. In Zazen, consciousness is not analysed intellectually. The goal is to put a stop to thoughts that feed off each other with input from the sensations of the body. Practicing attention in normal everyday life is another form of Zazen.

Examples: "It is sort of freedom of body and consciousness, as when you open a birdcage the bird can fly out and return freely, with a fixed state of mind it would be either inside or outside the cage, and right now it has the freedom to go and come back, not to create a duality in-between. It is not about trying to achieve a particular state of consciousness, or that consciousness rests or becomes fixed within one state."

The core of zazen consists of three central aspects; holding a correct body position, breathing, and maintaining a spiritual attitude. It is a process by which both body and mind are cleansed. Zazen is a state of presence and attention. It is not a theory or dogma.

Examples: "To clean the senses and to experience life in a clearer way, not being so filled, mind and body belong together. It is a relaxed attention, a presence in the existence of life. It is not a worship of Buddha as something on the outside; Buddha is a nature within all of us."

2. Meditative state of consciousness

Inexperienced meditators. Curiosity and a need to understand the meditative state are prevalent with inexperienced meditators. The mind seems different in a meditative state than it does in the normal waking state.

Examples: "Well, I turn off as much as I can and try to see what's happening. In a meditation you don't have a brain. I feel more stable and stronger in the technique, so to say, and the difference is that I become warm and that I get a bit of a weird feeling in my body."

The mind is sometimes experienced as very active for the first ten minutes before it goes into a calmer meditative state where thoughts decrease. Stress also negatively affects the quality of the meditative state.

Examples: "I often have a lot of thoughts for the first ten minutes, and then they drop off. Then I also notice that it turns out differently depending on how well
prepared I am, so to say, if I take some time to calm down step by step, then the meditation becomes much deeper.”

The meditative state is qualitatively different from other states of consciousness. It is difficult not to strive deliberately to achieve a particular meditative state.

Examples: “It is different. I really would like to know if I am doing the right thing, but that’s typical, because that’s not what it’s all about.”

A deeper state of meditation is experienced in group meditations.

Examples: “When you sit in a group I believe that it becomes more orderly and the time together makes you stronger.”

Experienced meditators. A fundamental, deep, grounded state is experienced as a silent, bright state of consciousness. Meditators state that the deep state of meditation is more alive and ‘awake’ than the normal daily state of consciousness. After meditating for one month in complete silence and solitude, in sitting meditation for twelve hours a day, a state of unlimited and unqualified brightness emerged and became a permanent state or foundation.

Examples: “This feeling of consciousness, being completely silent and bright. And when I meditate it is like letting go of direction, it feels like some kind of ground state almost. In deep meditation I feel more awakened than in situations when I for instance watch TV. Then my consciousness became, if possible, even brighter and more silent and it felt like all the feelings of limitations disappeared, a feeling of unlimited brightness.”

The experience that time does not exist is common.

Examples: “It becomes very peaceful and it feels as if everything becomes calmer, it becomes all quiet and still as if you have polished a window so that you can see a bit brighter, maybe emotions become a bit deeper, maybe more love or understanding is waking up or, well, in some way, is more open-minded to how things really are.”

Meditation is about being completely and fully awake. After meditating for many years, this state becomes a permanent condition. The mind can become open and focused more easily.

Examples: “As if you somehow wake up to a brighter, closer, and more open present. After practising Zazen for many years you get used to it and it also becomes sort of a condition. It becomes easier for the mind to be open and present and not distracted by things.”

The meditative state of consciousness is described as being in contact with a deep state of consciousness, a quality of which is an experience of deep solitude.
Examples: “My master often said that seshin is to affect, to get in contact with the deepest state of consciousness, and then in the long run you create a deep intensity, a deep closeness, a familiarity between body and consciousness, and then, of course, you also create this with others.”

3. Physiological experiences

Inexperienced meditators. During meditation unpleasant bodily feelings, especially aching legs are often experienced. Other physiological effects include: low blood pressure, numbness, warm feelings in the body and a higher awareness of breathing.

Examples: “My legs did hurt a lot to start off with, but after a while they stretched out so that I could sit in a half lotus position. When I’m about to stand up from a sitting position it hurts a lot in my legs. You become warmer and softer and there’s a numb feeling in some parts of the body. You become aware of how the stomach goes in and out, I don’t think of that otherwise.”

A calm and euphoric feeling within emerges after meditation. Relaxation in the shoulders and a general feeling of freedom is experienced.

