Research article

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Silence, darkness, and gravity: A qualitative analysis of individual experiences during Floatation-REST

Stille, Dunkelheit und Schwerkraft: Eine qualitative Analyse individueller Erfahrungen während Floatation-REST

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Abstract:

Background: In Floatation-REST (Reduced Environmental Stimulation Therapy), an individual lies on the surface of highly saline water in a dark and silent environment. Prior research on Floatation-REST highlighted its benefits for both physical and mental health in healthy individuals as well as in people with anxiety and stress-related disorders.

Methods: A qualitative-empirical approach was employed engaging ten healthy participants, who each completed a 60-minute float session followed by a focused interview on the perception of silence, darkness, and gravity. The data were analysed using qualitative content analysis and MAXQDA software.

Results: Silence was largely perceived as pleasant, evoking feelings of security, relaxation, and trust. Silence deepened the awareness of thoughts, emotions, and bodily sensations. Darkness similarly facilitated enhanced introspection and mental-process awareness. Regarding gravity, sensations of weightlessness and the dissolution of body boundaries were associated with mental relaxation, security, and a feeling of lightness.

Discussion: Floatation-REST is being employed in studies to induce altered states of consciousness (ASC), as well as in therapeutic contexts to treat mental disorders. Similar to our study, future work could selectively focus on exploring the impact of the three major aspects of the floatation experience we assessed on ASC and therapeutic success.

Keywords: Floatation-REST, silence, darkness, gravity, qualitative content analysis, relaxation, body boundaries, subjective time

Zusammenfassung:

Hintergrund: In modernen Industriegesellschaften ist Stille zu einer seltenen und zunehmend geschätzten Ressource geworden. Ständige Sinnesreize und Umgebungslärm – vor allem in städtischen Umgebungen – werden mit einem erhöhten Stressniveau, psychischen Störungen und einer verminderten Fähigkeit zu Ruhe und Reflexion in Verbindung gebracht. Trotzdem bleibt Stille ein grundlegendes menschliches Bedürfnis, das nachweislich die emotionale Selbstregulierung fördert, Stress und Ängste abbaut und das Bewusstsein für den gegenwärtigen Moment verbessert. Die Forschung bestätigt, dass kurze Erfahrungen der Stille, insbesondere in der Natur oder in therapeutischen Umgebungen, das psychische Wohlbefinden, die spirituelle Entwicklung und eine tiefere Verbindung zu sich selbst fördern.

Floatation-REST ist eine wirkungsvolle Form der *Reduced Environmental Stimulation Therapy*, bei der die Teilnehmer in eine reizfreie Umgebung der Stille, Dunkelheit und Beinahe-Schwerelosigkeit eintauchen. Diese Methode löst nachweislich tiefe Entspannungszustände aus, senkt den Blutdruck und die Muskelspannung und lindert Ängste, Depressionen und Schlafstörungen. Während die physiologischen und psychologischen Vorteile gut dokumentiert sind, wurden die spezifischen Auswirkungen der Kernelemente – Stille, Dunkelheit und Verringerung der Schwerkraft – bisher nicht qualitativ erforscht. Diese Studie schließt diese Lücke, indem sie untersucht, wie Personen diese sensorisch reduzierten Bedingungen während Floatation-REST wahrnehmen und integrieren.

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Methoden: Die Studie verwendete ein interaktives phänomenologisches Forschungsdesign, um individuelle Erfahrungen während einer 60-minütigen Floatation-REST-Sitzung in einer kommerziellen Floatation-Kabine in einem Gesundheitszentrum in Freiburg zu untersuchen. Die Kabine war mit 1.100 Litern Salzwasser (Magnesiumsulfat) gefüllt und auf Hauttemperatur gehalten, was mühelosen Auftrieb in völliger Dunkelheit und Stille ermöglichte. Zehn gesunde Teilnehmer (fünf Männer, fünf Frauen im Alter von 23–49 Jahren) mit vorheriger Floatation-Erfahrung (durchschnittlich fünf Sitzungen) wurden rekrutiert.

Im Anschluss an die Sitzung wurden halbstrukturierte, fokussierte Interviews durchgeführt, um detaillierte subjektive Berichte zu sammeln. Dabei wurde ein Leitfaden verwendet, der sich auf drei zentrale Erfahrungsdimensionen konzentrierte: Stille, Dunkelheit und Schwerkraft. Die Interviews wurden transkribiert und mithilfe der qualitativen Inhaltsanalyse (MAXQDA) ausgewertet. Acht thematische Hauptkategorien wurden entwickelt – drei vordefinierte (Stille, Dunkelheit, Schwerkraft) und fünf, die sich induktiv aus den Daten ergaben, darunter momentanes Wohlbefinden, spontane Eindrücke, Zeitwahrnehmung und sensorische Deprivation. Die Ergebnisse bieten eine differenzierte qualitative Perspektive auf das komplexe Zusammenspiel von sensorischer Reduktion und subjektivem Erleben in Floatation-REST.

Ergebnisse: Die Erfahrungen der Teilnehmer mit Floatation-REST offenbarten unterschiedliche, aber miteinander verbundene Wahrnehmungen von Stille, Dunkelheit und Schwerkraft. Stille wurde oft als eine allmähliche Reise nach innen beschrieben, die Körperbewusstsein und Gefühlsregulation förderte. Obwohl die innere Ruhe nicht sofort eintrat, empfanden die meisten die Stille als zutiefst angenehm und verbanden sie mit Gefühlen von Sicherheit, Präsenz und Introspektion. Dunkelheit löste sowohl beruhigende als auch beunruhigende Reaktionen aus und verstärkte die innere Konzentration und die Hörsensibilität. Obwohl einige Personen von Angst oder Orientierungslosigkeit berichteten, erlebten andere Hingabe, Verspieltheit und geistige Klarheit. Das Gefühl der Schwerelosigkeit war mit körperlicher Entspannung und emotionaler Sicherheit verbunden. Die Teilnehmer beschrieben Empfindungen, die vom Gehalten- oder Geborgensein bis hin zur Auflösung körperlicher Grenzen reichten, wobei einige die Erfahrung mit dem Aufenthalt im Mutterleib verglichen.

