

The Quality of Zen Meditation- Bodily Experiences of Participants with Generalized Anxiety Disorder

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ABSTRACT

Many aspects of meditation have been examined for over seventy years, including its physiological, psychological variables, and clinical conditions. However, the effectiveness of Zen meditation for clinical application has been debated. The quality of meditation could be one of the keys to understand the disagreements among studies. This study aims to reveal the experience of Zen meditation among participants with generalized anxiety disorder (GAD). A psychiatric outpatient department at a Taiwanese medical centre was the study site. A six-week Zen meditation programme was designed and provided to the study participants. Multiple data collection methods were used, including interviews, field notes, and diaries. Merleau-Ponty's phenomenology was adopted as a framework for guiding the data interpretation. Investigator and method triangulation was used to enhance the study rigour. Twenty-one adult patients with GAD were recruited. Four categories were merged: First, bodily awareness referred to the participants becoming more sensitive to their bodies, such as when they felt muscle tension, and when their senses became more sensitive. Second, determining the characteristics of the GAD body revealed how participants identified their bodies. Third, being with the breath referred patients to a wholly concentrated state. Finally, bodily resistance referred to the body disagreeing with the physical activities when practicing. By practicing Zen meditation, the participants experienced being close to their bodies, learnt to stay quietly with their bodies for a while, and gained awareness of their bodies. The contribution of this study is to identify the essence of good quality of Zen meditation which should be considered before examine the effect of Zen meditation.

Keywords

Bodily experience, Generalized anxiety disorder (GAD), Interviews, Zen meditation.

Introduction

Meditation has been studied for over seventy years, particularly regarding physiological parameters, psychological variables, and clinical conditions [1]. Previous studies have sought to discover how meditation affects people, in what situations meditation is suitable, and whether meditation is harmful. Regarding physiological parameters, electroencephalography (EEG), blood pressure and, lately brain imaging have been used to analyse the effects of meditation [1-10]. Some mechanisms of meditation seem to reach congruence at some way, such as EEG changes [1,11] but other physiology parameters remained unclear such as evoke potentials [11]. Cognitive tasks, stress reduction, quality of

life, and emotion-related variables have been the most examined psychological aspects in studies on meditation, revealing that meditation decreases general psychological distress [12,13]. The main areas of meditation studies related to clinical conditions have been cancer care, depression, and pain [7,13]. Although numerous methodological limitations have been identified, the findings of these studies imply that meditation can benefit people under stress-related clinical conditions [14,15]. However, people should be cautious because although meditation is mostly beneficial, it also causes adverse reactions, such as brief dissociative-like experiences [16-18].

Zen meditation, which has evolved in various societies and cultures, is widely practiced in Taiwan [19,20]. The central concepts of Zen meditation include: 1) developing profound insight that frees a person from the suffering caused by egocentric concerns; and 2)

encouraging instantaneous and uncluttered awareness throughout everything in the here and now [13]. The intellectual, spiritual, religious, and traditional aspects of Zen meditation have been highly emphasized [13,14,21]. Nevertheless, few studies have focused on the physical aspects of Zen meditation, especially the physical training involved.

Generalized anxiety disorder (GAD) features emotional (anxiety), cognitive (uncontrollable worry, poor concentration), somatic (muscle tension, autonomic symptoms, somatic preoccupation), and behavioural symptoms (irritability, restlessness) [22]. GAD is highly prevalent, constituting the most frequent mental disorder in communities [23,24]. The 12-month prevalence rates of GAD have ranged from 1.0% to 3.6% worldwide [22,23,25-27]. Taiwan has high prevalence rates of GAD than Hong Kong and Korea(Japan), with a 12-month prevalence ranging from 3.7% in urban areas to 9.3% in suburban areas. Cultural differences and the inconsistencies involved in using various diagnostic tools may have contributed to these high rates [28].

Studies focusing on the effects of meditation on anxiety disorders have been abundant. Methodological issues, such as the quality and variability of applied meditation methods, are the major concerns of meta-analyses and systematic review papers on meditation [18,29-31]. Evidence on the efficacy of meditation on anxiety disorders lacks consensus. Developing a theoretical perspective to address the extent and quality of meditation during the intervention period has been suggested for further meditation research [18,30]. Moreover, researchers have continued studying meditation because defining the essential quality of meditation should facilitate understanding the disagreements among various studies [14,18]. Therefore, the goal of this study was to determine the qualitative characteristics of Zen meditation.