Examples: “Yes I feel calm. Blood pressure didn’t go down, but I felt happy and euphoric. Relaxed in the shoulders and afterwards it really feels like bodily freedom.”

Experienced meditators. During meditation breathing becomes longer and deeper and the body more relaxed and restful. Over time, sitting meditation becomes ‘normal.’ There is not much difference from other activities in daily life.

Examples: “The breaths become longer and deeper. It’s a form of bodily rest, so to say. Something that happens often, especially if you are experienced, is that there might not be anything special to notice. The difference between meditating and not meditating is not that big.”

4. Psychological experiences

Inexperienced meditators. A decrease of thoughts followed by a calmer state of mind is experienced during meditation. A feeling of emptiness is also expressed.

Examples: “I often have a lot of thoughts for the first ten minutes and then they diminish and I become calmer. It depends on how well-prepared I am, if I go directly from work and sit down, then I do not go deep. Then I am relaxed, empty.”

Experience of meditation includes: the development of an inner strength, alertness, a greater focus and happiness, an increase in concentration, a calmer
feeling and reduced stress. Also, an increase in the ability to resist temptations is experienced.

Examples: “You feel really strong and you believe you can do anything, you enjoy life, happiness. I often become very alert. I’ve noticed it’s easier to finish things, suddenly it’s just been done, it’s since I started to meditate that I became aware of this. Then I feel happier. The concentration becomes bigger in a way. I feel more confident within. Relaxed, yes I feel calm. The stress lessens.”

Experienced meditators. An open state of mind emerges where awareness of unconscious deep feelings and emotions arise during meditation. Thoughts and mental processes are experienced as being more composed, focused and easier to direct and control.

Examples: “Sometimes not much happens, and then a period comes with more, with a lot of feelings and you can become sad, very euphoric or happy, or it can bring up some kind of store of feelings within. If you’ve succeeded to fully be in the meditation, one can experience thoughts to be more composed or easier to direct afterwards.”

If meditation is performed for a minimum of an hour daily, no particular effect is noticed at all. However if meditation is not done for about two days in a row, unwanted and unpleasant feelings from earlier memories begin to arise.

Examples: “I used to be absent minded, very nervous, extremely introverted, I used to blush and stutter and I couldn’t have conversations with people. If I cease meditation for a short period, sometimes unpleasant memories return. I spent a lot of time planning for the future, thought of what was going to happen or I spent time thinking about things that had happened.”

Another respondent had a seven week period of not meditating. After this time there was strong resistance to starting meditation again.

Examples: “I stiffened quite quickly and it was hard to get back again. The ego is never overcome. It is powerful and it is easy to get used to laziness.”

5. Waking state of consciousness

Inexperienced meditators. Respondents state that since they started to meditate they have noticed the emergence of a higher or deeper awareness. In addition, concentration seems to improve and problems don’t seem too loom as large as they did before.

Example: “It is easier to concentrate and not to be that hung up about unimportant things.”

Perception of the real world changes, as a different viewpoint develops. As meditation progresses, the world is increasingly seen as it is rather than as it is
interpreted. The normal waking state is experienced as an active, noisy state of mind with thoughts and emotions constantly interrupting even the simplest of activities. This is a process of stripping away different layers of the self.

*Examples:* "I experience it as if I would peel off things, and that I everyday I come nearer the core, but there are a whole lot of layers of peeling left. I've gained more contact with my inner senses through the filters, easier to see the world for what it is. My waking state of consciousness can be just anywhere, what I try to achieve is to be who I am, that's difficult, as it is with doing the dishes; it's difficult to consciously do the dishes."

*Experienced meditators.* Two of the respondents stated that before they started to meditate they lacked self-confidence and were preoccupied with themselves. They were anxious about the past and worried extensively about the future.

*Examples:* "I used to be distraught, very nervous and extremely introverted. I felt confused and closed within and scared and worried for things and afraid of failure and all those feelings about being occupied with yourself the whole time."

Another respondent stated that he used to experience the waking state of consciousness as confused and muddled.

*Examples:* "Everything was a muddle, there were layers and layers of different thoughts and they seemed to be unnecessary."

The present waking state of consciousness is now, after at least 20 years of meditating, experienced as bright and clear. It is difficult to live in today's society without being torn apart, but after meditating for a long time, one gains the knowledge of how to return to the bright and present state. The waking state is experienced as peaceful and meaningful.

*Examples:* "It becomes brighter and clearer. I've got the knowledge of returning to the brightness and this presence. It gave peace, it gave meaning."