Über diese Kernthemen hinaus förderte der Mangel an äußeren Reizen insgesamt Selbstreflexion, emotionale Einsichten und eine Hinwendung zum gegenwärtigen Momentbewusstsein. Die Teilnehmer berichteten von unterschiedlichen emotionalen und körperlichen Reaktionen während des Floatens, von Freude und Dankbarkeit bis hin zu kurzer Angst oder Desorientierung. Die Zeitwahrnehmung veränderte sich häufig und wurde oft als schwebend oder nichtlinear beschrieben. Die Zustände nach dem Floaten waren überwiegend positiv, geprägt von tiefer Entspannung, gesteigerter Vitalität und einem Gefühl der Erneuerung, obwohl gelegentlich Erschöpfung oder Schwindelgefühle berichtet wurden. Insgesamt wurde die immersive sensorische Reduktion als starker Katalysator für innere Erkundung, emotionale Erdung und psychisches Wohlbefinden wahrgenommen.

Diskussion: Während Stille überwiegend als angenehm, sicher und vertraut empfunden wurde, wurde Dunkelheit als vergleichsweise unangenehmer empfunden und rief manchmal ein Gefühl des Kontrollverlusts hervor. Dennoch wurden sowohl Stille als auch Dunkelheit als hilfreich empfunden, um die inneren emotionalen, mentalen und körperlichen Prozesse klarer wahrzunehmen. Ein Gefühl der Sicherheit war auch mit dem fehlenden Gefühl der Schwerkraft verbunden. Stille erwies sich als besonders hilfreich, um das Bewusstsein für innere Prozesse zu schärfen. In der heutigen schnelllebigen Welt, in der wir ständig mit Reizen konfrontiert werden, kann eine Auszeit vom hektischen Alltag wohltuend sein. Floating bietet die Möglichkeit, sich vorübergehend zurückzuziehen. Die Stille fördert die Selbstreflexion und ein Gefühl der Ruhe. Achtsamkeit – die Aufmerksamkeit auf den gegenwärtigen Moment, unseren Körper, unsere Emotionen, Gedanken, Wünsche und Bedürfnisse – kann uns helfen, wieder mit uns selbst in Kontakt zu kommen. Da diese Veränderungen Bausteine spiritueller Begleitung sind, könnte Floatation-REST als ergänzende Methode zur Selbsttransformation in einem professionellen spirituellen oder therapeutischen Kontext eingesetzt werden.

Schlüsselwörter: Floatation-REST, Stille, Dunkelheit, Schwerkraft, qualitative Inhaltsanalyse, Entspannung, Körpergrenzen, subjektive Zeit

1 Introduction

Silence has become a rare and valuable commodity in today's industrialised world, where it has become increasingly difficult to experience moments of quiet. Taking the time to pause, slowing down, and being still have become a challenge. However, silence is a fundamental human need that deserves greater attention, as many people struggle to truly relax (Decker-Voigt 2007; Koisser 2016; Pfeifer & Wittmann 2020; Winnicott 2019). Modern life exposes people to constant disruptive environmental changes. Urban residents face higher exposure to stress and an increased risk

of mental-health disturbances, including schizophrenia and depression, with noise pollution recognised as a contributing factor (Lederbogen et al. 2011). Additionally, excessive noise in hospital environments negatively affects patient recovery (Mazer 2010). That is, the promotion of well-being is related to finding a place to rest, a space to experience stillness in life in order to enhance one's capacity of reflection (Lundvall et al. 2022).

Brief periods of silence can be highly effective for emotional self-regulation. Research has demonstrated that spending just 15 minutes sitting quietly in a comfortable chair produces a calming effect and helps down-regulate strong emotions (Nguyen et al. 2018). Similarly, lying on a waterbed in a quiet, dark room for one hour (Bed-REST; REST: Reduced Environmental Stimulation Therapy) significantly reduces anxiety, stress, and tension (Hruby et al. 2024). Spending several hours in a dark, quiet room with the freedom to move around (Chamber-REST) has been shown to provide relaxing, stress-relieving, and anxiolytic effects (Vytykáčová et al. 2022; Soláriková & Bartolen 2025).

Floatation-REST is a method that significantly reduces auditory, visual, and tactile stimulation. During this procedure, participants lie in a tank filled with saltwater (magnesium sulfate) heated to skin temperature. The high salt concentration allows individuals to float effortlessly in a supine position without sinking, while the tank or cabin provides complete darkness and silence (Griffith 2023). Floatation-REST has been shown to induce a state of relaxation that is deeper than that which other relaxation techniques typically achieve (Lashgari et al. 2023).

The physiological effects of Floatation-REST include reduced blood pressure and decreased muscle tension (Al Zoubi et al. 2021; Flux et al. 2022). Psychologically, it promotes stress reduction and enhances perceived relaxation (Hruby et al. 2024; Kjellgren et al. 2008; Suedfeld & Bow 1999). Floatation-REST has proven to alleviate anxiety and depressive moods, offering short-term benefits (Feinstein et al. 2018a; Feinstein et al. 2018b; Flux et al. 2022; Jonsson & Kjellgren 2017) with effects lasting up to 48 hours (Garland et al. 2023); it can also improve sleep quality (Kjellgren & Westman 2014). Floatation-REST may additionally induce mind-altering states (Kjellgren et al. 2009). Compared to Bed-REST, it produces distinct altered states of consciousness, characterised by a relative dissolution of body boundaries and distortions in time perception (Hruby et al. 2024).

