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Investigation of Metabolite Changes in the Brains of Faradarmani Practitioners under the Influence of the Faradarmani Consciousness Field Using Proton Magnetic Resonance Spectroscopy

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The brain, as a highly evolved organ in humans, has reached a level of complexity that has led researchers and experts in neuroscience and clinical sciences to conclude that it is the primary organ responsible for key functions observed at the human level—such as perception, awareness, and consciousness. For a long time, a major challenge has persisted: whether consciousness and awareness in living beings, especially humans, originate from and are shaped by the brain (the monist approach), or whether the nature and source of consciousness are independent of and beyond the brain (the dualist approach). This debate has been a central topic in various philosophical and scientific schools of thought, each with its own staunch supporters.

According to the theory of T-Consciousness Fields, the brain—with all its complexity and unique features—is merely a tool or medium for manifesting the effects of consciousness and awareness at the level of an advanced living being. T-Consciousness, by its nature, originates from a source independent of the brain, and its effects can be clearly detected and observed at the brain level. Supporting evidence for this theory has been presented in previous studies using techniques such as electroencephalography (EEG) and fMRI on the brains of Faradarmangars practitioners. These studies showed that, during connection with the Faradarmani Consciousness Field, the brain exhibits widespread deactivation, along with reduced activity and decreased functional connectivity. These findings indicate the brain's passive and detector-like role in relation to T-Consciousness Fields.

Continuing the line of research on the brain's interaction with T-Consciousness Fields, this time researchers have focused on a key mechanism underlying brain function—namely, changes in the concentration of metabolites or biochemical molecules present in the brain. The central question is whether connection with the Faradarmani Consciousness Field leads to changes at the molecular and biomolecular level—changes that can be traced in the brain's bloodstream and across different brain regions. To address this question, the studies presented in this issue, alongside brain imaging using MRI, also include an analysis of proton spectra obtained through Magnetic Resonance Spectroscopy (MRS). These analyses compare the brain's molecular composition before and after the influence of Faradarmani Consciousness Field. The material and molecular changes observed in the brain offer valuable insights into how the brain responds to and interacts with a non-material and non-energy factor—Taheri's Consciousness.

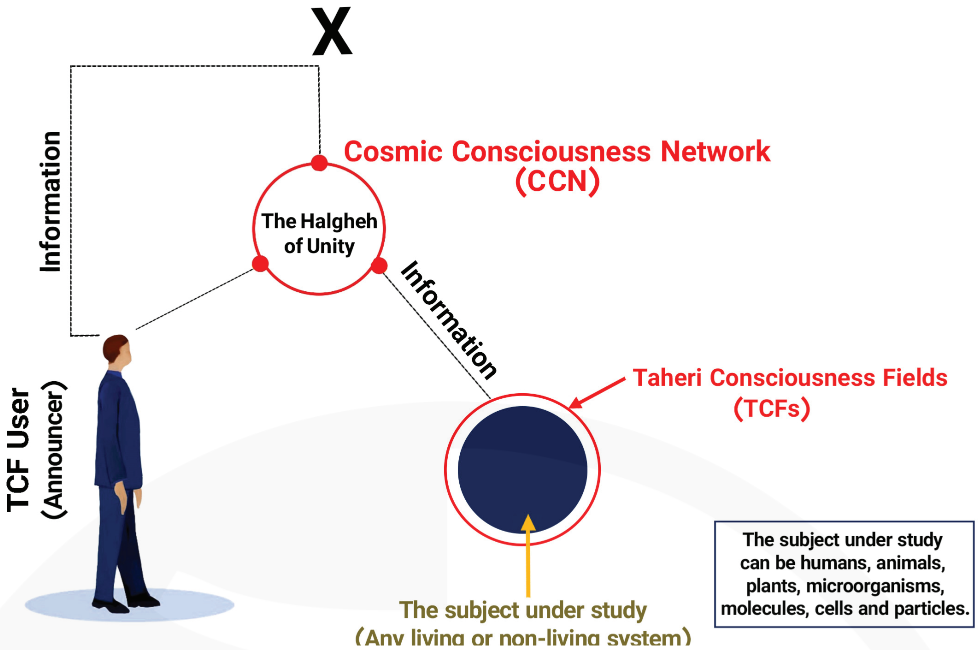
The initial response to the above question is presented in the set of studies in this issue: "The brain, when exposed to the Faradarmani Consciousness Field, exhibits a specific material response—one that is particularly significant in terms of metabolism and the energy flow required for brain activity."

In fact, the reduction of molecules and intermediates that are normally key to supplying bioenergy in the brain under standard conditions, when affected by the Faradarmani Consciousness Field, conveys several important messages.

First, the brain undergoes material changes under the influence of Faradarmani Consciousness Field within a very short time frame for molecular and biological alterations (on the order of minutes). This indicates that it is indeed the influence of Faradarmani, mediated by the human mind, that brings about material changes in the brain—not the other way around, as materialist views suggest, where the physical components of the nervous system are considered the origin of mental states.

Second, the dominant pattern of material change in the brain is the reduction in the levels of molecules involved in brain energy pathways. This finding implicitly suggests that another type of energy is being supplied in response to interaction with the Faradarmani Consciousness Field—an energy that compensates for the decrease in bioenergetic molecules known in neurobiology. According to the T-Consciousness theory, this form of energy—independent of cellular metabolism—is referred to as biological dark energy. To investigate this observation more precisely, upcoming issues related to brain studies will further examine this hypothesis through experiments and direct measurements of typical bioenergetic molecules (such as ATP and ADP) at the brain level.

Studies related to T-Consciousness Fields and their effects on various components of the world of matter and energy, within the emerging science of Sciencefact, herald a major transformation and a profound renaissance within the framework of conventional science. It is anticipated that in the near future, a vast number of researchers and leading scientific institutions around the world will become acquainted with and aligned with this existential phenomenon. It is hoped that conscious and unbiased researchers across the globe will explore and experiment with this universal and accessible reality without prejudice or dogma. May we witness, day by day, the expansion of its scientific reach and the realization of its potential in creating a more elevated and improved quality of life.



A schematic on applying T-Consciousness Fields (TCFs). The effect of TCFs begins with connecting to the Cosmic Consciousness Network (CCN) and through the TCFs user (announcer). Variable T-Consciousness Fields are a subset of CCN, and by applying each TCF, specific information is transmitted. In this way, the subject of study, which can be living or non-living creatures, is exposed to this information. It should be noted that TCFs and the information do not have a material or energetic nature; therefore, they cannot be measured directly and quantitatively. However, it is possible to record and examine their effects by designing different experiments. For this purpose, the behavior or indicators measured by the researchers in the subject under study after being exposed to the TCFs are compared with the control samples (without the effect of TCFs), and the results are reported after statistical data analysis.

Considerations of This Issue

1. Introduction

1.1 T-Consciousness and the New Science of Sciencefact

In the past few decades, the nature of Consciousness and its place in science have received considerable attention. Many philosophical and scientific theories have been presented so far in this field. In the 1980s, Mohammad Ali Taheri introduced new fields of non-material and non-energy nature, known as T-Consciousness Fields (TCFs). In Taheri's view, T-Consciousness, along with matter and energy, are the three main constituents of the universe, with T-Consciousness being different from matter and energy. According to his theory, there is a wide variety of TCFs, each having certain functionalities. TCFs are also considered a subset of "Cosmic Internet Network" in Taheri's theory, which is named the Cosmic Consciousness Network (CCN).

The main difference between the theory of TCFs and other concepts introduced so far for describing the nature of consciousness is the applicability and practicability of TCFs. In other words, these fields can be applied to all living organisms and non-living objects, such as plants, animals, microorganisms, materials, molecules, atoms, etc. In this respect, Mohammad Ali Taheri introduced "Sciencefact" in 2020 as one of the subgroups of the "Erfan-e-Keyhani-e-Halgheh" school, which he had previously founded. The name "Sciencefact" was chosen to confirm the existence of T-Consciousness as a "fact" scientific research method is utilized. Although common science merely considers the study of matter and energy, Sciencefact investigates the effects of TCFs (which are neither material nor energy) on matter and energy and all their manifestations (such as humans, animals, plants, microorganisms, cells, materials, molecules, atoms, etc.). By repeatably conducting laboratory research experiments in various fields of science and applying TCFs, Sciencefact has emerged as a common ground between science and TCFs and uses this capability to investigate T-Consciousness and T-Consciousness Fields resulting from it.

The influence of TCFs begins with the connection (Etesal) between the Cosmic Consciousness Network as the Whole Consciousness and the subject under study as a component. The connection is established by the mind of the Faradarmangar (a person who has been trained to assign TCFs). The human mind has the role of an intermediary (announcer) that acts with short and immediate attention to the subject under study, and the main achievement is obtained due to the effects of TCFs. These fields cannot be directly measured by science, but their effects on various subjects can be investigated through repeatable experiments.

1.2 Methodology of T-Consciousness Fields Research

The research methodology followed in the study of T-Consciousness is based on *Assumption, Argument, and Proof*:

The basic *Assumption* is that the universe is formed by a third element, called T-Consciousness, and that is different from matter and energy.

The *Argument* is that the existence of TCFs can be shown through their effects on matter and energy (e.g., humans, animals, plants, microorganisms, cells, materials, molecules, atoms, etc.).

The *Proof* is the scientific verification of the TCFs' effects on matter and energy (according to the *Argument*) through various reproducible scientific experiments

1.3 Study phases in Sciencefact

To investigate and verify the existence, effects, and mechanisms of TCFs, the five following research phases (Phase 0 to Phase 4) and their objectives are outlined below:

In Phase 0 of the studies, the goal is to demonstrate the existence of TCFs by observing their influence on matter and energy. The nature of T-Consciousness and what it is will not be addressed in this phase. Phase 1 is dedicated to exploring various effects of different TCFs. In Phase 2, one examines the reasons behind the effects of these fields. Then, during Phase 3, the mechanisms of TCFs' effects on matter and energy are investigated. Finally, the goal of Phase 4 is to draw conclusions, particularly with regard to the *mind and memory of matter* and their relation to T-Consciousness, etc.

1.4 Using Faradarmani Consciousness Field

The T-Consciousness Field used in the studies presented in this issue was the Faradarmani Consciousness Field activated by the individuals themselves. In fact, all participants in this series of studies were Faradarmangars, meaning they themselves had the ability to access the Faradarmani Consciousness Field and initiate the application of Faradarmani (Nazar).