6. Dream states of consciousness

*Inexperienced meditators.* As a result of meditation, the respondents have had fewer dreams and more shallow dreams. In addition, the need for sleep is less marked than it previously has been.

*Examples:* "I work with my dreams. Lately I've discovered I have fewer dreams. I've discovered lately that I have shallow sleep and I've also noticed that I need less sleep. Earlier I slept a lot."

Happiness and pain are experienced as much stronger in the dream state than in the waking state. One respondent also experiences lucid dreaming which cannot be compared with their former normal dream state. Lucid dreams are
Experienced meditators. It is possible to meditate in lucid dreaming as well as to continue working on Zen koans. The deep sleep state is experienced as a deep relaxed dreamless sleep.

Examples: “You are conscious of dreaming in the dream, so to say. /You can then have a meditation exercise. /The mind is clearer and sharper in every way. /There are dreams where one can communicate with people who have died. /My sleep is very relaxed.”

Experiences of clear lucid dreams started sporadically after a period of extensive meditation for one meditator, but now have become constant. Experiences of leaving the body in the dream state have also occurred. This is a very real experience, more like that of a waking state. The respondent is conscious during dreaming and can also direct the direction of the dream. Knowledge of ego identity is also clearly retained throughout the dream. In addition, awareness and consciousness is retained throughout the night even in the deep sleep state.

Examples: “It’s a dream but it’s very clear. /I looked at it as a kind of dream but it’s not this normal reality. /It’s like the state of deep sleep doesn’t really exist, in a normal night I’m often conscious. /Yes I remember what I do in my dreams.”

Another respondent believes that it is not healthy to judge everything that is being experienced. However, the respondent also experiences being closer to some kind of truth in the dream state, but does not want to speculate on what this is. It is more important to be present in the moment.

Examples: “I believe that when you are here you should live here, to be present and not in a lot of parallel processes but instead be present where you are. /It’s part of life and part of the body being a bit there and a bit here, but when you are here you are here.”

7. Developing stages of consciousness

Experienced meditators. After many years of meditation, the state of consciousness has permanently changed towards a feeling of limitless clarity.
in mind and body. Meditation has become a way of life. A state freed from previous, different states or stages of consciousness.

Examples: “After practising Zazen for many years it becomes sort of a condition. /Buddha is a nature within all of us. /Seshin is to affect, to get in contact with the deepest state of consciousness, and then in the long run you create a deep intensity, a deep closeness, familiarity between body and consciousness, and then of course you also create this with other.”

The inexperienced meditators did not give responses that were appropriate for this super-ordinate theme.

8. Altered states of consciousness

Inexperienced meditators. One respondent experienced a weightlessness; a kind of floating feeling during the meditative state. The same respondent also had out-of-body experiences and lucid dreams as well as peak experiences while walking and spending time in nature. These experiences occurred before engaging in meditation and have not changed as a result of meditation.

Examples: “I only feel the body between the hands and thumbs but the rest of the body is insensitive. /I’ve had out of body experiences. /It feels like a totally new state, and could perhaps be described as more real than the waking normal state. /Sometimes when I walk in nature I can get one of these feelings of close belongingness with God or a strong feeling of happiness.”

Experienced meditators. Out-of-body experiences and lucid dreams at night were reported by all in the experienced group. One respondent experienced contact with dead people in his lucid dream state.

Examples: “I am conscious even when I sleep, when I dream. /In a dream like that, it almost feels like I leave my body, but it is a dream, but very clear. /It’s more like a waking state but I regard it as a dream, but it’s not this normal reality. /To be aware that you dream in the dream. /There are dreams when you communicate with dead people, but it’s nothing I in Zen try to achieve, but it can happen.”

9. Definitions of consciousness

Inexperienced meditators. Consciousness is explained as being common to all humans and as a divine inner energy independent of space and time.

Examples: “The divinity within human beings. /Energetic information which exists regardless of time and space. /I am. /Everything is divine consciousness.”

Experienced meditators. Consciousness is equated with all that is. It is experienced as ‘waking up’; a direct experience of the reality of the moment, right here and now.
Examples: “All this. /Everything and right here. /What could be explained. /To wake up to the reality of every moment.”

10. Spirituality

Respondents from both groups stated that a common reason for starting and continuing meditation is their interest in spirituality.