Life experience is expended and accumulated through our bodies. Bodily experiences incorporate the physical senses, and life is integration and harmony of bodily experiences [32]. Yu (2011) stated that bodily experiences involve the interaction between internal sensations and the external environment. Bodily experiences, which entail notions, feelings, culture, and nature, are neither purely corporeal nor cognitive but a combination of both. Through our bodies, we contact, observe, and understand our experiences. The body is not just an object but also a subject that is able to initiate acts and express views. Relying on sensations, perceptions, and the information which are provided by our bodies so that scientific activities can be started [33]. This article is a succeeding work of the author. Differ from the previous study [34], this article focus more on the bodily experiences of patients with GAD.

The body presupposes experience, constructed by the openness to and investment in the world of sensation [35]. Zen meditation involves certain physical procedures such as physical exercise, respiration regulation, sitting positions and mitigation exercise. Therefore, the theoretical concept of bodily experiences of Merleau-Ponty was adopted in this study as body discipline is

involved in Zen meditation [20,36]. Patients with GAD were chosen because the disorder has been one of the major topics of meditation studies.

Aim

This study aimed to understand the bodily experiences of Zen meditation practitioners with GAD. We focused on the bodily experiences during Zen meditation practice, how the body adapts to the physical procedures of Zen meditation, and what practicing Zen meditation means to GAD patients.

Methods

Study design

Using a purposive sample, this study adopted qualitative study methods such as conducting individual interviews, writing in diaries, and taking field notes. The individual interviews were administered two weeks after the completion of the programme. The diaries were maintained by the participants throughout the programme, and the field notes were maintained by the researcher. Using these multiple sources of data functioned as method triangulation, which helped boost the study rigour. Three researchers in the United Kingdom and Taiwan were engaged throughout the study, thus functioning as investigator triangulation.

A six-week group Zen meditation programme led by a female senior Zen meditation instructor was provided at a day care centre on Saturday mornings, incorporating warm-up exercises, meditation, and body massage. First, six gentle 10-15 minutes warm-up exercises were performed separately: movements involving the head and neck, shoulder and chest, wrist and leg, floor-sitting, and floor-lying. Second, in practicing Zen meditation, the participants adjusted their sitting positions by using a hard cushion to straighten their backs. The participants began with three deep breaths, and then concentrated on breath counting. Counting from 1 to 10 while exhaling was suggested and then repeated; when drowsiness, counting backwards from 10 to 1 was recommended. Once the mind became clear of daydreams and thoughts, a participant could simply follow the breath, and focus on breathing in and out; counting was not required. The meditation time for the first session was five minutes, and each session was increased by 5 min. Finally, the participants followed the instructor in practicing self-massage. Using both hands, the participants massaged themselves from head to toe for approximately 10 min to reinvigorate themselves after being motionless for a period.

Ethical consideration

Three ethical committees approved this study: the medical faculty of the United Kingdom, the Research Committee of the Nursing Department, and the Medical Research Ethical Committee at the study hospital in Taiwan. After the first pilot study was conducted, the recruitment criteria were modified; therefore, ethics approval was sought and granted again on a second occasion.

The four major principles of biomedical ethics are respect for autonomy, nonmaleficence, beneficence, and justice. Information explaining the right of autonomy was printed on the informed-

consent form for each potential participant to ensure that the principle of autonomy was enforced. All of the participants were adults and capable of acting on their own behalf, and all of the participants remained anonymous throughout this study. Regarding beneficence, the primary aim was to establish an alternative way to help patients with anxiety improve skills for self-managing their anxiety symptoms. However if they were distressed, as mentioned, a back-up system was in place. Regarding justice, all of the patients who met the inclusion criteria were offered equal opportunities to read the research information printed on a poster displayed at outpatient department.