A Comparative fMRI Study of Brain Responses to the Faradarmani Consciousness Field in Women and Men

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Abstract

Based on Taheri's theory introduced in the 1980s, Consciousness is defined as the fundamental element of the universe from which information, matter, and energy spring forth. In this perspective, there are various T-Consciousness Fields (TCFs) with non-physical entities that their influence can be recorded through laboratory experiments. In the current study, the effect of one type of these fields named Faradarmani Consciousness Field (FCF) was investigated. Functional magnetic resonance imaging (fMRI) technique has been widely used to understand the functional activities and cognitive behavior of the brain during task or resting states. Here, 30 random volunteers (15 females, 15 males; 20 to 50 years of age) took part, and the exposure to FCF and without this treatment was considered as task and rest, respectively. While previous studies have examined the behavior of the brain in response to FCF, a comparison of the effects of this Field on the brains of men and women has not been conducted. Exploring the sex-related effects of FCF on the human brain can reveal new and different aspects of the functioning of these innovative non-material and non-energetic fields in the scientific realm. According to the results of the present study, 89% of all voxels showing activity change in both genders are associated with a reduction in activity, with 97% of these changes occurring in women's brains. In contrast, activated areas represent 11% of all voxels showing activity change, and 85% of these belong to the male brain. The most dominant function of the activated areas in both sexes is related to the motor cortex, controlling and managing voluntary movements and skeletal muscles. Following this, functions such as memory (visual and spatial) and attention are associated with the activated areas. These findings provide valuable insights into the differential effects of FCF on the brains of men and women, shedding light on the specific areas and functions that are influenced by this non-material and non-energetic field.

Keywords: Brain, fMRI, mind, Sex-related difference, Faradarmani Consciousness Field

Introduction

Functional Magnetic Resonance Imaging, or functional MRI (fMRI), measures brain activity (Karahanoğlu et al., 2015). This technique relies on the fact that neuronal activation is associated with cerebral blood flow. In other words, when a region of the brain is in use, blood flow to that area increases. The fMRI, based on the Blood Oxygen Level Dependent (BOLD) signal, is the most important non-invasive method for measuring the spatial location and intensity of human brain function (Bright et al., 2019). During the past decades, research on the mind-body interventions, such as yoga, Tai Chi, breath regulation techniques, etc. have been showed that the influence of these techniques can be associated with different neural patterns and even altered gene expression involved in inflammatory reactions (Fox et al., 2014; Buric et al., 2017). According to a study, the mindfulness meditation practitioners showed a lower frontal gamma activity related to default mode network (Berkovich-Ohana et al., 2012). Conversely, it has been indicated that mindfulness increased brain activity in various regions (Wheeler et al., 2017).

When it comes to gender-dependent differences in brain structure, menstrual cycle is one of the various factors (Pletzer et al., 2010). Not only have several studies reported a correlation between the concentration of estrogens and the volume of medial temporal lobe (Steventon et al., 2023), but this also has been shown to contribute to cognitive function (Cutter et al., 2003). Additionally, women at menopausal age face a higher risk of dementia (Gilsanz et al., 2019). Moreover, Allen and colleagues (2002) have reported that the total brain and most major substructures, such as hemispheres, frontal and parietal lobes, left insula, and cerebellum, are significantly larger in men, although the proportional sizes of individual regions relative to the total hemisphere volume are similar in both genders (Allen et al., 2002).

It has been found that the volumes of gray and white matter also differ based on gender. Women have a higher percentage of gray matter, while men have a higher percentage of white matter and cerebrospinal fluid (CSF) (Gur et al., 1999). While evidence supporting gender differences in brain morphometry exists, some studies contradict these findings. For instance, a study has reported a greater percentage of gray matter as a proportion of the total intracranial volume in men compared to women (Farokhian et al., 2017).

Some studies suggest that gender may have a significant impact on various cognitive functions, including emotions, memory, perception, and more (Cahill, 2006; Zhang et al., 2019). It appears that men and women may have different approaches to encoding memories, perceiving emotions, recognizing faces, solving specific problems, and making decisions. In essence, bridging the existing gap between the substantial structural similarities in the brains of both genders and the enumerated differences requires justification. Functional brain investigations have been conducted with this goal in mind.

As the brain is believed to control cognition and behaviors, gender-related functional differences may be associated with the specific gender-related brain functions. However, based on existing studies, prominent functional differences in the brain related to behavior are not consistently observed between the two genders. According to the Institute of Medicine (US) Committee on Understanding the Biology of Sex and Gender Differences, it seems that gender differences in the human brain are mostly attributed to prevailing beliefs about gender differences in cognitive abilities and functions, such as the belief in better verbal skills in women and better spatial abilities in men (Wizemann and Pardue, 2001). In men, IQ is associated with the volume of gray matter in the frontal and parietal lobes. On the other hand, in women, the intelligence quotient (IQ) is associated with the volume of gray matter in the frontal lobe and the Broca's area, which plays a role in language. This suggests that men and women use different regions of the brain to achieve similar intelligence quotients (Haier et al., 2005).

The nature of consciousness and its place in science have received much attention in the current century. Many philosophical and scientific theories have been proposed in this area. In the1980s, Mohammad Ali Taheri introduced novel fields with non-material/

non-energy nature named Taheri Consciousness Fields (TCFs). In this perspective, T-Consciousness is one of the three existing elements of the universe apart from matter and energy. According to this theory, there are various TCFs with different functions, which are the subcategories of a networked universal internet called the Cosmic Consciousness Network (CCN). The major difference between the theory of TCFs and other theoretical concepts about consciousness is related to the practical application of the TCFs. These fields can be applied to all living and non-living creatures, including plants, animals, microorganisms, materials, etc. (Taheri, 2013).

In this study, we investigated the influence of Faradarmani Consciousness Field (FCF), as a type of TCF, on the brain in both genders highlighting its distinction from mindfulness and meditation methods. Previously, the changes in brain activity were evaluated under these non-physical fields (Taheri et al., 2022 a, b, c), and the novel aspect of the current study is the comparison of obtained data between men and women.

Material and Methods

Application of FCF

In the present study, neural imaging using the fMRI method was conducted on the brains of two groups of 15 Faradarmani practitioners, including both men and women (a total of 30 individuals). This imaging was performed during the Faradarmani Connection as the test task. The task-fMRI analysis of the two populations aimed to differentiate the brain activities of participants while they are under the treatment of the FCF, as task performance (test) and in a resting state (without the effect of FCF). This study has been approved by the Ethics Committee at Iran University of Medical Sciences (Approval ID: IR.IUMS.REC.1399.293).

Statistical analysis

In task fMRI analysis paired T-test was used to form contrasts and p-value was set at 0.05. FDR corrected for cluster level (cluster threshold) and $p<0.001$, uncorrected for voxel level (height threshold).

Results

The results of this study regarding brain regions in distinct genders and the analysis of fMRI tasks were examined using the Statistical Parametric Mapping (SPM12) software package. In the tables of this section, the number of voxels, peak MNI coordinates, the MNI peak region, peak intensity, and the precise location of the MNI peak region in the hemisphere and brain lobe are detailed separately for each gender. The contrast presented in the tables is the Task-Rest contrast, indicating changes (increase or decrease) in the activity of brain regions during the task compared to the control. This effectively demonstrates the impact of the FCF on the brain in the male and female populations separately.

Before examining the brain by gender, Figures 1 and 2 first present, based on a previous study (Taheri et al., 2022c), the regions of activation and deactivation in the population without gender differentiation. As shown in Figure 1, the frontal-parietal lobes of both hemispheres of the brain exhibited a significant increase in activity during this task. On the other hand, the temporal and occipital lobes of both the left and right hemispheres became deactivated during the connection with the Faradarmani Consciousness Field.

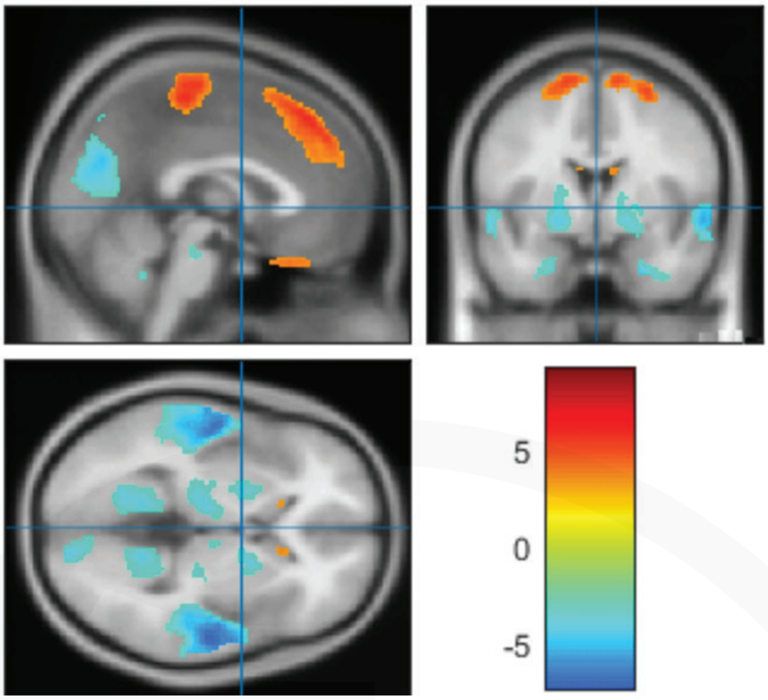

Figure 1. Brain regions activated and deactivated under the influence of the Faradarmani Consciousness Field in the population of Faradarmangars from the previous study (Taheri et al., 2022c), without gender differentiation (red indicates increased activity, and blue indicates decreased activity).

The 3D visualization of the brain regions activated and deactivated during the task (Taheri et al., 2022c) is shown in Figure 2.

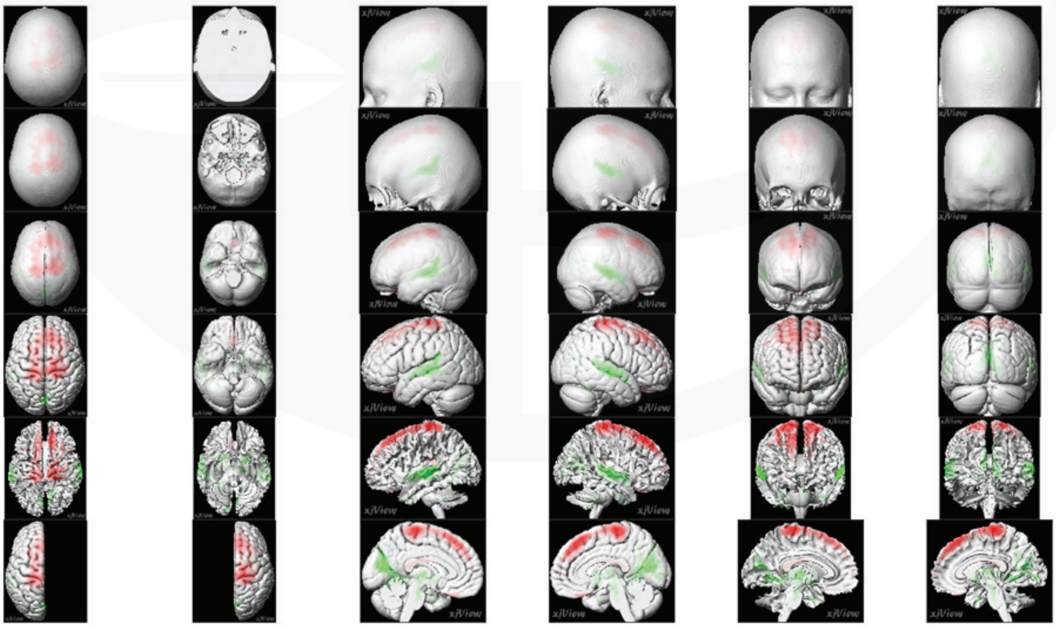

Figure 2. 3D view of the brain in the population of Faradarmangars from the previous study (Taheri et al., 2022c) during the fMRI task, shown from all directions (top, bottom, sagittal, and posterior views).