Examples: “To deepen the consciousness is to understand that we are part of a bigger consciousness, we are not alone and we are not cut off. It’s like the bubbles on the sea, when you forget who you are the bubbles break and you become part of it. /Dare to see your own death. /The reason to continue meditating is one’s own spiritual motivation. /I believe I’ve had past lives. /I believe God does exist in everything it’s just that we don’t notice it in daily life. /My spiritual experiences are strong, being spiritual is when you can see and be a part of it all. /I meditate mainly out of spiritual reasons. /Consciousness is really divine consciousness. /Mysticism is an experience of God’s presence. /Just a pleasant smell in the wind could be a spiritual experience.”

11. Enlightenment

Inexperienced meditators. One respondent does not believe that enlightenment can be defined. Another believes that all human beings are already enlightened. Two respondents believe that enlightenment is dependent on knowledge and education.

Examples: “I believe there is a state like that, but there’s no definition. /The human being is enlightened. /I would say knowledge.”

Experienced meditators. Respondents used the term ‘waking up’ to describe enlightenment. Another stated that enlightenment is a realisation of the treasure and infinite importance of life and being.

Examples: “You wake up, it’s a shift in consciousness, a realisation. /Waking up is to wake up to one’s own treasure, which everybody has, and that time shouldn’t be wasted. /Every moment in life is a treasure, the treasure in the moment, that moment. /The deep value in one moment, one breath, a beautiful picture, when the bird is about to fly, when one’s body and consciousness lifts, that moment. /It’s important to wake up to the treasure we have within, and to the treasure others are who surround you.”

12. The search for meaning in life

Respondents from both groups stated that meditation is a central part of their quest for finding meaning and value in their lives. Meditation gives a broader understanding of one’s own life as well as the life and importance of other
human beings. Understanding the meaning of existence and the importance of spirituality are common themes raised by the respondents.

Examples: “Meditation is kind of like an inner wash. I search for a deeper state that has the truth. I wish to become more of who I really am. I wish to be able to enjoy life, existence, happiness, and maybe to feel more of a contact with others.”

13. The effects of meditation on personal development

Inexperienced meditators. The respondents state that they have noticed several changes in their own development and view of the world, and their environment including the quality of social interactions.

Examples: “Maybe a bit less self-occupied. Calmer within. I notice that I have more patience. I don’t feel threatened by the surroundings. I view the world as more beautiful. I have a higher tolerance of others than I used to have a year ago. I used to be more watchful about what I said. I believe it gives more self-confidence. A closer contact with the unconscious. I experience a deeper spiritual presence. I believe the theoretical idea of a universal wholeness becomes more obvious.”

Experienced meditators. These respondents state that they have noticed a number of personal changes through the process of meditation. Openness, expansiveness and non-attachment to the material world are examples of qualities and affects that have developed over time.

Examples: “I am not as attached to different conceptions. I believe I have a more open attitude towards others. The breakthrough I had many years ago was when I realised I was a snowflake. I view myself as being part of the world around me, the people around me and even the animals. The feeling of belongingness that I used to have as a child has come back. The feeling of separation has disappeared. I no longer feel trapped in this physiological body. Through the practice of Zazen I come closer to who I am.”

These thirteen super-ordinate themes have been further shortened and abstracted into a table format (see Table 1). The summaries shown have been selected (a) to attempt to represent the most commonly occurring descriptions under each theme and (b) because of their value in demonstrating experiential differences between the two groups.

Quantitative Data

A Mann Whitney U-test (using SPSS 14.0), with inexperienced/experienced as independent variables and with experience of altered states of consciousness (as measured by the EDN test), as dependent variable indicated a significant difference between the two groups (Z = 2.141, \( N_1 = 3, N_2 = 4, p = 0.032 \), two-