1.1 The effectiveness of silence

A review examining the effects of silence included six studies conducted in various settings (Pfeifer & Wittmann 2020). All six studies demonstrated the positive effects of silence on mood, relaxation, mind wandering/rumination, and a stronger sense of presence in the here and now. Silence was specifically found to promote relaxation both indoors and outdoors, namely in a city garden (Pfeifer et al. 2020). Quiet outdoor settings transiently enhanced present-moment awareness, reduced focus on the past, and increased relaxation, during which participants hardly felt any boredom. In one study, participants who spent quiet time in a forest felt significantly more relaxed and less bored than those in a seminar room (Pfeifer et al. 2023). They also were less aware of time, noting that it seemed to pass more quickly and felt shorter in duration while in the forest. These findings align with a study on silent walking in nature (Schuling et al. 2018), which showed that silence contributed to greater well-being, a more vivid experience of the environment, increased awareness of thoughts and feelings, and sensations of lightness and calm. A well-developed sense of meaning in life and spirituality, alongside a strong connectedness to nature, is recognised as significant indicator of psychological and physiological health. Research consistently demonstrates that these factors are positively correlated with enhanced well-being, suggesting their critical role for spiritual development (Pfeifer et al. 2024): Notably, a higher nature-connectedness score as individual trait correlates with more presence and acceptance as facets of mindfulness, a central component of spirituality, and a greater openness, and less neuroticism. Especially in times of crisis, the silence in nature can become a resource for better coping with life's circumstances (Büssing 2023).

The role of silence accompanying meditative practice for spiritual development has been widely discussed in the literature, where its significance as a means to cultivate stillness of the mind has been emphasised in both ancient and modern traditions (Ben-Soussan et al. 2021). Silence following guided meditation techniques, such as Hypnomusictherapy (HMT)/Depth Relaxation Music Therapy (DRMT), is perceived as more relaxing than silence following a seminar (Pfeifer et al. 2016; Pfeifer et al. 2019a). A study by Liu and Rice (2019) found that experienced meditators preferred meditating in silence, while novice meditators favoured background music. An analysis by Woods et al. (2020) of three different forms of meditation revealed that silence is often associated with feelings of brightness, bliss, and lightness. Silence was described by meditators using terms like all-encompassing, absolute, deep, or infinite, highlighting its perception as a complete experience. In meditative contemplation, experienced meditators emphasise that silence and stillness are intertwined with the absence of concepts, mental activity, noise, thoughts, and distractions (Woods et al. 2020). Meditation induces physiological changes collec-

tively termed 'relaxation response' (Lazar et al. 2000; Kohls et al. 2019). These changes, such as a reduced heart and respiratory rate and decreased arterial blood pressure, have also been observed during Floatation-REST (Flux et al. 2022).

1.2 The connection between Floatation-REST and silence, darkness, and gravity

In addition to stillness, Floatation-REST is distinguished by darkness and reduced gravity. However, a review of studies on the effects of Floatation-REST in relation to these three elements revealed a lack of research. Although silence, darkness, and gravity are sometimes mentioned, their direct influence on perception and subjective experience has yet to be thoroughly explored.

Regarding the experience of darkness, participants have reported feelings of peace and happiness (Jonsson & Kjellgren 2017). It remains unclear whether darkness alone was responsible for these sensations. Some participants also described visual phenomena, such as points of light, flashes in the dark, yellow-golden lines, and rings of light (Feinstein et al. 2018a; Feinstein et al. 2018b; Norlander et al. 2000).

Gravity in Floatation-REST has been primarily explored through observations of reduced muscle tone in participants. The high salt concentration and water density create buoyancy, an upward force on the body which is felt by the person who is floating effortlessly (Feinstein et al. 2018b; Suedfeld & Bow 1999). Bood et al. (2007) discussed the link between buoyancy in saltwater and the resulting state of relaxation.

The novel concept of 'mental gravity' suggests that physical gravity is an internal model applied to understand the emotional self in relationship with the world (Kent 2023; 2024). Feeling *up* or *down* reflects this idea. Stronger mental gravity would make emotions feel heavier, depression (feeling low, heavy, and slow) being the clearest example. The sensed buoyancy effect, which allows the body to float effortlessly in the water, thereby partly defying gravity, could potentially have an uplifting effect on individuals with psychological disorders.

A review of the current research on Floatation-REST, particularly its connection to the aspects of silence, darkness, and gravity, reveals a significant gap: no qualitative study has yet focused explicitly on the combined experience of these three central elements. While these aspects are integral to the process of Floatation-REST, they have not been the primary subjects of detailed investigation. Qualitative research on Floatation-REST remains far less common than quantitative studies, highlighting a need for more in-depth exploration. This gap raises the central research question of how individuals perceive stillness, darkness, and gravity in the context of Floatation-REST.

2 Methods

The floating cabin used in this study was designed and built by the company Floataway (Norfolk, UK) and is a 'cabin for two'. It is located in a room at the Prana health center in Freiburg, Germany (see Fig. 1). The room houses the floating cabin (dimensions: width 180 cm, length 237 cm, height 225 cm) and a shower. The pool contains 1,100 liters of water enriched with 550 kg of Epsom salt (magnesium sulfate), and the water level is maintained at 27 cm. The pH value of the water is between 6.8 and 7.2. The high density of the saltwater (approximately 1.25) enables floating with about one-third of the body above the water's surface. For more details, see Hruby et al. (2024). During the floating experience, users encounter sensory deprivation, as auditory stimuli are largely blocked, and complete darkness prevails.

Fig. 1

2.1 Participants

A total of ten participants (5 males, 5 females) with an average age of 33 years (range: 23 to 49) took part in 60-minute Floatation-REST sessions and were subsequently interviewed about the experience they just had. The inclusion

criteria were: ages between 18 and 49, proficiency in both written and spoken German, and good physical and mental health. Exclusion criteria: open or bleeding wounds, specific contraindications due to medically diagnosed illnesses, pregnancy, and menstruation at the time of the float session. All participants had to have experienced at least one prior float session, ensuring they were familiar with the process and able to engage fully with the experience. Half of the participants reported meditating monthly, two participants meditated weekly, and three participants meditated daily. It is important to note that the people did not meditate during the one-hour session, but experienced it calmly, as the interviews revealed.