Following the analysis conducted in the previous study, the present study examines the same data with the population divided into two groups: women and men, as presented below. Figures 3 and 5 display three contrasts of the data obtained in this study for both genders: task contrast, rest contrast, and task–rest contrast. Since the brain also shows activity during the resting state, and part of the observed activity during the task is inherently and naturally present, the task–rest contrast compares brain activity voxel by voxel between the task and rest states and highlights statistically significant differences. This essentially reflects the impact of the task, or interaction with the FCF, on the brain.

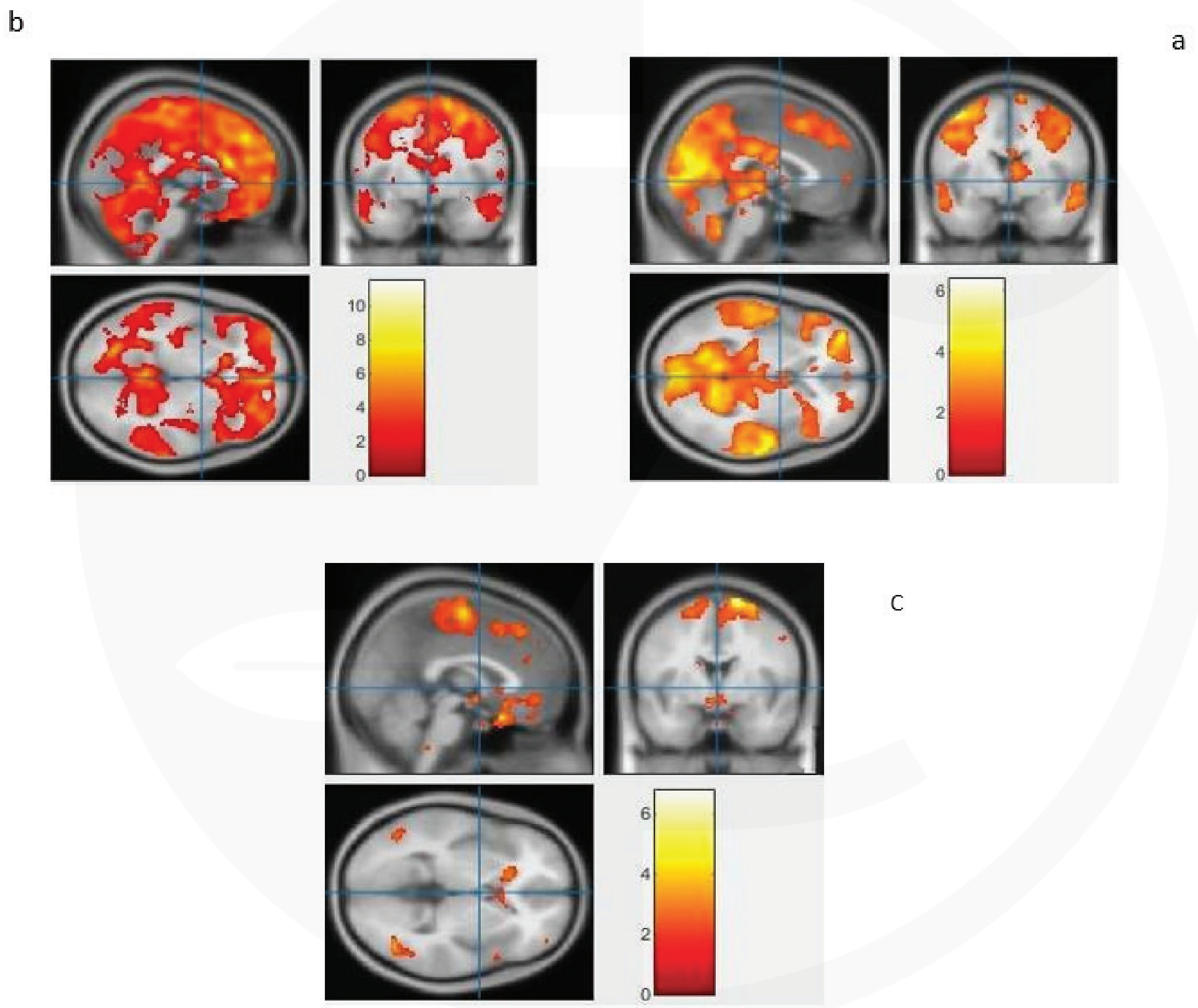

Figure 3. Representation of Brain Voxels in States (a) Rest of Men, (b) Task of Men, and (c) Task-Rest of Men.

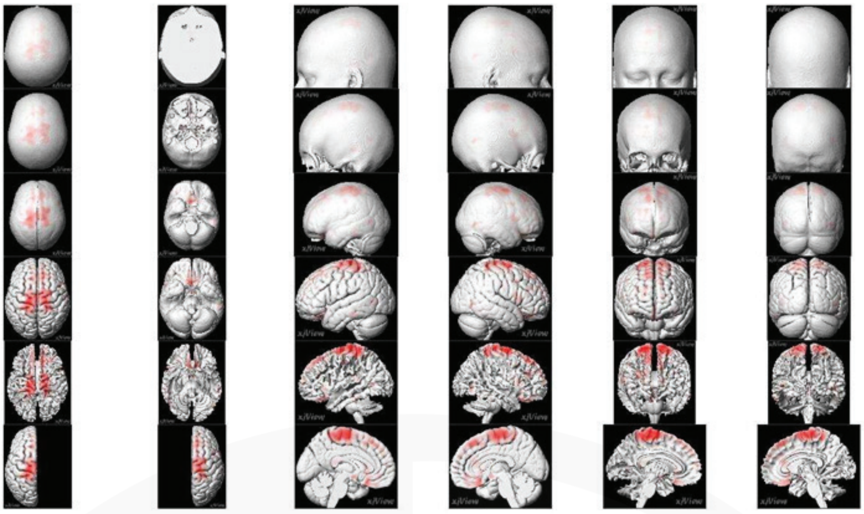

Figure 4. Three-Dimensional Render of the Male Brain in the Task-Rest Contrast.

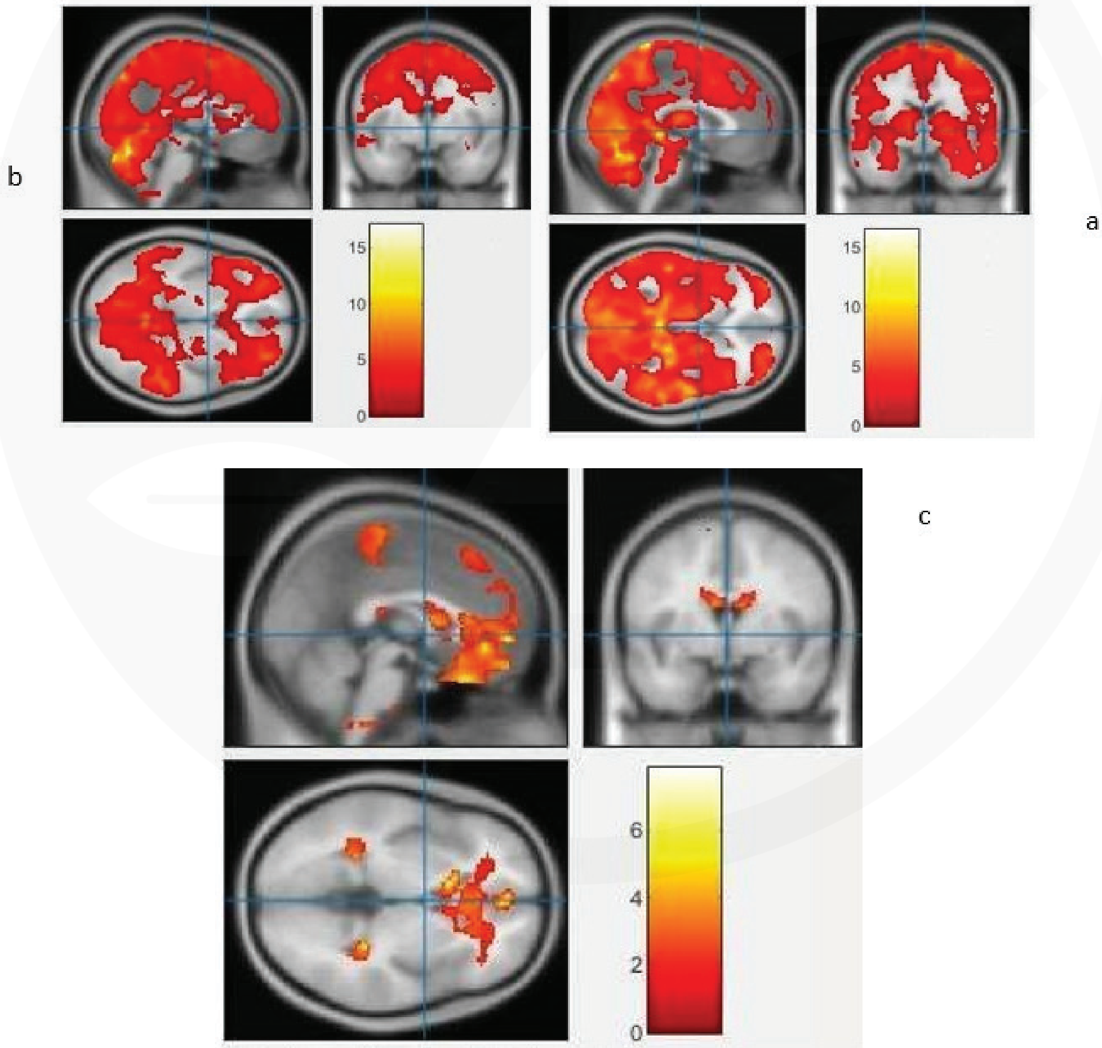

Figure 5. Representation of Brain Voxels in States (a) Women at Rest, (b) Women at task, and (c)Task-Rest of Women.