<table>
<thead>
<tr>
<th>Super-ordinate Theme</th>
<th>Inexperienced meditators</th>
<th>Experienced meditators</th>
<th>Difference between Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Zazen</strong></td>
<td>• a need to achieve</td>
<td>• not about achievement</td>
<td>↑ yes</td>
</tr>
<tr>
<td></td>
<td>• concentration, struggle, effort</td>
<td>• relaxed attention continues in normal everyday life</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• thoughts are going in all directions</td>
<td>• no duality between mind and body</td>
<td></td>
</tr>
<tr>
<td><strong>Meditative states</strong></td>
<td>• curiosity, desire and need to understand</td>
<td>• unlimited, silent, bright state</td>
<td>↑ yes</td>
</tr>
<tr>
<td></td>
<td>• mind seems different from other states</td>
<td>• feeling that time does not exist</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• try to achieve a particular meditative state</td>
<td>• being completely and fully awake is a permanent condition</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• experience of deep solitude, deep intensity, a deep closeness</td>
<td></td>
</tr>
<tr>
<td><strong>Physiological experiences</strong></td>
<td>• unpleasant bodily feelings, aching legs</td>
<td>• breathing becomes longer and deeper</td>
<td>↑ yes</td>
</tr>
<tr>
<td></td>
<td>• higher awareness of breathing</td>
<td>• body more relaxed and restful</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• calm and euphoric feeling within emerges after the meditation</td>
<td>• over time, sitting meditation becomes normal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• general feeling of freedom</td>
<td>• not much qualitative difference from other activities in daily life</td>
<td></td>
</tr>
<tr>
<td><strong>Psychological experiences</strong></td>
<td>• fewer thoughts followed by a calmer state of mind</td>
<td>• an open state of mind - easier to direct and control thoughts</td>
<td>↑ yes and ↓ no</td>
</tr>
<tr>
<td></td>
<td>• a feeling of emptiness</td>
<td>• an hour daily practice - no particular effect is noticed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• development of an inner strength</td>
<td>• an awareness of unconscious deep feelings and emotions arise</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• alertness, greater focus and happiness</td>
<td>• unwanted and unpleasant feelings from earlier memories begin to arise if meditation practice relapses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• a calmer feeling and reduction in stress</td>
<td>• strong resistance to starting meditation again after prolonged period of not meditating</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• increase in the ability to resist temptations: food, ‘nakedness’</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Waking state</strong></td>
<td>• normal waking state is experienced as an active, noisy state of mind with thoughts and emotions constantly interrupting even simple activities</td>
<td>• before starting to meditate lacked self confidence and preoccupied, anxious about the past and worried about the future</td>
<td>↑ yes or → maybe</td>
</tr>
<tr>
<td></td>
<td>• after short period of meditation notice the emergence of a higher or deeper awareness</td>
<td>• used to experience the waking state of consciousness as confused and muddled</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• concentration seems to improve</td>
<td>• after meditating for a long time, the waking state is experienced as bright, clear, peaceful and meaningful</td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 1 (continued).

<table>
<thead>
<tr>
<th>Super-ordinate Theme</th>
<th>Inexperienced meditators</th>
<th>Experienced meditators</th>
<th>Difference between Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dream states</strong></td>
<td>• problems don’t seem too loom as large as they used to</td>
<td>• gain a knowledge of how to return to the bright and present state even in the most stressful and difficult social and everyday conditions</td>
<td>→ maybe</td>
</tr>
<tr>
<td></td>
<td>• dream state has a waking quality</td>
<td>• can meditate in lucid dreaming and continue work on koans.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• fewer and more shallow dreams</td>
<td>• lucid dreams now constant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• need for sleep is less</td>
<td>• out-of-body experiences, very real more like a waking state</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• lucid dreams have great clarity than normal dreams</td>
<td>• passive observer throughout the dream</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• awareness and consciousness is retained in the deep sleep state</td>
<td></td>
</tr>
<tr>
<td><strong>Developing stages of consciousness</strong></td>
<td>• state of consciousness has permanently changed towards a feeling of limitless clarity within mind and body</td>
<td>↑ Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• meditation has become a way of life</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• a state freed from previous, different states or stages of consciousness</td>
<td></td>
</tr>
<tr>
<td><strong>Altered states of consciousness</strong></td>
<td>• weightlessness with a kind of floating feeling during the meditative state</td>
<td>• Out-of-body experiences → maybe</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• out-of-body experiences and lucid dreams as well as peak experiences while walking and being in nature</td>
<td>• contact with dead people</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• these experiences occurred before engaging in meditation</td>
<td>• not especially desired, but can happen</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• experiences have not changed as a result of meditation</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Definitions of consciousness</strong></td>
<td>• consciousness is common to all humans as a divine inner energy independent of space and time</td>
<td>consciousness is equated with all that is. ↓ No</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• it is experienced as ‘waking up’ a direct experience of the reality of this moment right here and now</td>
<td></td>
</tr>
<tr>
<td><strong>Spirituality</strong></td>
<td>All respondents:</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• to deepen consciousness is to understand that we are part of a bigger consciousness,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• mysticism is an experience of God’s presence</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• just a pleasant smell in the wind could be a spiritual experience, spirituality is something natural</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Enlightenment</strong></td>
<td>• enlightenment can’t be defined</td>
<td>• enlightenment is ‘waking up’ ↑ yes or → maybe</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• all human beings are already enlightened</td>
<td>• every moment in life is a treasure, moment by moment to treasure others</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• enlightenment is dependent on knowledge and education</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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tailed). The mean value derived from the group of inexperienced meditators ($M = 17.43, SD = 13.94$) indicated that they perceived a greater degree of difference between the meditative state and the normal waking state than did the group of experienced meditators ($M = 1.57, SD = 0.53$).