Settings and sampling

To test the feasibility of the study design, two pilot studies ($n = 6$ and $n = 9$) with four sessions each were administered before the main study. The potential participants were personally invited at a psychiatric outpatient department at a medical centre. The inclusion criteria were: adults diagnosed with GAD who were willing to attend the programme and participate in individual interviews, and were able to maintain diaries. Patients with previous experience with any type of meditation were excluded. Thus, 21 participants were enrolled in the main study. To ensure that the participants learned Zen meditation effectively, they were divided into two groups. Approximately one of three or four potential participants was recruited; five participants dropped out. Consequently, 21 participants of the two groups completed the programme ($n = 9$, $n = 12$). Only the main study data are reported.

Data collection and analysis of individual interviews

One-off individual interviews were held. A longitudinal relationship was established because the researcher contacted the participants weekly to remind them to attend the Zen programme and acted as a participating observer throughout the programme, thereby benefiting the conduct of the interviews.

The interviews lasted between 60 and 90 min. After the related themes and categories were formed, translation proceeded. In addition, the researcher's field notes and participant diaries were used to support the process as the aide-mémoire. The diaries facilitated individual interviews greatly, because reading the diaries with the participants during interviews helped to recall feelings and events. The guidelines (Table 1) were developed in the pilot studies.

What are your experiences of warm-up exercise?
What are your experiences when practising Zen meditation?
What are your experiences when practising Zen meditation?
Please compare Zen meditation experiences between the first week and now?

Table 1: The individual interview guidelines.

Regarding data analysis, Merleau-Ponty's notion of bodily experience was applied as a conceptual framework to analyse the data. In addition, hermeneutic circles were used to guide the analysis, which involved a scholarly reading of texts—questioning, comparing, and imaginatively dwelling on their situations. The

interviews were audio-recorded with the permission of each participant, and each interview session was transcribed verbatim. The researchers repeatedly listened to the recordings to amend and understand the context, and various levels of analysis and the voices of the participants were obtained; thus, the credibility of the data interpretation was improved. A thematic analysis was then conducted to compare and contrast similarities among ideas, forming an understanding by continual movements between the part and whole of the text and context.

Diaries

For analysis, each participant was provided with a weekly diary and asked to record the frequency and duration of meditation practised at home. Any notes regarding Zen meditation practised at home were encouraged. Detailed descriptive statistics were applied to the diaries for profiling the frequency and duration of Zen meditation practice at home.

Field notes

Throughout the main study, field notes were made consistently to function as an excellent aide-mémoire for the researcher to achieve a holistic view. For example, listening to the tapes while reading the verbatim transcripts and field notes enabled the involved scenes to become vivid. These records provided evidence for examining data and facilitated analysis.

These diverse methods enabled the researcher to gain a deeper understanding of structure of the study phenomena. Thus, the rigour of this research was ensured.

Findings

Demographic data and Zen meditation practice

Based on the demographic data, the two groups were similar. For example, approximately twice the number of women than that of men agreed with the epidemiology data, the average age of the participants was 38.8 (SD = 10.62), all of the participants had approximately 12-years of education, and most were married and had small family structures. There were no considerable age and education differences between the two groups.

The frequency of daily meditation of Group 1 at home ranged from 0 to 14 times, and an average of once per day was found in both groups. The duration of each meditation was 12–15 min in Group 1, whereas it was 20–30 min in Group 2 throughout the entire intervention programme. However, there was no considerable difference between the groups regarding frequency and duration ($t = 1.22$). In addition, the meditation duration in both groups increased over time, but the meditation frequency decreased at the end of the programme.

Bodily experience of Zen meditation practice

Regarding the major theme, bodily experience, the four categories that emerged are shown in Table 2. Quotes from the participants are cited, and the participants are identified numerically. For example, respondent 1 from Group 1 is referred to as RA1, and respondent 2 from Group 2 is RB2.