In these figures, alongside the display of active regions, a color bar indicating the intensity of activity is presented, and the corresponding color code allows for an understanding of the activity intensity. As evident, the task results in an increase in yellow points in the brain, clearly visualized in the Task-Rest contrast. Information regarding color-coded voxels, including location, intensity, region, and recognized function in the brain, is provided in tables specific to each gender. Additionally, Figures 4 and 6 render three-dimensional representations of the male and female brains in the Task-Rest contrast, illustrating the involved brain areas during interaction with the FCF within the natural brain structure. These figures specify their locations in the brain cortex and other regions with details not visible in the previous figures. The presented data is further organized by gender for better comparison.

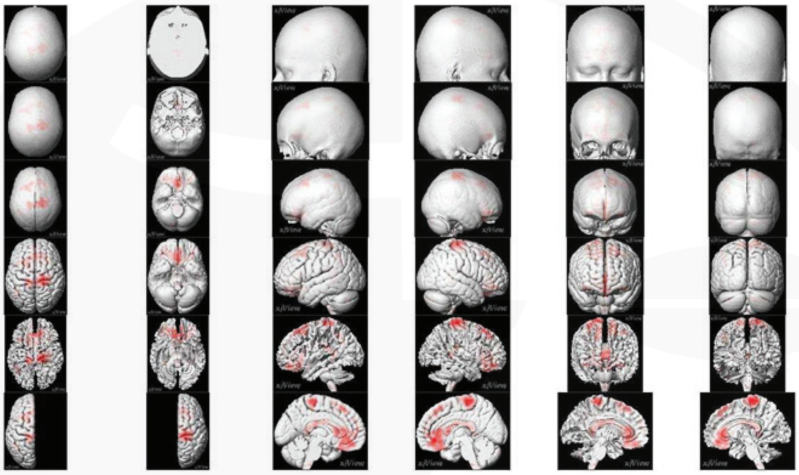

Figure 6. Three-Dimensional Render of Women's Brain in Task-Rest Contrast.

Effect of FCF on the male brain activity

The data presented in this section pertains to the brain activity of the male group during connection to FCF. As observed in Table 1, in the Task-Rest contrast, an increase in activity is evident in four clusters and two regions, predominantly in the precentral gyrus and with the highest voxel count. Additionally, in males, during interaction with FCF, a decrease in activity is observed in the posterior cingulate gyrus.

Table 1. Activated and Deactivated Groups (Voxel Count Over One Hundred) in the Male Brain under the Influence of Faradarmani Consciousness Fields in the Task-Rest Contrast.

MNI Peak Region	BA Region	MNI Coordinate Peak	Peak Intensity	Lobe	Hemisphere	Number of Voxels	Cluster Number	Change in Activity
Posterior Cingulate	18	16 -56 6	-4.9451	Limbic	Right	291	1	Decrease
Precentral Gyrus	4	-22 -24 64	6.6983	Frontal	Left	473	1	Increase
Precentral Gyrus	7	-16 -42 68	5.3964	**Parietal**	Left	143	2	Increase
Precentral Gyrus	Undefined	16 -24 70	6.4762	Frontal	Right	159	3	Increase
Superior Frontal Gyrus	6	16 0 72	6.776	Frontal	Right	131	4	Increase

Effect of FCF on the female brain activity

The data presented in this section pertains to the brain activity of the female group during connection to FCF. As seen in Table 2, in the Task-Rest contrast, there is a decrease in activity in seven clusters and six regions, predominantly in the fusiform gyrus and later in the lentiform nucleus. Additionally, in women, there is a slight increase in activity in the caudate region during the interaction with FCF.

Table 2. Activated and deactivated groups in the female brain (with the number of voxels exceeding one hundred) under the influence of Faradarmani Consciousness Fields in the Task-Rest contrast.

MNI Peak Region	BA Region	MNI Coordinate Peak	Peak Intensity	Lobe	Hemisphere	Number of Voxels	Cluster Number	Change in Activity
Fusiform Gyrus	37	-46 -64 -20	-10.0637	Related to the Temporal	Left	5410	1	Decrease
Superior Temporal Gyrus	41	48 -16 2	-10.4179	Related to the Temporal	Right	1472	2	Decrease
Lentiform nucleus	Undefined	-18 -8 2	-9.081	Inferior lobe	Left	649	3	Decrease
Lentiform nucleus	Undefined	20 6 6	-8.0636	Inferior lobe	Right	338	4	Decrease
Superior Temporal Gyrus	22	46 -44 12	-6.2728	Related to the Temporal	Left	147	5	Decrease
Undefined	7	0 -78 44	-5.2426	Undefined	Inter-hemispheric	100	6	Decrease
Precuneus	Undefined	26 -52 46	-14.0351	parietal	Right	243	7	Decrease
Caudate	Undefined	-16 -28 20	7.859	Inferior lobe	Left	166	1	Increase

As shown in Tables 1 and 2, the brain behavior of men in response to the FCF, unlike women, exhibits activation (albeit with around 10% of the number of voxels deactivated in the brains of women). The activated regions in the brains of men cover extensive areas of the Brodmann areas such as 4-7 and 6, while in women, it involves only one area (Caudate).

Indeed, with respect to decreased activity, in the female group, there is a significant decrease in activity in the presence of the FCF in four regions, including the fusiform gyrus, superior frontal gyrus, lentiform nucleus, and precuneus. This is in contrast to the male group, where a decrease in activity is observed only in one region (posterior cingulate).

Activity related to activated and deactivated regions in the brains of women and men in this study based on previous research.

To better understand the differences between activated and deactivated regions in the female and male brains, a comparison of regions related to the default mode network and activated and deactivated areas in the Task-Rest contrast in women and men is presented in Figure 5. Alongside this comparative image, the precise areas of the activated and deactivated brain regions in the samples of this study are presented in appendix (Tables 3 and 4), and their correlation with the default mode network is discussed in the discussion section.

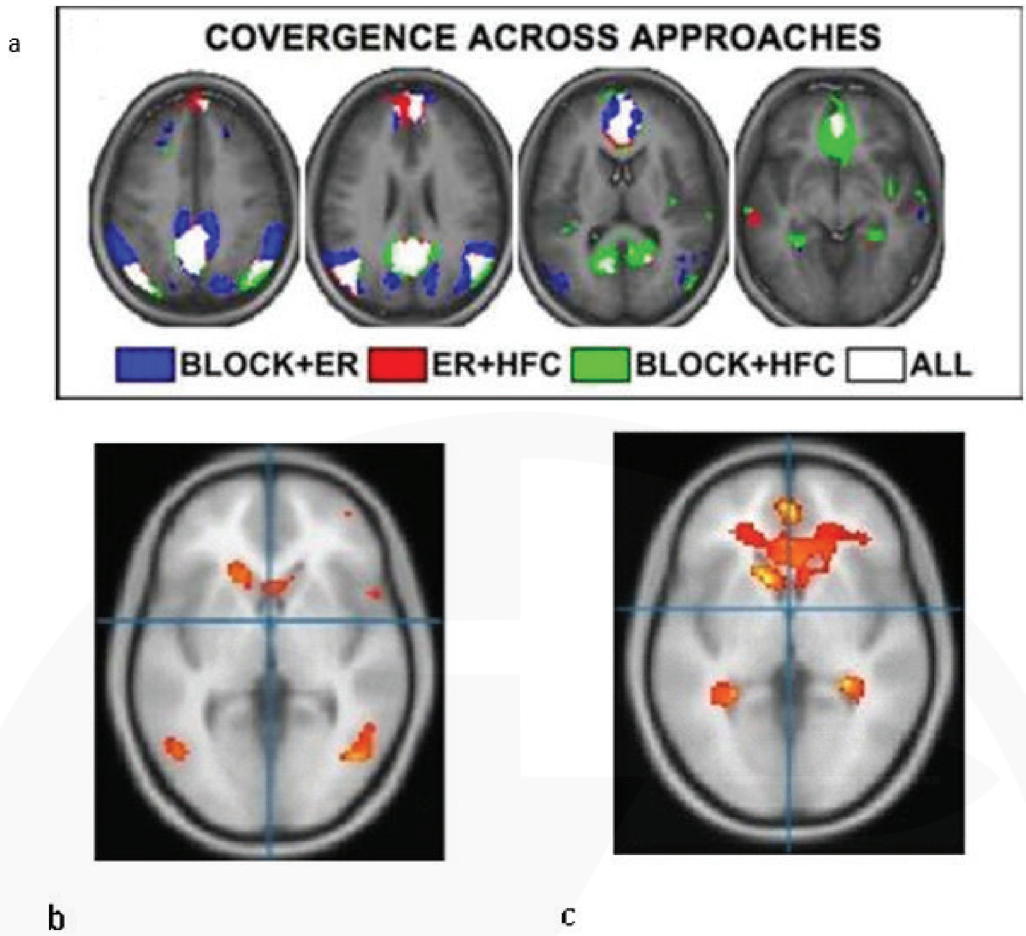

Figure 5. Examination of the correspondence between regions associated with the default mode network and areas of altered activity in women and men in this study. (a) The default mode network, convergently identified by various and distinct fMRI approaches (Buckner et al., 2008). **BLOCK**: Deactivation blocked by task block. **ER**: Deactivation related to event-related tasks. **HFC**: Hippocampal functional connectivity. White areas represent the overlap of various methods. (b) Regions of altered activity in men in this study. (c) Regions of altered activity in women in this study.

Additionally, in the appendix section, comparative tables (Tables 3 and 4) summarize the activated and deactivated regions in the brains of women and men, along with their corresponding features, proportional functionality (if defined with Brodmann's areas), and the way they activate or deactivate in other studies.

Discussion

The current research investigates the influence of a non-physical field, introduced by Taheri, on the two groups of men and women. Analyzing the changes in the activity of different brain regions based on gender provides a golden opportunity to understand the possible differences in brain activity of males and females under FCF.

Around 89% of the total altered voxels in both genders (97% of which belong to women's brains), are associated with decreased activity. The impact of the FCF in predominantly deactivating the brain is evident in terms of both the number of deactivated regions (8 deactivated regions versus 5 activated regions in total for both genders) and the number of voxels. This result supports a previous study (Taheri et al., 2022c) on the FCF in a combined population of 20 individuals (both men and women). It complements the findings from this research, where the behavioral data of women influenced the overall dataset in the previous combined study. The Default Mode Network becomes active when individuals are left undisturbed to think without external interference or during tasks involving self-related processing (Raichle et al., 2001). According to Garrison et al (2015), this network is less active during activities that require cognitive effort (Garrison et al., 2015). For instance, studies have shown that certain brain regions, during meditation, exhibit less activity compared to control conditions in neuroimaging studies. For example, the main areas of the default-mode network, including medial prefrontal and posterior cingulate cortices, showed a decrease in activity (Brewer et al., 2011). Moreover, it has been identified that meditators showed less activity during meditation compared to rest in the posterior cingulate cortex and precuneus compared to the control group (Kelley et al., 2002; Hehr et al., 2022).