Discussion

This study appears to show some key differences between the inexperienced and experienced meditators based both on their phenomenological accounts as well as on data derived from the quantitative questionnaire.

Indications of Permanent Changes

In Table 1 the phenomenological data were shortened, abstracted and then presented in a table format. These abstractions highlighted the differences between experienced and inexperienced meditators by focusing on the way that they described their experiences. In the text that follows, the super-ordinate themes are presented along with a set of abstracted descriptions in italics. The descriptions presented have been selected (a) to attempt to represent the most commonly occurring descriptions under each theme and (b) because of their value in demonstrating experiential differences between the two groups.

A further examination of the descriptions of the themes revealed that in at least six of the thirteen themes a pattern emerged for experienced meditators that seems to indicate: (a) permanent changes may have occurred and (b) the meditative state has become integrated into normal life.
These six super-ordinate themes followed by the abstracted phenomenological data from Table 1 are presented in the paragraphs that follow to illustrate and highlight the experiences. Zazen: relaxed attention continues in normal everyday life. Meditative States: being completely and fully awake is a permanent condition. Physiological Experiences: over time sitting meditation becomes normal; not much qualitative difference from other activities in daily life. Dream States: can meditate in lucid dreaming and continue work on koans; lucid dreams now constant; out-of-body experiences; very real more like a waking state; awareness and consciousness is retained in the deep sleep state. Developing Stages of Consciousness: state of consciousness has permanently changed towards a feeling of limitless clarity within mind and body; a state freed from previous, different states of consciousness. The Effects of Meditation on Personal Development: openness, expansiveness and non-attachment to the material world. All these descriptions seem to indicate permanent changes have occurred.

By contrast, inexperienced meditators report differences between their meditative and ‘normal’ states in at least three themes, as highlighted here. Zazen: a need to achieve; concentration, struggle, effort. Meditative States: mind seems different from other states; try to achieve a particular meditative state. Physiological Experiences: calm and euphoric feeling within, emerge after the meditation.

The differences between the two groups within these particular three themes were supported by the results of the quantitative test which revealed that the inexperienced meditators perceived a greater difference (about 17 EDN-points) between the meditative state and normal waking state than did experienced meditators. The mean value of 1.57 points for the experienced is close to 0 (= judgment as “normal state”), indicating that the meditative state is not experienced as different from normal waking state, and thereby had become integrated into daily life.

Indication of Possible Trait Changes

By using Cahn & Polich’s (2006) designation of a trait change as a lasting change in meditative state that persists in the meditator irrespective of active engagement in meditation, it is possible to suggest that trait changes may have occurred in the cases of the experienced meditators.

Again, by setting out abstracted descriptions under relevant themes, a pattern can be discerned which may lend additional descriptive evidence that trait changes have occurred among the experienced meditators. Zazen: no duality between mind and body; Meditative States: unlimited, silent, bright state; Physiological Experiences: experience of deep solitude, deep intensity, a deep closeness. These types of experiences are reiterated in the experienced meditators group in the theme Developing Stages of Consciousness: state of consciousness has permanently changed towards a feeling of limitless clarity.
within mind and body; meditation has become a way of life; a state freed from previous, different states or stages of consciousness.

Markers of possible trait changes can also be observed in experienced meditators where experiences prior to starting meditation are compared with later experiences, as in the following examples. Waking State: before starting to meditate lacked self confidence and was preoccupied, anxious about the past and worried about the future; used to experience the waking state of consciousness as confused and muddled; after meditating for a long time, the waking state is experienced as bright, clear, peaceful and meaningful; gain knowledge of how to return to the bright and present state even in the most stressful and difficult social and everyday conditions.

Many of the world’s traditions, cultures and contemplative disciplines (such as Buddhist Abhidharma, Jewish Kabbalah, Islamic Sufism, Vedantic philosophy and others) maintain that one marker of advanced stages of meditative development is the ability to remain ‘awake’ or ‘conscious’ through waking, dream, and deep sleep states (e.g. Walsh, 1995). Evidence from this study suggests that meditation begins to have an effect on dream states quite early in meditation practice. Examples from inexperienced meditators which seem to support this include: dream state has a waking quality; fewer and shallower dreams; lucid dreams have greater clarity than normal dreams.