On average, participants had completed five previous floating sessions (range 3 to 20). The interviews lasted an average of 12:38 minutes, ranging from 8:22 to 24:19 minutes.

2.2 Procedure

An interactive phenomenological qualitative research design was employed. The focus was on understanding the meaning and significance each participant attributed to their experiences regarding the floating session they had just finished. All were exposed to the same situation. Focused interviews were selected as the primary data-collection instrument (Merton et al. 1990). Participants were encouraged to describe their experience of the one-hour Floatation-REST session in detail during the survey. A guideline based on a framework by Helfferich (2011) was developed in advance (for an English version, see: Gerlach et al. 2024), which follows the steps of collecting, reviewing, sorting, and summarising (CRSS) the questions asked. The guideline focused primarily on the three central categories of silence (C3), darkness (C4), and gravity (C5) (see Table 1). Przyborski and Wohlrab-Sahr (2021) outlined four principles for conducting focused interviews: non-influence, specificity, capturing a broad spectrum, and depth, which were observed in this study. Two preliminary tests were conducted with individuals similar to the intended participants and led to slight adjustments in the guideline. The interview guide with the questions used as introductory questions, for each of the three main topics of silence, darkness, and gravity, as well as the final question, can be found in the appendix.

Prior to the float session, all participants were informed about the confidentiality and anonymity of their data through a participant information sheet and provided written consent. Participation in the study was voluntary, and participants could cancel their sessions at any time. Each participant received a compensation of ten euros. The study was approved by the Ethics Committee of the Institute for Frontier Areas of Psychology and Mental Health, Freiburg, with approval number IGPP_2024_03.

Demographic data, information about prior experience with contemplative techniques, such as meditation, yoga, tai chi, and Floatation-REST, were recorded. Participants also completed and signed a health checklist to confirm that they met the inclusion criteria for safe floating, and safety instructions for floating were provided. The interviews were conducted after the float session.

Each interview was transcribed and analysed using qualitative content analysis according to Kuckartz and Rädiker (2023). The transcription followed the simplified transcription rules provided by Dresing et al. (2015). MAXQDA 2020 software (VERBI-Software, 2024) was used to process the data. The qualitative content analysis led to the development of a category system consisting of 8 main categories and 14 subcategories (see Table 1). These categories were formed both deductively (predefined before the analysis) and inductively (derived from the specific interview material). Category 1 relates to the momentary well-being after the float. Category 2 contains data referring to spontaneous impressions regarding the experience during Floatation-REST. Categories 3 (silence), 4 (darkness), and 5 (gravity), focus on the main themes of this investigation. Categories 6 (thoughts on the lack of stimulation), 7 (perception of time), and 8 (miscellaneous) were inductively derived from the transcribed interviews. The categorisation of the interview content provides a detailed examination of the three main themes, as well as insights into additional aspects of the participants' individual experiences during Floatation-REST.

3 Results

We will first present the participants' responses to the three main themes: silence, darkness, and gravity. This will be followed by an analysis of additional associations with the floating experience, including thoughts on the lack of stimulation and the perception of time gathered from the interview material. Finally, we will present the states following the floating experience. In addition to one exemplary quotation per topic, Table 1 contains further quotations (anchor examples) from participant reports per category in the category system.

Table 1: The qualitative content analysis resulted in a category system (C) with 8 main categories and 14 subcategories. The categories were formed both deductively (before the interview) and inductively (from the specific interview material). Participant (P) quotes (Q) are listed as anchor examples in the third column.

Category Designation	Category Description	Anchor Examples
C1: State after floating	Descriptions of the post-float state following the floating session	*"Rested. Warm. I found it extremely hot today. (...) Happy, satisfied, relaxed."* (P8, Q2)
C2: Associations with the floating experience	Statements about what associations or images with the floating experience participants had just had	See subcategories
C2.1: Thoughts and feelings	Statements about thoughts and feelings during or in relation to the float experience	*"So exactly, in the beginning it was actually this, what do you call it? Homely, cosy, cozy, hygge."* (P5, Q 12)
C2.2: Body sensations	Statements about bodily sensations during Floatation-REST	*"Well, I can definitely feel the exhaustion in my neck. It's like that, it was also really strong when I was floating. There was always this tension in my neck."* (P4, Q 4)
C2.3: Mental images	Associations in the form of mental images, comparisons, and ideas experienced during Floatation-REST	*"Fish in the water, but more like a shark in terms of movement."* (P3, Q 4)
C3: Experiencing silence	Statements about the experience of silence	See subcategories
C3.1: Auditory perception	Statements about the experience of auditory perception	*"Or when I moved around a bit, I also heard the water making noises."* (P2, Q 10)
C3.2: Thoughts and feelings	Statements about thoughts and feelings related to the experience of silence	*"And all this being quiet [...] it was just good to realise what was going through my head. And every now and then I also had really quiet moments in my head. But yes, there were always thoughts, too."* (P2, Q 10)
C3.3: Perception of body and space	Statements on body and space perception in connection with silence	*"So, self-awareness in any case. And this listening. Very fine, what happens inside me."* (P4, Q 18)
C4: Experiencing darkness	Statements about the experience of darkness	See subcategories
C4.1: Visual perception	Statements about visual perception in the form of light, images, etc.	*"Even when I close my eyes, I can see like this / I don't know if you feel the same way, but there are little dots everywhere. Do you know that? Well, it wasn't really that dark." (P4, Q 20)*
C4.2: Thoughts and feelings	Statements about thoughts and feelings related to the experience of darkness	*"It was more of a feeling of familiarity. Yes, a sense of familiarity perhaps sums it up quite well."* (P1, Q 18)
C4.3: Connection to auditory perception	Statements on the connections between silence and darkness or auditory and visual perception	*"So, due to the absence of visual stimuli, your hearing was even more present. More alert."* (P3, Q 37)
C4.4: Perception of body and space	Statements on body and spatial perception in connection with darkness	*"Already the body feeling, feeling. The rhythm. This perception of the energy that is simply there. Of your own. Of how the body feels right now. What is your breath doing right now? Where do you feel that?"* (P8, Q 20)
C5: Experiencing gravity	Statements about the perception of or in relation to gravity	See subcategories
C5.1: Thoughts and feelings	Statements about thoughts and feelings related to gravity	*"Well, you still notice them a bit [...]. But it's much more pleasant. [...] You just feel a bit more secure."* (P5, Q 36)
C5.2: Weightlessness (zero gravity)	Statements about the experience or non-experience of weightlessness (zero gravity)	*"And when you move around a bit, I felt a bit weightless."* (P9, Q 18)
C5.3: Perception of body and space	Statements on body and spatial perception in connection with gravity	*"So, I realise that I'm lying on the water [...] I enjoy it when I'm not touching the edge, but really swimming around freely. Sometimes you can't avoid it because you drift back and forth sometimes through breathing. But I'm aware of it at that point."* (P8, Q 24)
C5.4: Body dissolution	Statements about experiencing or not experiencing body dissolution	*"But that also went hand in hand with [...] the absence of feeling the body at all."* (P1, Q 20)