Regarding the activated regions, numerically accounting for 11% of the total altered voxels in both genders (85% of which pertains to men's brains), includes primarily the motor cortex responsible for voluntary movements and skeletal muscles' control and management. Following that, memory (both visual and spatial) and attention are functions of the activated regions in both genders. Although the involvement of the motor cortex in cognitive activities has been mentioned in previous studies (Bhattacharjee et al., 2021; Matheson and Kenett, 2020), the distinct role of these regions in managing human motor activities is unquestionable.

As described in the results section, we understand that out of the total 8 deactivated clusters in both genders, only two deactivated regions show similar trend with the effects of meditation practices on default mode network (Garrison et al., 2015; Kelley et al., 2002). One is in the brains of women (precuneus), and the other is in the sole deactivated region of men's brains (posterior cingulate; however, it is in Brodmann area 18, which is different from the central Brodmann areas of the default mode network).

While deactivated region in men was close to the default mode network or self-directed activity, in women's brains, there were several deactivated regions, including areas associated with visual perception, word recognition, auditory perception, various complex cognitive functions ranging from self-awareness to memory, recall, mental imagery, and emotional responses, which collectively play a role in shaping behavior and personality (Gain, 2018). Among these deactivated regions, the precuneus area has been previously reported as deactivated during meditation in other studies (Yang et al., 2019; Hehr et al., 2022).

The predominance of the degree of deactivation in brain behavior under the influence of FCF and the function of the regions related to cognitive features (in women) and the default mode network or self-nature (in men) indicates two points. First, the role of the brain in this encounter is passive and non-functional, and second, FCF treatment has selectively altered brain activity. It seems that these changes have occurred based on the needs of individuals under FCF treatment.

On the other hand, the interesting similarity in brain behavior between men and women in the activated regions during connection to the FCF is noteworthy. Given that in fMRI techniques, high contrast data registration conditions, immobility, and no movement of the head and body of the samples are necessary, the fact that in both genders, during complete stillness, regions related to motor management and motor cortex are activated implies the influential effect of the FCF on motor control regions during usage, something that is ‘not’ observed in meditation methods. Similar results have been observed in studies using neuroimaging techniques on individuals proficient in martial arts and dance, with the observation of images and films or mental imagery compared to practical activity (Cross and Elizarova 2014; Bläsing et al., 2012).

Researchers across various disciplines, such as biological sciences, neuroscience, and cognitive sciences have always been curious to understand whether the existing and confirmed divergence in behavioral and cognitive characteristics between women and men is rooted in distinct brain structures and functions. Several studies have acknowledged that sexual differentiation of the brain is attributed to several factors, including gene expression, steroid hormones, stress and environmental factors (McCarthy and Arnold, 2011; Beltz et al., 2020).

According to a study, there is a distinctive link between gender inequality in a society and the risk of mental health as well as lower academic achievement in women. This lower outcome was associated with significant differences between the brains of men and women. For example, in gender-unequal countries, women had thinner cortices compared to men, whereas there were even thicker regional cortices in women in gender-equal countries compared to the opposite gender (Zugman et al., 2023). Moreover, the sex differences have been attributed more to the brain size, rather than solely sex effects (Luders and Kurth, 2020). According to Ruigrok et al., 2014 the differences in volume and tissue density were found in the amygdala, hippocampus and insula (Ruigrok et al., 2014). Conversely, other studies have revealed no significant or weak differences in total brain volume between males and females (Wierenga et al., 2018; Jäncke et al., 2015).

The observations in this study confirmed the effectiveness of the FCF on the human brain. In the previous study conducted by our research team, the behavior of brain under this field was screened in a population, with equal number of women and men, without focusing on the gender of participants, and the obtained results indicated that the FCF treatment was more associated with a reduction in brain activity rather than activation of that. According to the current study, it appears that this inactivation is more related to the women. As mentioned above, in this perspective the brain assumes the role of a detector or receiver in its interaction with FCF. While the reasons behind the divergent behaviors of the brain in different genders remain unclear, it seems that FCF treatment has led to the transmission of various information, thereby emphasizing the specific needs of individuals.

Based on Taheri's theory, the thing that guides the activities of neurons is nothing but the mind. To illustrate, like a computer requiring software to regulate hardware's operations, every single part of our universe, including the living cells, needs an operator and software part to perform tasks and function properly. Therefore, altering brain activity under FCF treatment with non-physical entity may help to understand this perspective. Unlike other mind-body exercises like Tai Chi and yoga, which involve breath regulation and training programs, here, participants do not perform any kinds of practice except for fleeting attention to FCF. In other words, receiving this treatment entails no physical intervention but operates through the human mind. With this description in mind, the changed brain activity suggests tantalizingly that something beyond nervous cells, with non-physical entity, interacts with FCF and processes received information. As explained, this software part is described as mind by Taheri. For example, with lower but significant brain activation data in both genders due to the effect of FCF, the behavioral brain shows motor movement activation in conditions where firstly the individuals under the influence of FCF treatment did not previously have prominent physical abilities related to it, and secondly the outcome of brain behavior at the organ level is not observed intentionally or upon the individual's request. This data provides evidence in support of the regulatory influence of the mind on the brain in managing bodily functions.

Conclusion

This study provides evidence of the influence of FCF on brain activity. Observing more inactivation behavior suggests that the brain plays a passive role in this interaction. This reduced activity can be found much more in female group, indicating varied information transmission under FCF. It means that participants' brains receive specific information based on their needs, leading to altered brain behavior under FCF. More investigations in larger populations are required to understand the different influences of FCF on the brain of both genders. The authors of the present study recommend the additional study of measuring the change of brain metabolites and electroencephalography to know more details of the effect of Faradarmani CF on the brain.

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Appendix

Table 3. MNI coordinates of deactivated regions under the influence of Faradarmani Consciousness Field and their associated functions.

Sex	Priority	region	Related function (with respect to Brodmann's area if defined)		Deactivating Factor based on resources
Female	1	Fusiform Gyrus	**37** (left) Visual face recognition (1) Visual motion processing (2) Visual fixation (3) Structural judgments of familiar objects (4) Continuous attention to color and shape (5) other Face-name association (left) (6) Attributing intentions to others (7) Analogical reasoning (left side) (8) Design (9) Motion aftereffect (10)	Language Semantic categorization(left) (11) Word retrieval (Left) (12) Attention to semantic relationship (left) (13) Word generation (left) (14) Sign language (15) Single letter processing (left) (16) Understanding metaphors (left) (17) Orthographic-Phonological Binding (left) (18) Memory Recognition Memory (19)	In response to happy faces (20) repetitive priming in second encounter with same visual stimulus (21)
	2	Superior Temporal Gyrus	41 (Right) Hearing Basic processing of auditory stimuli (verbal and nonverbal) (22) Perception of harmonic tones (23) Processing of sound intensity (24) Rapid sound recognition (two way) (25) Sound distinction (26) Auditory priming (27) Memory Effect of repetitive priming (28) Active auditory memory (29) other Visual speech perception(mirror neurons) (30)	22 (left) Receptive language Processing auditory language (29) Semantic processing (30) Sentence generation (31) Frequency deviation detection (32) Generation of specified internal word (33) Related to language Selective attention to speech (34) Second language learning based on intonation (35) Repetitive words (36) Hearing (37, 38) Processing of complex sounds (39) other Attributing intentions to others (40) Analogical reasining (41)	Focused area for the neurofeedback test Passive listening to speech-like sounds (sound therapy) in autistic patients (42)(43).
	3	Lentiform Nucleus	Complex functions related to movement, cognition and emotions (44)		Fatigue caused by neurological disorders Patients exposed to chronic immune system stimulation Patients with chronic fatigue syndrome (45) aging (46)
	4	Precuneus	Self-sense (48) and agency، biography memory (47) special performance and orientation (48, 49, 50) recall، integration of environmental perception related information (Gestalt) ، mental imagery، episodic memory retrieval،emotional response to pain	A region of the inner cortical wall A key region for the “Default Mode Network” known in the brain’s resting state (47)	During meditation (51)
Male	1	Posterior Cingulate	Visual-spatial information processing (57) Feature-based attention (58) Selective attention of orientation (59) memory visual priming (60) other emotional/ attention response in visual processing (61)	18 (right) Visual diagnosis of light intensity (52) pattern recognition (53) Visual motion pattern tracking (optokinetic stimulation) (54) discrimination of finger movements (55) sustained attention to color and shape (56)	General anesthesia with propofol (45) During meditation (62)(63)

Table 4. MNI coordinates of activated regions under the influence of Faradarmani Consciousness Fields and their associated functions.

Sex	Priority	region	Related function (with respect to Brodmann's area if defined)		Deactivating Factor based on resources
Male	1	Precentral Gyrus	Left (4) motor swallowing / throat movement (64) Contralateral lower limb movement (knee, ankle, foot, toe) (65) Motor imagery (66) Movement sequence learning (67) Autonomic control of breathing (68) Control of rhythmic functions (such as bicycle) (69) Blink suppression/ voluntary blinking (70) sensory - somatic Perception of body movement (71) Frequency discrimination of vibration (72) Deep sense of fingers (73) Response to touch (74) other topography memory (motor memory) for visual clues (75) 7 (left) Mental rotation (76) Personal space perception (77) Processing of scrambled patterns (78) Using spatial images in analogical reasoning (79)	Processing tool-based movements (80) Motor execution (81) Mirror neurons (82) Saccadic eye movement (83) Memory Working memory (motor, visual, auditory, somatosensory, verbal) (84) Visual-spatial memory (right) (85) Conscious recall of previous experienced events (86) sense pain perception (87) attention visuomotor attention (88) language language processing (89) literal sentence processing (90) word perception (imaging) (91) other processing emotions and self-reflecting during decision-making (92) targeted processing (93)	Exhausting exercise (94) Heart rate increase (95)(96)
	2	Frontal Gyrus Superior	Right (6) motor programing/motor sequencing (97) autonomic control of breathing (98) horizontal saccadic eye movement (99) coordination between limbs (100) language language change (101) speech comprehension (102) word recall (103) memory working memory (103) remembrance practice (104) long-term episodic memory (105) topographical memory (106)	attention spatial attention (107) Visuomotor attention (108) Attention to human voice (109) other observation of action (mirror neurons) (110) programing/solving novel problems (111) executive behavioral control (112) response to tactile stimulation (113) generation of musical phrases (114) calculation (115) Recognition of contextual texture (116) Detection of frequency deviation (117)	Cumulative dose of antipsychotic (118) In regulation condition (119)
Female	1	Caudate		Voluntary skeleton movement control learning، memory، reward، motivation، emotions and romantic interactions (120)(121) Studies of disfunction in this area have found it involved in several disorders including: Huntington's and Parkinson's diseases, various forms of dementia, ADHD[1], bipolar disorder, obsessive-compulsive disorder, and schizophrenia (122).	Coordinated activities such as dancing, singing, etc. (123) Positive correlation with cognitive mental fatigue (124،125)

1. Attention deficit hyperactivity disorder

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Analysis of MRS Spectrum and Shannon Entropy Changes Under the Influence of the Faradarmani Consciousness Field (Task) and without it (Rest)

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Abstract

The Faradarmani Consciousness Field is non-physical in nature, and its influence begins through the human mind. In a previous study using fMRI, it was shown that specific brain regions in trained individuals, known as Faradarmangars, became activated or deactivated during the task state involving the use of this field. Proton magnetic resonance spectroscopy (^{1}H-MRS), as a non-invasive method, allows for the assessment of changes in brain function and metabolism during exposure to the Faradarmani Consciousness Field. In this study, changes in the output spectrum from the MRS method were analyzed without focusing on any specific metabolite, accompanied by the calculation of Shannon entropy based on the distribution of spectral values. In fact, through this analysis, prior to the detailed examination of each individual metabolite, we gain insight into possible overall metabolic changes in the brains of Faradarmangars based on the obtained spectrum. This research significantly contributes to understanding general metabolic changes involved in brain activation and deactivation, as well as identifying the contrast between activated and deactivated areas based on the quantitative metric of entropy. According to the results of this study, the MRS spectrum showed an approximately 30% overall reduction in amplitude in the brain's activation region and about a 20% decrease in the Shannon entropy of amplitude distribution in comparison to the average control group. In contrast, no significant changes were observed in these parameters in the deactivated region.