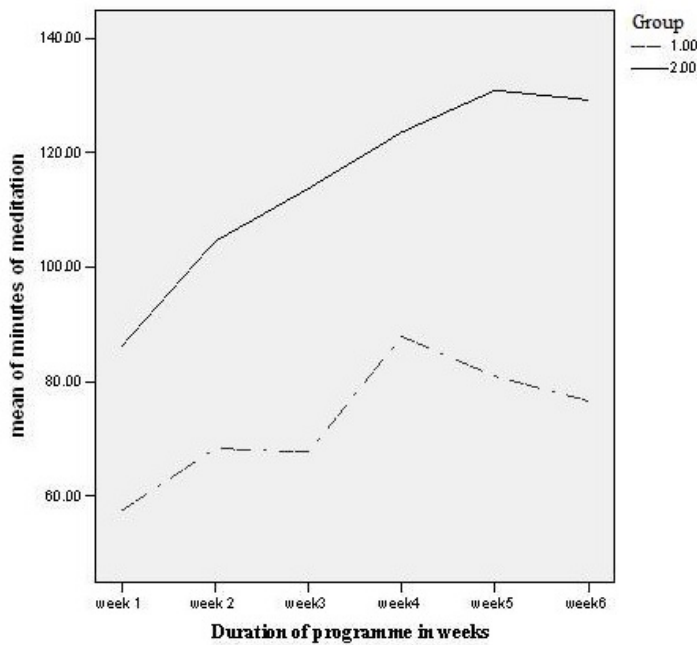


Figure 1: Comparison of average meditation time in minutes per week between Groups 1 and 2 over the Zen Programme.

Theme	Categories
Bodily experience of Zen meditation practice	Bodily awareness The GAD body Being with the breath Bodily resistance

Table 2: The theme and categories emerged from individual interviews.

Bodily awareness

Bodily awareness refers to the participants becoming more sensitive to their bodies and their physical senses. An awareness of muscle tension developed among the participants. RA7's reflections suggest that warm-up exercises involve both physical and mental aspects: "When practising warm-up exercises, you must pay attention to the movements, you are forced to shift your mind onto your body...and it is the most obvious when stretching" RA7 also stated: "When I meditate in the morning, my back is bent over. I gradually become aware of my position if I concentrate. Then my back adjusts and becomes straighter; during night meditation, however, it is the other way around. At first I sit straight...then I bend over...time to go to bed (smiled)." RB7 reported that her experiences of muscle tension were associated with her breathing patterns: "I can feel my back become straighter...shifting the focus of breathing from the chest to abdomen is the key..." RB4 discussed the different levels of muscle relaxation: "...Even when you feel that you are already relaxed, you can still relax even more when your mind is calmer."

The warm-up exercises that function as preparatory work for practicing Zen meditation symbolized a break that separated a routine daily life from motionless meditation. RB2 reported her experiences with and without warm-up exercises before meditation: "A couple of times I did not do the warm-up exercise. I meditated directly; later I found that the effect was not good... my

body was tense, and my mind was possessed by daily thoughts... When the body is stiff, meditation is not comfortable and won't last long..." Accordingly, performing warm-up exercises before Zen meditation is necessary for attaining a satisfactory meditation experience.

Some of the participants discussed their heightened senses during meditation practice. RB2: "I prefer to practice meditation in the hospital. When meditating in my home, tiny sounds annoyed me, such as neighbors' walking..." RB1: "I can feel the wind blowing onto my face plainly when meditating. The entire world seems to slow down..." RA7: "when meditating, sometimes I could sense each drop of saliva was swallowing. I feel satisfied as I am in tune with my body..." Accordingly, these participants occasionally experienced sharpened senses.

The GAD body

The GAD body refers to how the participants perceive their bodies. "Your health is going downhill, you can feel it. People persuade you that you just think too much, but you know it. I envy patients who wear casts 'because they receive sympathy properly, but not people such as us. My entire body is stiff, aches and it costs a fortune to get a massage'" (RA8). "There was a period during which I jumped high when someone touched my shoulders as the muscles were tensed" (RA4, a housewife). "The problem with insomnia is that it I have no energy for the next day, my mind is also blurred" (RB10). "You cannot feel one hundred per cent rested...it must be your brain not allowing you to rest, your mind keeps you busy, always planning, thinking, and worrying. There is no boundary between the office and my home" (RA7, a factory manager). "This disease has been with me for eight years on and off, and it makes me extremely tired, I sometimes even forget how to spell words, my memory is affected" (RB2). Feelings of physical pain, stiffness, weariness, and decreasing mental function are intertwined. These various bodily experiences reveal how the participants with GAD perceived their body function and sensations. Accordingly, these were bases that constructed their expectation related to Zen meditation.