Table 1 (continued)

Category Designation	Category Description	Anchor Examples
C6: Thoughts on the lack of stimulation	Statements about the experienced lack of stimulation; also references to everyday life	*"As soon as you realise that you're lying here and nothing is happening around you, it takes the tension out of the scenario. There's no more input. All you have is yourself, so to speak."* (P5, Q 28)
C7: Perception of time	Statements about the perception of time	*"Time was also a big thing just now. I thought I'd been in MUCH longer than I was in the end. And then I came out and then ah ok, it's still light. That's right. That's how it was."* (P5, Q 2)
C8: Miscellaneous	Other statements that cannot be specifically assigned to a main category or subcategory	*"I would think it would be cool if the floating tank was four times as big (laughs). So I think that after the umpteenth time or maybe even the third time / so this special experience that was there at the beginning, when it comes and then the joy is there and then maybe you fall out and then it happens again and then maybe you stay in. And then I would just be super curious to see what comes next."* (P7, Q 32)

3.1 Silence

> Firstly, it is a path to silence. Even if it's quiet on the outside, it's really loud on the inside. [...] I always realise that I need quite a while until there really is silence inside me. And I love that. (Participant 7, Quote 14)

Auditory perception becomes particularly acute when experiencing silence. Participants reported hearing both external sounds and sounds from within their own bodies. The majority (6 out of 10 participants; see Table 2) indicated that these sounds were more noticeable in the silence, with their reactions ranging from pleasant to unpleasant.

Thoughts and feelings were also reported. Nearly all participants found silence to be a pleasant experience, associating it with terms such as security, deep relaxation, pleasure, and trust (9/10 participants; Table 2). At the cognitive level, five participants noted that their minds were never completely quiet (5/10). Half of the respondents also found silence helpful for becoming aware of their mental processes (5/10). Some participants also described the process of engaging with silence as a gradual journey, one that develops over time.

Body awareness played a significant role in connection with stillness, as more than half of the participants reported that stillness helped them become more attuned to what was happening in their bodies (6/10). The sensations most commonly noticed were breathing, heartbeats, joint movements, and tingling sensations. A shift in the perception of silence was also noted over time, with feelings evolving from unpleasant and constricting to pleasant. The perception of surrounding space was contradictory: while some participants experienced a sense of expansiveness, others felt a sense of narrowness.

3.2 Darkness

> This very dark [...] also somehow gives me the feeling that [...] I can look better inwards. (Participant 2, Quote 16)

Similar to auditory perception in silence, visual perception was discussed in relation to darkness. Four participants reported perceiving something visually, such as light, brightness, colours, or faces, despite the complete darkness (4/10).

The interviewees' statements varied regarding their thoughts and feelings about darkness. Although many participants found the darkness pleasant, associating it with feelings of familiarity, relief, enjoyment, and even curiosity and playfulness (6/10), four out of ten participants found the darkness unpleasant, experiencing sensations of tightness, fear, or a loss of control. Some participants described the loss of control as unpleasant, while others embraced it as a beautiful experience through surrender. Mentally, similar to silence, many participants found darkness helpful to better perceive their thoughts, as it facilitated meditation practice and mental clarity (7/10).

A connection to the auditory sense was also noted. Due to the loss of visual input, three participants reported experiencing their hearing as heightened (3/10). Regarding body and spatial perception, all participants agreed that they experienced a lack of body localisation in space due to the darkness in the cabin (10/10). This disorientation was rated as unpleasant, but it was also approached in a playful manner.

Table 2: Quantification of reported experiences (number of participants out of ten) and descriptions of these experiences as they relate to participants' reports on the three main themes: silence, darkness, and gravity

Experience	Description	Number of Participants
Silence		
Pleasant experience of silence	Silence was experienced as pleasant, which was associated with the aspects of security, deep relaxation, enjoyment, and trust	9/10
Increased auditory perception through silence	The silence in the floating cabin sharpened auditory perception, as many detailed acoustic bodily and outer events were perceived	6/10
Silence is helpful for the perception of bodily processes	The silence made it easier to perceive and observe internal bodily processes, such as heart beats or breathing	6/10
Silence is helpful for the perception of mental processes	The silence made it easier to perceive and observe one's own thoughts	5/10
No mental silence	No complete silence was experienced in the mind; experience of mind wandering	5/10
Darkness		
Loss of sense of body location in space	Due to the darkness, spatial location in the cabin was lost	10/10
Darkness helps to recognize thoughts and achieve mental clarity, as well as to meditate	Darkness facilitated thought perception, mental clarity was experienced, and it helped some to practise meditation	7/10
Pleasant experience of darkness	Darkness was experienced as something pleasant, which was associated with the concepts of trust, relief, pleasure, and curiosity	6/10
Visual impressions despite the darkness	Although absolute darkness prevailed in the floating tank, the participants reported experiencing visual impressions	4/10
Darkness leads to a sharpening of the auditory sense	In the absence of visual stimulation, hearing became more sensitive and heightened	3/10
Gravity		
Experiencing relaxation	Relaxation was experienced in connection with weightlessness in the cabin	5/10
Intrauterine experience in relation to weightlessness	A connection was drawn between the feeling of weightlessness and associations with intrauterine experiences	4/10
Experiencing body dissolution	In connection with weightlessness, participants reported an experience of bodily-self dissolution	2/10
Experiencing a physical sense of being	In connection with weightlessness, participants reported a bodily sense of being in the here and now and being carried by the water	2/10