Keywords: MRS, metabolite, spectrum, Shannon entropy, amplitude, Faradarmani

Introduction

Magnetic resonance (MR) imaging, introduced in the 1980s, has revolutionized the diagnostic landscape of central nervous system (CNS) disorders (Oz et al., 2014). Over the past few decades, MR techniques have continued to evolve, giving rise to advanced methods such as functional MRI (fMRI), and proton magnetic resonance spectroscopy (^{1}H-MRS), which have further enhanced our understanding of brain function, metabolism, and pathology (Padelli et al., 2022). Instead of displaying visual images of structures, MRS generates a linear spectrum — a graph with chemical shift (in parts per million, ppm) on the x-axis and signal intensity (amplitude) on the y-axis. Each peak in the spectrum corresponds to a specific metabolite, allowing researchers to identify and quantify brain metabolites such as N-acetylaspartate (NAA), choline (Cho), creatine (Cr), and others (Liserre et al., 2021).

The concept of Shannon entropy has so far been used to analyze large datasets obtained from biological samples. In biology, Shannon entropy is commonly applied to measure diversity and to determine the distribution and interactions of cells, genes, or molecules (Roach, 2020). Initially, Shannon entropy was used to represent the randomness in DNA sequences composed of the four nucleotides: adenine (A), cytosine (C), guanine (G), and thymine (T) (Schmitt and Herzel, 1997; Li et al., 2019). In systems biology, information content is described using Shannon entropy (Uda, 2020), and it has been applied to evaluate the robustness of signal transmission across various omics layers, such as transcriptomics, proteomics, and metabolomics (Uda et al., 2013).

For example, Shannon entropy calculated from mass spectrometry data of peanuts was used to identify advanced glycation end-products (Johnson et al., 2016). The application of Shannon entropy to RNA-seq datasets has also proven valuable for rapid and in-depth analysis of gene expression changes (Zambelli et al., 2018). In another case, antibodies in human blood were identified using a peptide microarray, and Shannon entropy calculated from the resulting profiles was proposed as an indicator of individual and population health status (Wang et al., 2017).

Based on Taheri's theory, there are various T-Consciousness Fields (TCFs), which are subcategories of the Cosmic Consciousness Network (CCN). The Faradarmani Consciousness Field is one of these non-physical fields. In this approach, these fields can be utilized by humans. Indeed, information transmitted from TCFs can induce alterations in the subject under study (Taheri, 2013).

As cited in the references, all metabolite-related data are derived from the output spectrum of the MRS method. In this study, prior to conventional spectral analyses and the extraction of data on the concentration and types of individual metabolites, we conducted a direct and independent examination of the raw MRS output spectrum, analyzing it using Shannon entropy. Previously, multiple studies involving T-Consciousness Fields have also measured Shannon entropy and analyzed the effects of such fields on the subject under investigation (Taheri et al., 2022a).

Method

MRI was performed on a 3.0-T clinical scanner (Magnetom Prisma, Siemens Medical Solutions, Erlangen, Germany) with a gradient strength of 40 mT/m. A body-connected coil enabled the transmission of excitation. Specifically, a ^{1}H phased-array head coil (125 MHz) was used for signal detection (Siemens Rapid Biomedical, Germany).

After acquiring scout images of the subjects, a T2-weighted imaging protocol was performed in axial and coronal planes to capture data from the regions of interest. The MRI protocols were also followed for the MRS experiments. Data acquisition was conducted in two phases: similarly to previous steps, from baseline up to 15 minutes before the onset of treatment (rest phase), and immediately after the initiation of the treatment up to 15 minutes (task phase).

The T2-weighted imaging protocol was based on a standard spin-echo sequence with the following parameters: TR/TE = 5000/77 ms, NEX = 2, FOV = 4 × 4 cm^2, matrix size = 256 × 256, and slice thickness = 1 mm. Prior to performing MRS, a voxel of 1×1×1 cm^3 was defined in each of the three target regions for each subject. Following manual shimming and water suppression adjustment, short-echo proton MR spectra with high signal quality were acquired using the PRESS technique (TR/TE=6000/135 ms, 156 acquisitions).

Before starting the MRS test, water suppression was performed using second-order shimming and a Chemical Shift Selective (CHESS) pulse sequence. At the end of the MRS experiment, the reference water signal was acquired by disabling water suppression to allow for metabolite concentration calibration. The described MRI and MRS protocols were conducted similarly both before and after the treatment process. Rest and task imaging were performed sequentially without moving the subjects and with their eyes completely closed during both phases.

Experimental design

Based on fMRI data from previous studies, in order to investigate metabolic changes in the activated and deactivated brain regions of Faradarmangars, three regions were selected: one containing an activated area (right Precentral Gyrus), one containing a deactivated area (right Superior Temporal Gyrus), and a third region with similar dimensions located between the activated and deactivated areas, which, according to the obtained data (Taheri et al., 2022b), does not show activation or deactivation in response to the Faradarmani Consciousness Field (Figure 1). The third region was chosen to serve as a negative control for comparing potential metabolic changes with the other two regions. Images of the selected regions and the MRS spectra obtained during the rest state are presented in Figures 2 to 4.

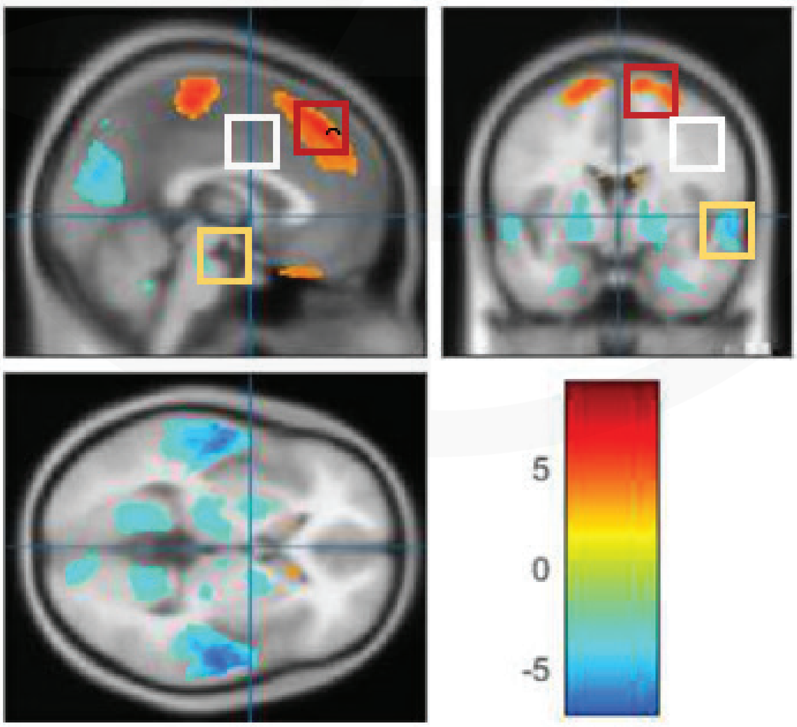

Figure1. Three selected regions based on fMRI data. Red box: Activated region, Yellow box: Deactivated region, White box: Neither activated nor deactivated region (Taheri et al., 2022b).

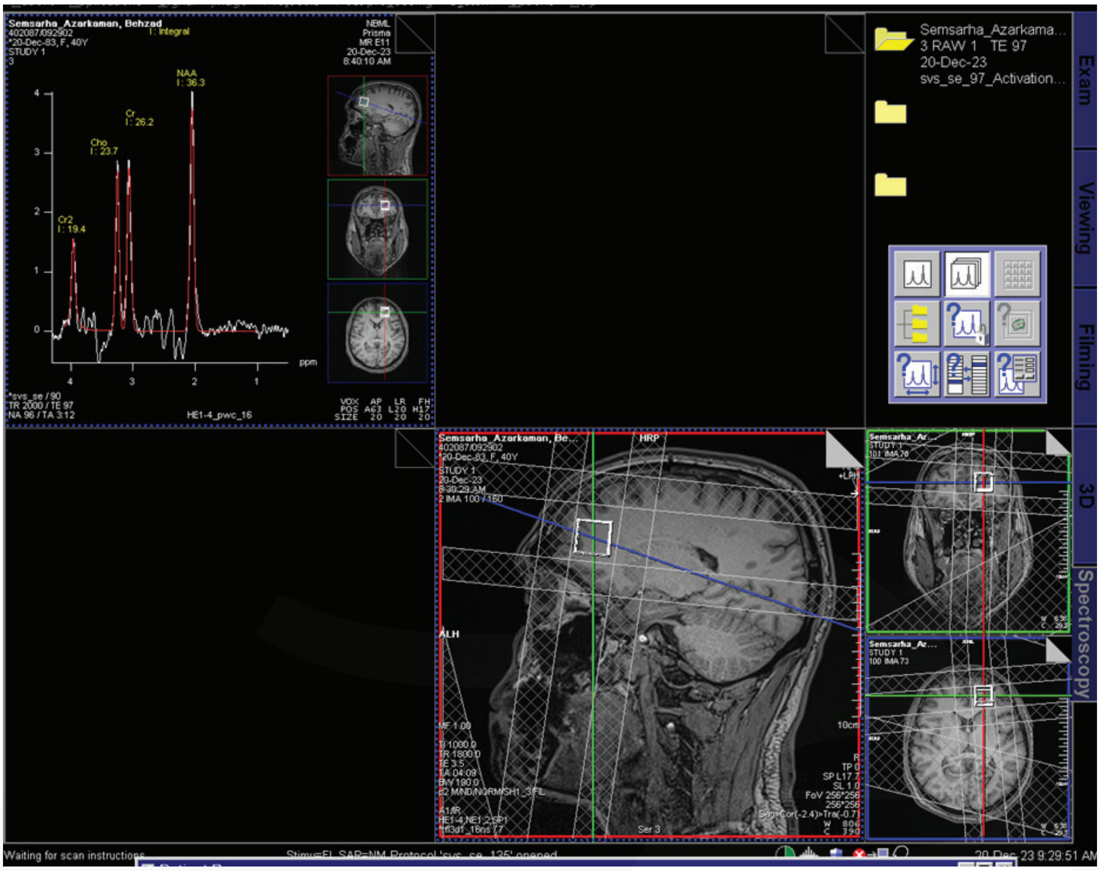

Figure 2. T2-weighted MR image of one of the study subjects, showing the placement of the MRS voxel on the selected activated region under Faradarmani Consciousness Field treatment, along with the proton spectrum obtained in the rest state.