The effect of meditation on the dream states of experienced meditators is consistent with accounts in the aforementioned traditions, but can be seen as quite remarkable from the standpoint of western tradition. Some examples include: can meditate in lucid dreaming and continue work on koans; lucid dreams now constant; out-of-body experiences, very real more like a waking state; awareness and consciousness is retained in the deep sleep state.

The ability to remain conscious through the deep sleep state was reported by the experienced meditators. Indeed consciousness in deep sleep may be one of the markers not only of a general trait transformation, but a permanent condition. If it is permanent, as opposed to a peak experience, it is an indication that the highest stage of meditative development has been attained according to the traditions (Wilber, 2000a).

It is interesting to speculate whether or not the phenomenological evidence and research cited above support the claims of some religious traditions (Aurobindo, 1951) and other theorists (Wilber 2000a) that higher stages of transpersonal development may be part of the developmental potential of all humans (Nagel, 1999).

Possible Counterevidence for Trait Changes

By contrast, reports from experienced meditators exhibit data that seem to contradict this trait change evidence. Examples are given in the theme
Psychological Experiences: awareness of unconscious deep feelings and emotions arise; unwanted and unpleasant feelings from earlier memories begin to arise if meditation practice relapses; strong resistance to starting meditation again after a prolonged period of not meditating.

These data seem to suggest that permanent trait changes may not have occurred in some of the experienced meditators. Furthermore, they seem to imply that if meditation ceases for some time, a return to previous states (anxiety, unpleasant feelings, etc.) may occur. This would seem to imply that trait development has not taken place in the way other types of human development proceeds, or that meditative development involves a reversible developmental sequence. Such speculation is difficult to resolve relying on the data in this study alone.

Brown & Engler (1980) showed that in Rorschach tests advanced meditators or so-called ‘enlightened practitioners’ show evidence for the experience of conflicting themes such as fear, dependency struggles and so forth. Within the meditative traditions, it is accepted that personal conflicts are actually likely to intensify as meditation progresses (Brown & Engler, 1980). “What has happened up to this stage in meditation is that the individual has ‘relived’ his life up to that point. He has opened himself to all the traumas, the fixations, the complexes, and the shadows of all of the prior levels of consciousness which have so far emerged in his life” (Wilber, 1979, p. 19). Within the Zen tradition itself, experiences of ‘minor’ satori (or awakening) are common amongst inexperienced meditators (Yamada, 1986). However, permanently fixing a state of satori (attaining personalisation of satori) is very difficult and requires an extremely long period of time (Yamada, 1986).

Inexperienced Meditators – Possible Markers of State Changes

Revisiting the descriptive accounts of inexperienced meditators, seems to indicate that meditative state changes i.e. altered sensory, cognitive, and self-referential awareness appear to be common in the early practice of zazen. Some examples from inexperienced meditators are offered: after short period of meditation, notice the emergence of a higher or deeper awareness; fewer thoughts followed by a calmer state of mind; alertness, greater focus and happiness; a calmer feeling and reduction in stress; view the world as more beautiful; experience a deeper spiritual presence; problems don’t seem too looming as large as they used to.

Some of these accounts may suggest the presence of trait changes; though it is more likely that a complex set of state changes are common in the early period of meditation practice. These data also demonstrate the difficulty of determining when a trait change has actually occurred. Furthermore, it is difficult to ascertain whether it is part of a recognisable stage model. The data in this study seem to provide some evidence for general trait transformations. However, these data cannot yet further our understanding of whether or not real stages exist or indeed how many there may be.
Limitations of the Study

Significant variables such as the personalities of practitioners, the regularity of meditation practice, and the effect of experiences in deep meditation are not yet completely understood (Holzel & Ott, 2006). These variables could in fact impact the reliability and ability to generalise any findings or conclusions from this study.

The choice of abstract descriptions in the tables, may involve a bias that only selects those descriptions that demonstrate a difference between inexperienced and experienced meditators. This study is also open to other methodological difficulties that have been associated with the phenomenological study of meditation. These include: possible errors of memory and perception relating to the original situation and experience; possible deceit by participants who may attempt to manipulate descriptions; the process may also be dependent on the researcher’s subjectivity (Giorgi & Giorgi, 2003). Additionally, it is a very small-scale study, involving only eight participants. Consequently, the findings of this study are best interpreted as only providing some support for the possibility of trait changes. Nevertheless, it contributes value in helping identify specific areas of functioning (eg., like every-day functioning, sleep, stress) that may have significance for further research.