3.3 Gravity

> It's just a square womb where you lie down. You have no weight; you are warm in there. (Participant 5, Quote 40)

Participants reported experiencing more on an emotional level than on a cognitive level. Relaxation was notably perceptible and was associated with the sensation of reduced gravity (5/10). While participants overall felt weightless, some described this feeling as being carried by the water, a sensation that was linked to a sense of security (2/10). Some participants felt a strong awareness of their body, describing it as a physical sense of presence (2/10). Body dissolution was also reported in connection with weightlessness (2/10).

The perception of the body and space was mentioned by all participants, but their statements were contradictory. Whereas touching the edge of the water basin was described as pleasant, as it conveyed a sense of space and security, it could also be perceived as unpleasant and disruptive to the inner process. Physically, participants experienced both muscular relaxation and physical tension as they worked to maintain a stable position, although this tension gradually dissipated over time.

Emotionally, some described an intrauterine experience (4/10), likening it to the feeling of being in the womb. The joy of experimentation, lightness, and a sense of security were also mentioned, along with the enjoyment of free movement.

3.4 Further associations with the floating experience

> Compared to many other methods, I find it a very effective way to calm down. To calm down *quickly*. But it still gives me the feeling of being held. The water gives me an incredible sense of safety and security. (Participant 8, Quote 8)

Further associations emerged in the form of thoughts, feelings, physical sensations, and images. Mentally, self-observation of body and mind was a central theme, along with reflections on the past and future. These thoughts were more pronounced at the beginning of the session, but gradually shifted toward a focus on the present moment as the experience progressed.

The emotions felt during the float were primarily positive, with participants mentioning feelings of gratitude, security, safety, happiness, and love.

> So exactly, in the beginning it was actually this, what do you call it? Homely, cosy, hyggelig. (Participant 5, Quote 12)

Emotional neutrality was also reported by some. Unpleasant feelings, such as exhaustion, anxiety, pressure, and fear, were reported as well.

> If I relax too deeply, a bit of panic can set in. There was also a bit of fear. […] A little fear of this darkness. Exactly. But that was more just a thought and it didn't materialise in the end. (Participant 4, Quote 20)

Similarly, the physical sensations varied, with no single sensation standing out. These included everything from the awareness of breathing and heartbeats to physical reactions like muscle twitching, along with both relaxation and tension. The images or ideas associated with the floating situation equally varied, ranging from the womb, the sea, and to the outer space.

3.5 Thoughts on the lack of stimulation

> But I think there really is strength in peace and quiet. Because then you have time to reflect and think about what I really want. Or what is good for me and what is not. If you're always just rushing about or distracting yourself, you miss out on so much. (Participant 8, Quote 36)

The silence, darkness, and reduced gravity during Floatation-REST can be summarised under the concept of 'lack of stimulation'. All participants reported experiencing this as pleasant. Absence of external input provided them with more space for personal experiences, reflection, and the realisation of desires and needs.

3.6 Perception of time

> No, it felt longer for me, too. That's because I didn't have a reference. It could have been days, it could have been five minutes. I was simply gone once. (Participant 5, Quote 6)

The perception of time was mentioned by six participants. One aspect of time involved reflections on the passage of time, including thoughts about how much time had already passed and how much remained. Two participants felt they had a good sense of time, while two others experienced an altered perception of time, with one person expressing a strong sense of disorientation regarding time.

3.7 State after floating

> Well, one part of me is very relaxed, and another part in the chest area feels a bit more alive right now. (Participant 3, Quote 2)

The post-float state was largely characterised as pleasant, with participants reporting feelings of relaxation, contentment, warmth, vitality, presence, a sense of reset, heightened sensitivity, and a feeling of detachment. However, some exceptions were noted: one participant described experiencing exhaustion, while another mentioned dizziness, though this sensation was temporary. Several participants also described a feeling of being transported or existing 'somewhere else', highlighting the immersive and transformative nature of the floatation experience.

4 Discussion

Many people found that silence helped them to become more aware of their thoughts and bodily sensations such as breathing and heartbeat. Silence was also described as a gradual process that took time to unfold. Emotional reactions to darkness varied: some participants experienced it as pleasant and playful, while others felt fear and a sense of losing control. The perception of a loss of control appeared to depend on whether individuals interpreted it as a negative or positive experience. Many participants also reported

that darkness enhanced their ability to perceive thoughts and promoted mental clarity.

Some participants reported heightened auditory sensitivity and a reduced sense of the body's position in space. Regarding gravity, participants primarily experienced emotional states, such as the joy of experimentation, a sense of security, and weightlessness. Some described a feeling of bodily dissolution, while others felt a heightened physical sense of existence. The perception of the tank's interior also led to contrasting experiences: while some found touching the cabin's edge pleasant and reassuring, others perceived it as unsettling.