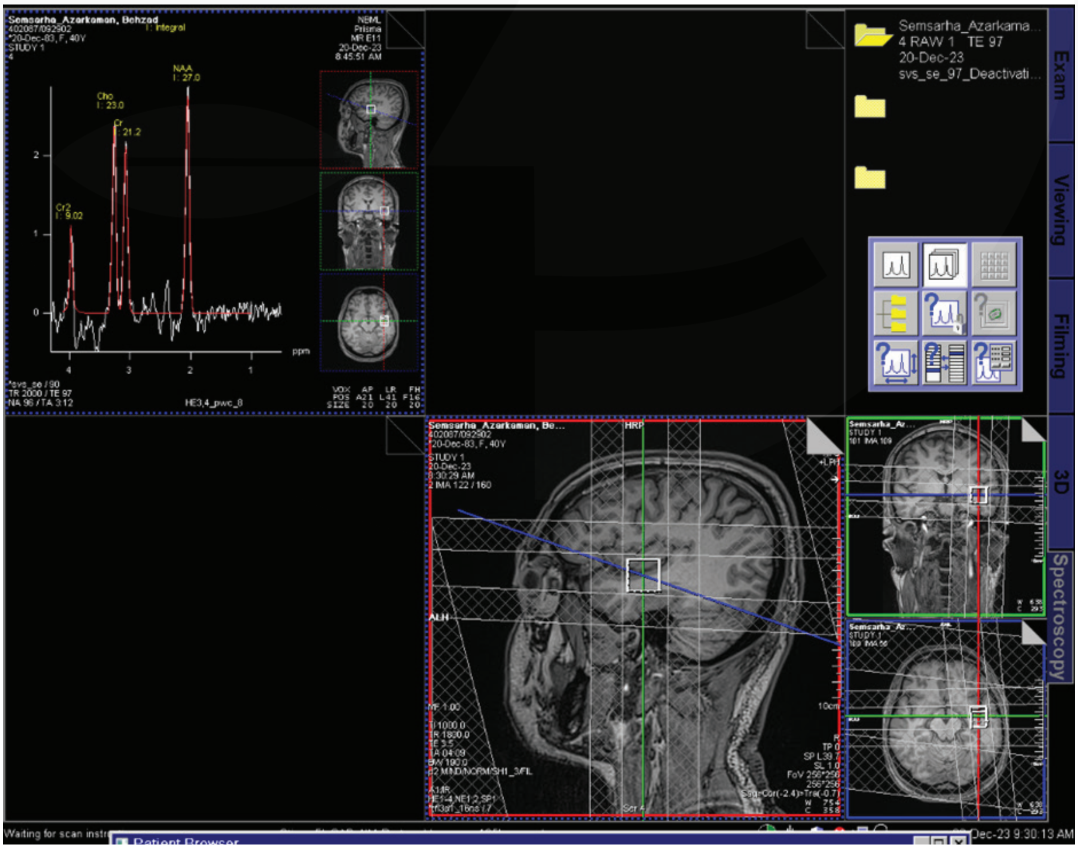

Figure 3. T2-weighted MR image of one of the study subjects, showing the placement of the MRS voxel on the selected deactivated region under Faradarmani Consciousness Field treatment, along with the proton spectrum obtained in the rest state.

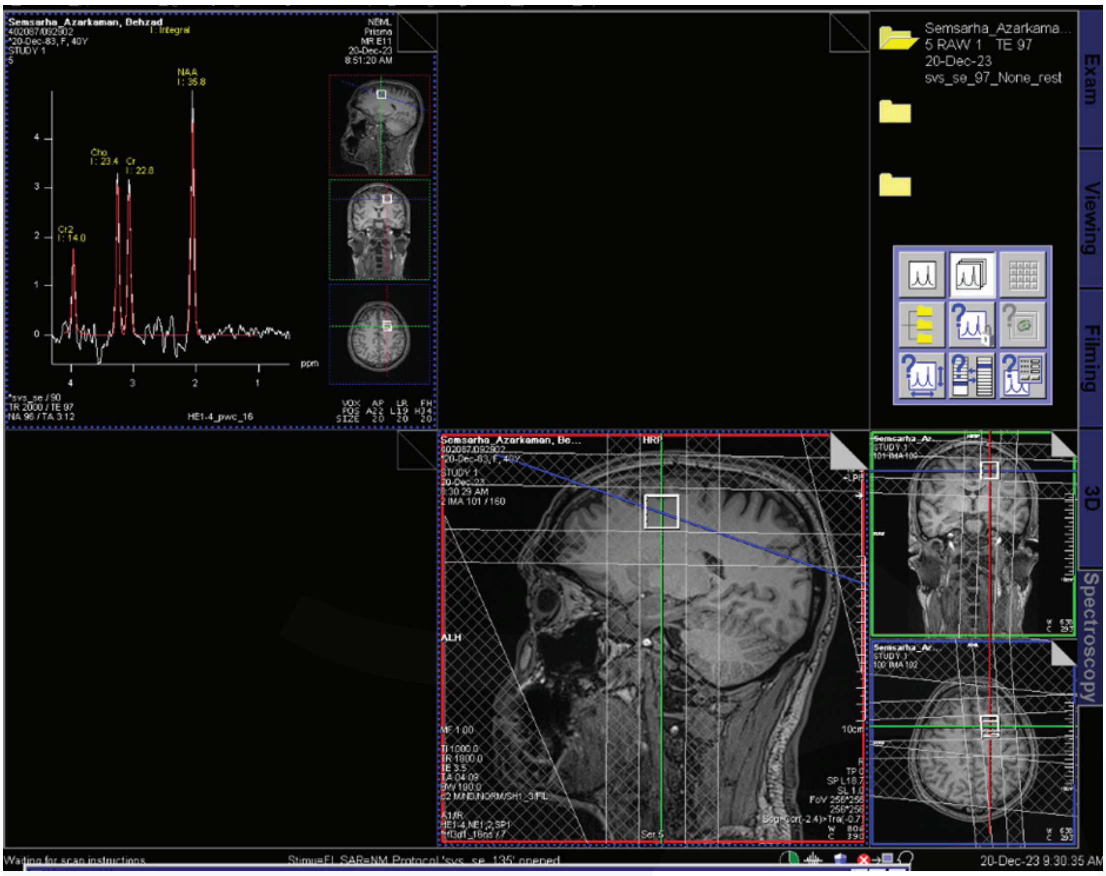

Figure 4. T2-weighted MR image of one of the study subjects, showing the placement of the MRS voxel on the selected neither activated nor deactivated region during Faradarmani Consciousness Field treatment, along with the proton spectrum obtained in the rest state.

Analysis of the MR spectrum

The volume of interest (VOI) for the MRS experiments was drawn on T2-weighted images. We attempted to create identical VOIs for the three regions across different subjects to ensure similar coverage of the target areas in each individual. Each spectrum corresponding to the selected regions was analyzed using a Java-based graphical user interface. This interface, used for the MRUI quantification package, contains a basic knowledge base of 57 peaks associated with at least 34 different metabolites. Metabolite concentrations were determined relative to the water signal used as a reference. Therefore, all amplitudes in each MR spectrum were expressed semi-quantitatively. It is also worth mentioning that the advanced method for accurate, robust, and efficient spectral fitting (AMARES) was used for quantification (Vanhamme et al., 1997).

The Application of Faradarmani Consciousness Field

In the present study, a population-level MRS analysis was conducted on Faradarmangars, comparing metabolite changes in selected brain regions during the task and rest phases. The task refers to the activity during which a Faradarmangar personally connects to the Cosmic Consciousness Network. This study was approved by the Ethics Committee of Iran University of Medical Sciences (Approval ID: IR.IUMS.REC.1402.940).

Thirty healthy adult participants (mean age: 42 ± 7 years), all with no history of neurological or psychiatric medication use in the six months prior to the test day, were included in the study group. Of these participants, 40% were male (n = 12) and 60% were female (n = 18). The design of the studies conducted using the MRS technique included a 15-minute rest phase (prior to connection with the field) and a 15-minute task phase, representing the state of connection with the Faradarmani Consciousness Field (initiated immediately after the rest phase). Further details about each phase of the study in chronological order are as follows:

1. **Rest**: A 15-minute initial phase in which Faradarmangars were instructed, while inside the MRI scanner, to keep their eyes closed and remain relaxed and stress-free, without engaging with any Consciousness Fields. The purpose of this phase was to obtain control data, representing the baseline state before connection with the field. This baseline plays a critical role in constructing population-level control data or "pre-connection" references.

2. **Task**: In this study, the second 15-minute phase—immediately following the rest phase without any temporal gap—is referred to as the task phase. In this phase, the individuals establish a connection with the Faradarmani Consciousness Field. This connection is initiated solely by the participants themselves upon hearing a predefined beep, which they had been informed in advance signals the beginning of the connection.

3. Data Analysis

The data obtained from this study were statistically analyzed using GraphPad software (version 9). One-way analysis of variance (ANOVA) was used to assess metabolite levels in comparisons between control and test samples. For the MRS datasets of each group, the Wilcoxon test was applied at a 5% significance level to compare changes in the concentration of each metabolite before and after treatment with the Faradarmani Consciousness Field.

Results and Discussion

In this study, without performing separate analyses of individual metabolites or focusing on their specific details, the overall MRS spectra were compared and examined. Figure 5 shows the spectral changes during the task state under the influence of the Faradarmani Consciousness Field, relative to the rest state, in activated and deactivated brain regions of the Faradarmangars.