Being with the breath

Being with the breath refers to a state of full concentration. Becoming conscious of each breath or just the flow of air in or out of my nose was another common experience. RA4 asked a question that demonstrated her awareness: "Is exhalation much longer than inhalation?" RB2: "I can feel the gaps between each breath lengthened..." RB9: "When your attention wanders away from breath counting, you are prone to use this (pointed his chest) to breathe... If you focus on breath counting properly, then you use the abdomen and it is around eight to nine breaths per minute." Furthermore, RB7 noted similar changes: "It is quite obvious that the locus of breathing moves downwards bit by bit and the abdomen muscle contraction deepens." "It was strange yet quiet, your thoughts stopped but you were awake. You knew you were here... presently here... sitting and you didn't have to do anything, which was so peaceful" (RB12). RB11: "At some point the entire world disappeared; only my breath was existed and it was joyful."

These special bodily experiences were explained with a delighted tone, even though these experiences lasted only a few seconds or minutes. During these moments, their bodies were allowed to do nothing, and they were not enslaved by their minds. Being with the breath reveals how Zen meditation can be satisfying because the participants felt rested and content.

Bodily resistance

Bodily resistance refers to the disagreement between the participants' bodies and the physical aspects of Zen meditation. A wide range of physical complaints was stated; muscle discomfort, leg pain, numbness, and fatigue were the most commonly reported. RB3, a 63-year-old woman, stated: "during the first week, the time of each Zen meditation was punctually three minutes as my body alarmed me. I mean, when I felt uncomfortable I peeped at the clock, it was always three minutes passed..." RA1 tried to manage back pain: "I bought a higher and harder cushion to provide better support; I also did more stretching..." Generally, leg pain and numbness stopped some of the participants from engaging in longer meditation practices.

Fatigue was another common barrier reported by the majority of the participants. "I enjoy meditation and hope to do it more, but I can only do it in the morning. Initially I tried to practise meditation in the evening, but I discovered there is no delight at all when meditating in a fatigued condition." (RB10). Likewise, RA7 reported: "I do not practise meditation when I am tired as it appears to have no benefits. I think meditating needs energy as it requires full attention. It differs from resting." RB4: "Meditation is good to quiet my mind... but I meditate only when I am vigorous. I found that I doze off not long after meditating if I am weary..." These participants acknowledged that fatigue hindered practising Zen meditation because meditating while tired is not beneficial.

Discussion

Bodily experience and quality of Zen meditation

Seeking the essential elements of various types of meditation is critical for understanding the disagreement among relevant studies. Currently, there is no gold standard physiological measurement technique for gauging the quality of meditation [14]. Arias et al. assumed that the term "meditation" should be narrowed and refined to include only techniques that have certain authentic traditional qualities in which practitioners can achieve a well-defined state called thoughtless awareness, which focuses a person's attention on the present moment. This statement indicates the core characteristic of Zen meditation and this study findings resonance this idea. Correspondingly, Hankey pointed out that sensory acuity, perceptual style indicated stabilization of aspects of attentional awareness [11].

One category of this study's findings, being with the breath, presents the state of concentration as well as empty mind. In the state, tranquility was experienced, thoughts were suspended and the sense of self disappeared. This was a moment of true rest for the participants and they would continue practicing for experiencing this moment again even after the programme was finished.

Moreover, we discovered that the ability of being in tune with the body's activities or becoming sensitive to the physical senses precedes thoughtless experiences. As the notion holds by Merleau-Ponty that the body stands between this fundamental distinction between subject and object, ambiguously existing as both [37]. Through body senses participants defined Zen meditation.

Arias et al. emphasized that the quality of Zen meditation involves thoughts or the mind, but the roles of physical training and discipline are neglected [18]. We, however, discovered that calmness can be attained through physical discipline; therefore, bodily experience should be regarded as critical for reaching a thoughtless state.