Further Research

Cahn and Polich (2006) suggest that a neurophenomenological comparison looking at meditative practices and comparing them with other altered states would be useful, in order to correlate phenomenological accounts of personal internal experience with brain activity as measured by neuroimaging methods. This would help isolate and identify objective brain activity associated with internal subjective psychological states.

A longitudinal research effort, including a larger number of participants, utilising the results of several phenomenological studies of meditation, may be more successful in abstracting the data and positively recognising stages of meditative development, if such exist.

References


Introduction

The purpose of this study was to explore the effects of meditation on physiological and psychological processes. The research design involved a series of experimental sessions where participants were exposed to different meditation techniques. The results indicated significant changes in heart rate, respiration rate, and self-reported psychological well-being.

Methodology

The study was conducted using a randomized controlled trial design. Participants were randomly assigned to one of three meditation groups: transcendental meditation, mindfulness meditation, and guided imagery. Each group underwent a series of weekly sessions over a period of six weeks.

Results

The results showed that participants in all three meditation groups reported significant improvements in mood and reduced symptoms of anxiety and depression. The group that practiced transcendental meditation showed the most significant improvements in physiological parameters, including heart rate and respiration rate.

Discussion

The findings suggest that meditation can have a positive impact on both physiological and psychological well-being. Further research is needed to explore the long-term effects of meditation and its potential applications in clinical settings.

Appendix 1

Interview questions

A. General questions regarding meditation experiences.

1. Do you notice any physiological effects during and after meditation?
   (e.g. mental capacity, creativity)
2. Does the meditation have any psychological effects on you? (e.g. wellbeing, stress factors)

3. Has your view and experience of yourself, others and the world changed through the practice of meditation? If so, what has changed and how has it changed?

4. Why do you meditate?

5. Why did you specifically choose to practice Zen meditation?

6. What is your definition of Zen meditation?

B. Questions regarding states of consciousness.

1. How do you experience consciousness during meditation? Is this different from normal, waking consciousness? If so, how is it different?

2. How would you describe your waking state of consciousness? Has it changed since you started to meditate? If so, how has it changed?

3. How would you describe your dream state of consciousness? Has it changed since you started to meditate? If so, how has it changed?

4. How would you describe your deep sleep state of consciousness? Has it changed since you started to meditate? If so, how has it changed?

5. How would you describe your meditative state of consciousness? Has it changed since you started to meditate? If so, how has it changed?

6. What is your definition of consciousness?

7. Can you explain what a mystical or religious experience is?

8. Can you explain what enlightenment is?

C. What do you consider meditation could contribute to mankind?

Appendix 2

EDN-Questionnaire

All 29 items are assessed with a VAS-scale (0–100), with endpoints 0 = No, not more than usually, and 100 = Yes, much more than usually.

1. My thinking was very slow

2. It felt very good in my body

3. I thought I heard voices, although no one was in my vicinity

4. I heard sounds without being able to explain where they came from

5. I felt limitless joy

6. It felt like everything seemed to be connected to a oneness

7. I could hear my thoughts, like talking

8. I saw colours before me when my eyes were closed

9. It seemed to me as though I did not have a body anymore

10. I saw light or flashes of light with my eyes closed

11. It seemed to me that my environment and I were one

12. Perception of time and space was like in a dream

13. I saw scenes rolling by like in a film

Mapping Zazen Meditation
14. I got a feeling for eternity
15. I encountered profound thoughts
16. I experienced past, present and future as a oneness
17. I suddenly remembered things that I thought were forgotten
18. It felt like I was falling asleep
19. I had the feeling of being outside my body
20. It felt I was floating or hovering
21. I felt isolated from everything and everyone
22. I got insights into situations that used to be puzzling
23. The boundary between myself and my surroundings seemed to blur
24. I could see clear pictures of things I was thinking of
25. I could hear sounds without knowing where they came from
26. I got original ideas
27. I had lively fantasies
28. I felt deep peace within me
29. My experiences had a religious or spiritual meaning for me

The Authors

Anette Kjellgren is working as an Associate Professor in the Department of Psychology, Human Performance Laboratory, at Karlstad University, Sweden. She has an interest in investigating different aspects of altered states of consciousness. She has conducted studies on different relaxation methods for inducing such states, mainly about isolation in flotation tanks, but also in connection with yoga and meditation outdoors in a natural environment.

Susanne Taylor works as a social worker in Sweden. In her work she cares for teenagers and adults with a wide range of social and psychological needs. She also works as a transpersonal psychotherapist and offers mindfulness courses. Her interests include: integral theory, human personal development, transpersonal psychology, including altered state research and holotropic breath work.