Regarding the previously mentioned studies on quantitatively measuring the effectiveness of silence (Pfeifer et al. 2019a; Pfeifer et al. 2019b; Pfeifer et al. 2020; 2023), the findings clearly indicate that silence positively influences relaxation, self-awareness, perception of space and time, mood, mind wandering, and a sense of being anchored in the present moment. The current qualitative study yielded similar results. Nearly all participants described silence as a pleasant experience, reporting feelings of deep relaxation, trust, and security. Silence also enhanced their ability to perceive their thoughts, emotions, and bodily sensations more intensely.

Schuling et al. (2018) confirmed the heightened awareness of thoughts and emotions during periods of silence, which participants generally perceived as positive. In their qualitative Floatation-REST study, Kjellgren et al. (2008) reported that participants described hearing spoken words, music, and their own thoughts while in the tank. This finding also relates to the experience of silence observed in the present study. One respondent highlighted the interplay between external and internal silence, noting how the two states seemed to align after a certain point. Equally noteworthy is the perception of silence as a subjectively influenced phenomenon. While most participants found silence pleasant, the experience was highly individual, with each person engaging with and interpreting the process of silence uniquely.

The experience of darkness differed significantly from that of silence, with darkness often eliciting more negative reactions. While silence was overall associated with positive thoughts and feelings, participants' encounters with darkness during Floatation-REST varied widely. Although some described darkness as a pleasant and calming experience, reports of discomfort and fear were more frequent. Historical analyses of texts have shown how darkness has been associated with feelings of fear and uncertainty (Lorenz 2014). Some participants described darkness as a loss of orientation and control while floating. The inability to perceive spatial boundaries or see anything at all can evoke discomfort for some individuals. Conversely, others found this loss of sensory input liberating and confidence-building. The perception and experience of darkness appear to be influenced by prior experiences with darkness, attitudes towards the unknown, and the ability to cope with uncertainty in daily life. While some embraced the experience of complete darkness playfully and freely, others struggled to surrender and let go of control.

The reduced gravity experienced during Floatation-REST was generally perceived as light, pleasant, and comparable to weightlessness in space, offering a sensation that participants could enjoy. These feelings comply with the concept of mental gravity, as the floating experience with its perceived buoyancy could have an emotionally uplifting effect on the floating person (Kent 2023; 2024). A connection was also drawn between the feeling of weightlessness and associations with intrauterine experiences. Similar findings have been reported in previous studies, including those by Edebol et al. (2008) and Kjellgren et al. (2008). The association of floating with a womb-like experience cannot be attributed solely to reduced gravity. Factors like auditory perception, complete darkness, and enveloping warmth may also contribute to this deep-seated sense of familiarity and comfort.

The sensation of body dissolution, which was also noted in relation to the experience of gravity, is a well-documented phenomenon in Floatation-REST research. Hruby et al. (2024) found that when the ambient temperature during Floatation-REST is adjusted to match skin temperature, the boundaries between the body, air, and water can become indistinct, making it difficult for individuals to perceive where their bodies begin and end. This experience is akin to what is observed in meditation, where the perception of body boundaries often diminishes, as sign of temporary self-transcendence, accompanied by a heightened sense of well-being (Dambrun 2016; Linares Gutiérrez et al. 2022). Both experiences suggest that environments fostering deep relaxation and focus can lead to altered body awareness, highlighting a connection between Floatation-REST and meditation in their shared effects on body perception. In spiritual traditions, such temporary self-transcendent experiences are associated with a pervasive sense of connectedness with other people and the world, as well as with God (Yaden et al. 2017). In the context of spiritual practice, such self-transcendent states can become sustained personality traits over time, referred to as spiritual awakening (Kilrea et al. 2023). They are described as highly functional and stable states in which the individual's perception of the world and relationship to it changes, often accompanied by an increased sense of well-being, clarity and connectedness with others. (Flatten et al. 2024).

Another key theme described by participants was the experience of sensory deprivation, or the lack of external stimuli. This was predominantly perceived as pleasant, as it created mental space that could be used for self-reflection and greater awareness of personal needs. Research has shown that even the experience of silence alone, such as in a seminar room, can enhance positive emotional self-perception (Pfeifer et al. 2019b). However, in the context of Floatation-REST, the absence of stimuli extends beyond silence to include a combination of silence, darkness, and the sensation of floating on the water's surface. This holistic reduction of sensory input offers a unique environment for deep relaxation and introspection.

Although the perception of time was not directly addressed in the interviews, several participants mentioned it, indicating that it was a significant aspect of their Floatation-REST experience. This aligns with the findings in Kjellgren et al.'s (2008) qualitative study, in which the perception of time was an important and highly variable experience for participants, similar to the results in the current study. The quantitative study by Hruby et al. (2024) also demonstrates a correlation between Floatation-REST and altered time perception, further supporting the idea that this experience can significantly affect how time is perceived. In both studies, participants described time in ways that diverged from their usual, everyday experiences, suggesting that Floatation-REST can create a unique temporal experience.

The post-float state was predominantly described as pleasant, with participants reporting feelings of relaxation, vitality, contentment, and presence. Consistent with findings from previous Floatation-REST studies (e. g., Al Zoubi et al. 2021; Hruby et al. 2024), participants have frequently reported sensations of feeling refreshed, calm, and relaxed along with significant mood improvements (Feinstein et al. 2018a). However, one participant in the present study described feeling exhausted after floating. This individual linked the experience to a broader sense of everyday exhaustion and noted that floating helped him recognise this underlying fatigue, prompting personal changes. This highlights the potential for transferring insights gained while floating into everyday life. By reflecting on the condensed perceptions of bodily sensations, emotions, and thoughts experienced during Floatation-REST, participants can gain a clearer understanding of their current state and evaluate how these insights could lead to adjustments in daily life. Thus, Floatation-REST offers a unique space for heightened self-awareness and reflection, fostering personal growth and well-being, which are facets of spiritual care.