Bodily experience of Zen meditation among participants with GAD

Their GAD bodies were aroused by Zen meditation and at the same time reconstructed their body schemas. For these participants, the physical symptoms are manifest. Muscle ache, tension from work, stomach pain, and insomnia were common bodily experiences. According to the researcher's field notes, bodily experiences were solicited when performing warm-up exercises. For instance, when stretching their shoulders, many of the participants mentioned their doctor shopping (alternative medicine) experiences related to shoulder pain symptoms. The body is where our memories are housed and where the meaning of our existing accumulated [36].

One of the manifest symptoms of GAD is uncontrollable worrying [24]. Patients with GAD suffer from unstoppable thoughts and may damages their mental faculty. The physical discipline of Zen meditation requires repeatedly counting breaths in silence in a motionless sitting position. Thus, the body is settled, talking is prohibited, and visual stimulation is shut down. A fresh experience of a body free from action occurs, creating a situation where thoughts can occur more vividly.

Approximately one-third of the participants learned to enjoy the state in which their thoughts or worries gradually subsided after attaining excellent breath-counting skills. A thoughtless state and calmness occurred. This finding agrees with Austine's stage theory of consciousness. In stage IV, the level of concentration and receptive meditative modes, a feeling of relief and becoming continually one-pointed state may occur. The uncontrollable worrying was suspended for a while and this pleased these participants deeply.

For the rest of the participants who did not experience the relieved bodily experience, some felt uneasy because they thought that they should stand up and do things to make effective use of time rather just meditation. A few of the participants felt more anxious when they failed to count their breathing and they had their thoughts wandering around. No relief was experienced, and they became physically uncomfortable and mentally anxious.

Generally, the body is controlled by the mind [33], and the body performs acts by obeying the orders from the mind. When

continuing Zen meditation is infeasible because of physical discomfort, the body then is regarded as a barrier or a useless burden. When these limitations of the body cannot be accepted by participants, it may become a source of stress. As recorded in the field notes, the participants compared their diaries and ranked themselves based on the amount of time they meditated at home. Some downgraded themselves when they discovered that others practiced longer or more frequently than they did. Similar ideas were reported by ShengYen as traditionally body barriers delayed the process of Zen progress to reach enlightenment state. That is, the body resistance seems obstruct mind's goals. However, this contradicts the perspective of Merleau-Ponty who argued that body is a subjective rather than an objective, also a field, mixed with motor intentionality and mental intentionality.

Conclusion

The intellectual and mental aspects of Zen meditation are highly regarded, but its physical aspects are frequently overlooked. This study investigated the bodily experiences of Zen meditation. After the six-week programme, the participants acquired their bodily experiences subtly by practicing Zen meditation. Zen meditation functions as a moderator that turns down the threshold of senses so that perceptions are broadened and deepened. Thus, new knowledge regarding their bodies was received and developed gradually. Insights on how GAD affected their bodies were developed. In addition, for one-third of the participants, inner tranquility was attained when their bodies enabled them to concord with Zen meditation practices.

The four categories under the theme, bodily experience of Zen meditation practice, are closely linked. "The GAD body" connects to "Bodily resistance" as the rigid and sore body makes the sitting still meditation a tough task. In addition, when participants are able to broaden or deepen "Bodily awareness", the concentration state "Being with the breath" is likely to happen. These study findings provide a unique perspective to enrich the understanding of Zen meditation in terms of bodily experience.

Recommendations and Limitations

Recommendations for further studies are as follows: 1) Because of the diversity of the progress of Zen meditation, considering the qualities of Zen meditation is a major factor, especially for studies regarding causality. 2) Tracing the experience of Zen meditation practice over a longer period (i.e., over six months) is suggested so that the data produced may help deepen or supplement previous findings. Recommendations for applying the study findings are as follows: 1) Notifying participants beforehand that the process may progress smoothly or fluctuate is suggested so that they are aware of what to expect. 2) The signs of improvements can be used as references to encourage participants. The limitations of this study are that the participants were patients with GAD and they completed this programme on their own volition. The participants of this study may not have a preference for Zen meditation.

Therefore, the application of these study findings to patients with anxiety disorders other than GAD diagnosis and with no preference

of Zen meditation may be limited.

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Ethics Approval

The Medical Research Ethical Committee at the study hospital (IRB No. 95-0108).

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