The potential therapeutic applications of Floatation-REST merit careful consideration, given its effects on enhancing mental clarity and a reflective capacity. These qualities could support therapeutic processes and treatments. The increased self-awareness reported on cognitive, emotional, and physical levels highlights the floatation experience as a potential resource. In a low-stimulus environment, issues that may be obscured by the distractions of daily life can surface more readily, offering new insights. This heightened self-awareness in combination with relaxation, just like with meditation, can also foster mindfulness and promote a stronger sense of being anchored in the present moment (Pantazis & Wittmann 2025).

Kjellgren (2010) studied the impact of Floatation-REST sessions preceding psychotherapy over a ten-week period in individuals experiencing stress-related symptoms. Participants noted that they found it easier to discuss personal problems following Floatation-REST and expressed a preference for these integrated sessions over traditional psychotherapy sessions without the floatation component. This suggests that Floatation-REST could be an effective complementary approach in (psycho-) therapeutic settings, enhancing openness, emotional processing, and overall engagement in therapy.

The reduced environmental stimulation technique of floatation minimises stimulation of the nervous system by immersing subjects in an environment with the facets of silence, darkness and a peculiar feeling of buoyancy. Floatation-REST as an induction method for altered states of consciousness (ASC) is marked by transient changes in internal experiences and external perception (Fort et al. 2025). Empirical evidence and subjective reports indicate that spontaneous or systematically induced ASC often involve a modified sense of self, in peak states culminating in phenomena such as ego dissolution, often resulting in spiritual experiences such as being one with the world (Thomas 2022, Wittmann 2018). The combination of the elements of body temperature, silence, darkness, and the sense of gravity perceived during Floatation-REST is specific for the induction method. From a psychological perspective, our qualitative results concerning the specific elements can be understood as variables that shape cognitive and emotional processes during the float experience. Silence may support a shift from external attention to internal reflection and integration. It has been shown that the psychotherapeutic process is enhanced by more emotional openness of the client when following a floatation session (Kjellgren 2010). Darkness could act as a liminal space that facilitates encounters with unconscious material and promoting intrapsychic confrontation. The feeling of physical self-confidence in the context of the buoyancy effect may contribute to the release of embodied memories as it may influence how individuals experience the emotional presence within self-continuity. The facets of silence, darkness, and gravity during Floatation-REST may

lead to meaningful changes of the self in the context of personal development and spirituality.

5 Limitations

Our work has limitations. The participants in the study were already interested in floating and had previous experience in floating as well as all in meditative techniques to some extent. It can be assumed that floating had pleasant effects on these people, as they would otherwise not have floated again voluntarily. Possibly, the five participants with at least weekly meditation practice have a greater awareness of their inner self and could subsequently report their experience in a more nuanced way. The questioning directly after the floating session was slightly overwhelming for some people. The introduction was not always smooth, as the people first wanted to arrive back in the here and now. However, if more time had passed in between, the experience might not have been as present, and the statements would no longer have been directly related to the floating session.

6 Conclusions

While silence was predominantly experienced as pleasant, safe, and familiar, darkness was perceived as even more unpleasant, sometimes evoking a sense of loss of control. Nevertheless, both silence and darkness were seen as helpful in enabling participants to more clearly perceive their inner emotional, mental, and physical processes. A sense of security was also associated with the lack of a sensation of gravity. Silence was found to be particularly helpful in enhancing awareness of inner processes. In today's fast-paced world, where we are constantly bombarded with stimuli, taking a break from the hustle and bustle of everyday life can be beneficial. Floating provides an opportunity to withdraw temporarily, stillness promoting introspection and a sense of peace. Engaging in mindfulness – attending to the present moment, our body, emotions, thoughts, desires, and needs – can help us reconnect with ourselves and gain clarity on what we truly want and need to lead a fulfilling life. Since these changes are building blocks of spiritual care, Floatation-REST could be used as a complementary method for achieving self-transformation in a professional therapeutic context.

The concept of primal trust could also be an important factor in the context of Floatation-REST. Four out of ten participants reported associations between the floating experience and intrauterine sensations, as the environment in the tank evoked feelings reminiscent of the womb. By simulating a womb-like environment, Floatation-REST could provide individuals with an indirect sense of what that time may have felt like, even though they cannot consciously recall it.

Future research could explore how repeated floating sessions can reduce anxiety related to darkness, which some participants reported. Most previous studies measured these effects at a single time point, so a longitudinal study could provide valuable insights into the long-term impact of Floatation-REST on these experiences. Replicating the current study with a larger sample and incorporating quantitative measures could also help verify the consistency of the results. A study design with a control condition could clarify some present results. For instance, a comparison group that undergoes floating sessions with music or light could provide a clearer understanding of how silence and darkness specifically influence the floating experience.

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Appendix

Table 1: Interview Guide. The interview guide with the questions used as introductory questions, for each of the three main topics of silence, darkness, and gravity, as well as the final question.

Key question	Memo	Possible more specific questions	Maintenance/control questions
Introductory questions			
How do you feel right now after floating? When you think back to floating, can you give me a few associations or images that come to mind spontaneously?	Experience after floating, experience during floating	What struck you in particular? What impressed you the most? What goes through your mind now when you think about what you have just experienced?	When you think back to the time of floating - what images come to mind? What thoughts or feelings come up when you think back to floating?
Main section with the three main topics			
Silence			
What was your experience like in terms of experiencing silence?	Perception of silence while floating	What effect did the silence have on you? Were you able to perceive something else more consciously due to the absence of noise?	Can you go into more detail about what you just said? Do you have an example / a comparison? If you really only stay with the experience of silence - what thoughts / feelings come to you?
Darkness			
What was your experience like in terms of experiencing darkness?	Perception of darkness when floating	What effect did the darkness have on you? Did it make you more aware of something else?	What did it do to you that it was completely dark around you while you were floating? Do you have an example / a comparison?
Gravity			
How would you describe your perception of or in relation to gravity?	Perception of gravity when floating	What effect did this experience have on you?	When you think back to floating - how did you experience gravity while floating?
Final question			
Is there anything else that is important to you that has not yet been mentioned?	Room for further thoughts		Can you tell us a bit more about this?