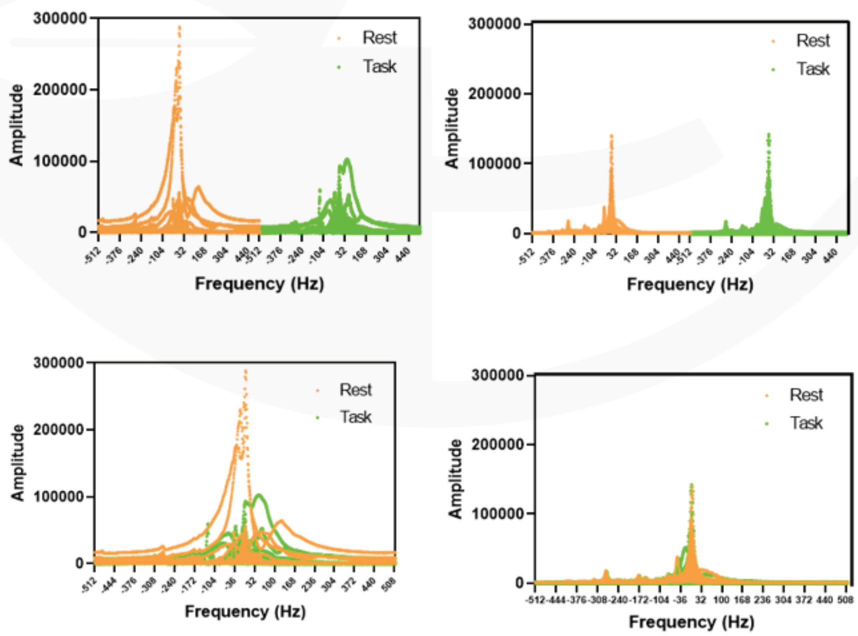

Figure 5. Comparison of the obtained spectra during the first 15 minutes (rest) and the second 15 minutes (task), shown separately (top) and overlaid (bottom). The task state refers to the condition under the influence of the Faradarmani Consciousness Field, while the rest state refers to the condition without it. Right: deactivated brain regions; Left: activated brain regions.

As shown in Figure 5, in the activated brain regions, the task state exhibits a reduction in the area under the peaks as well as a decrease in the peak power of the dominant signals. In contrast, in the deactivated regions, the task and rest spectra show a high degree of alignment despite existing differences. For improved comparison, the averaged peaks of the samples have also been compared, presented in Figures 6 and 7 and Table 1.

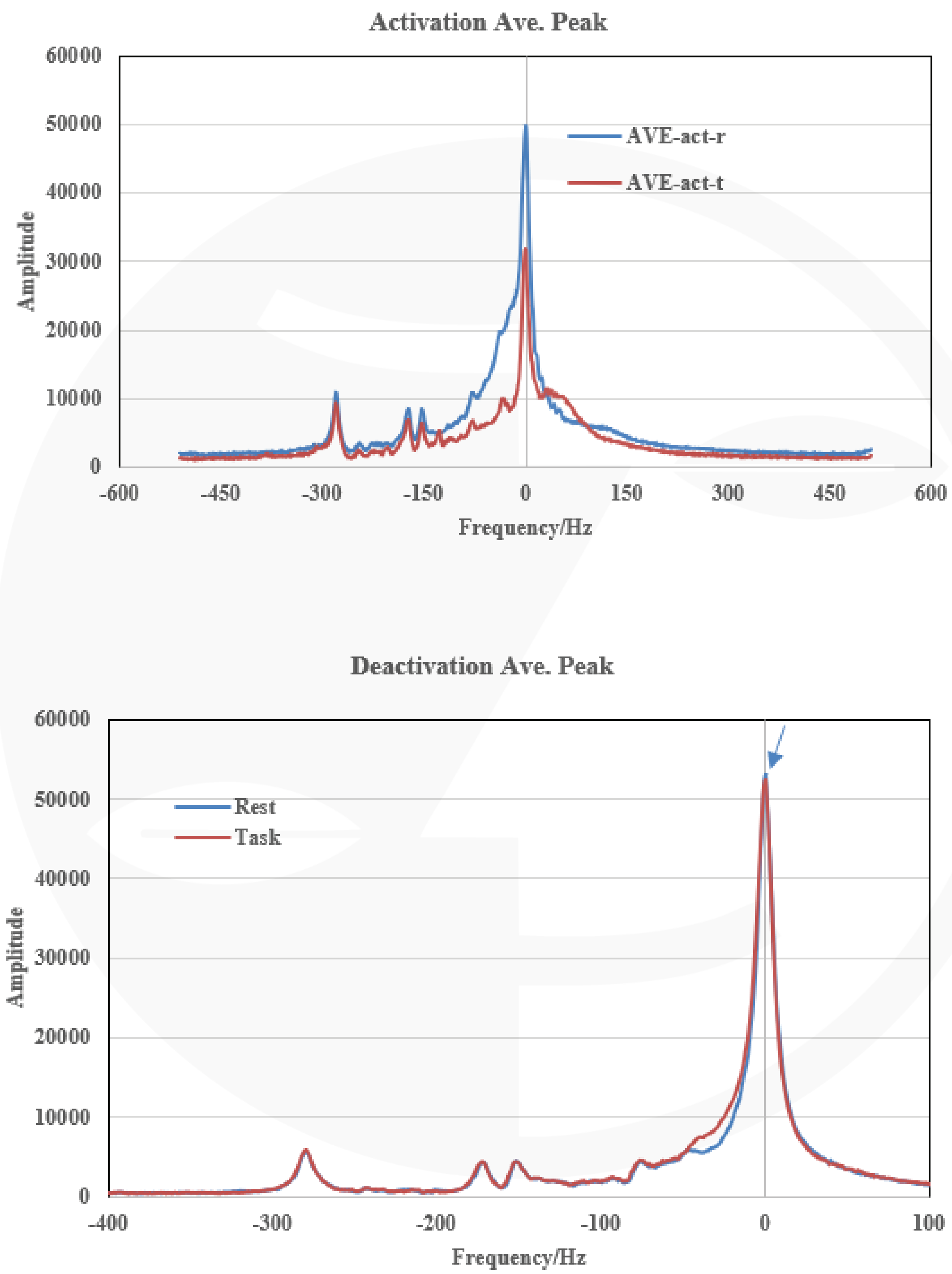

Figure 6. Comparison of the averaged spectra in the task and rest states in the activated brain region (top) and the deactivated brain region (bottom). The task state refers to the condition with exposure to the Faradarmani Consciousness Field, and the rest state refers to the condition without it. Red arrows indicate amplitude increases resulting from the task state, while blue arrows indicate amplitude increases resulting from the rest state.

Table 1. Comparison of the averaged spectra in the activated and deactivated brain regions of the Faradarmangars in the rest state (without Faradarmani Consciousness Field) and the task state (with Faradarmani Consciousness Field).

	Activation		**Deactivation**	
	Rest	Task	Rest	Task
Total Peak Area	5414030	3781657	2334550	2343484
Std. Error	348326	173718	92973	96046
Peak Y	49887	31836	52588	49905
Area	5414030	3781657	2334550	2343484
Std. Error	348326	173718	92973	96046

As shown in Figures 6, 7, and Table 1, the spectrum of the activated brain region of Faradarmangars exhibits a significant difference between task and rest, with a decrease observed during the task. This difference in the area under the peak shows a reduction of approximately 30% in the task state compared to the rest state. However, no significant difference is observed between task and rest in the deactivated brain region of Faradarmangars (less than 0.5% difference).

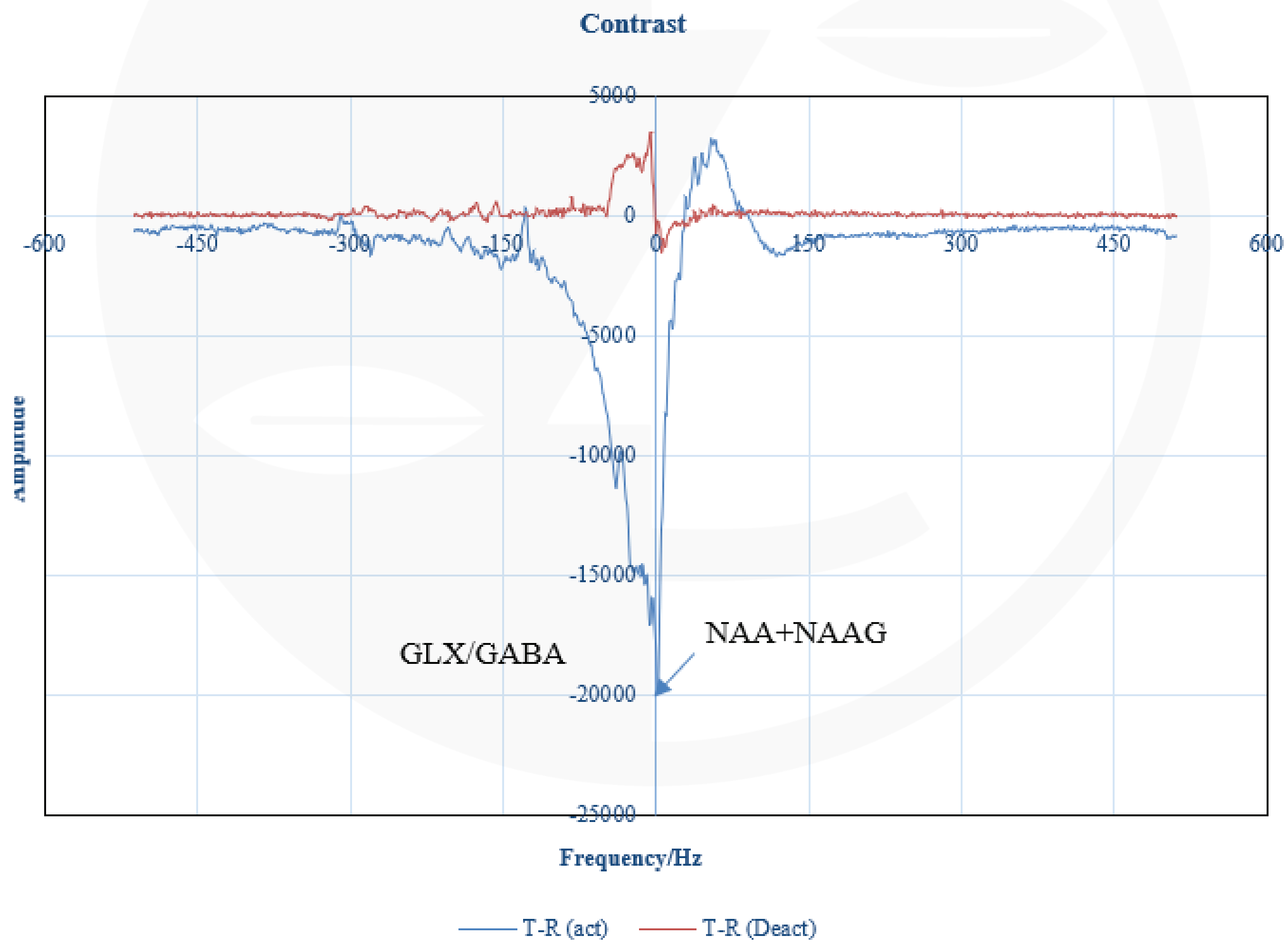

Figure 7. Comparison of the rest-task contrast in the activated (blue) and deactivated (red) brain regions of the Faradarmangars. The regions showing significant differences, along with potential metabolites contributing to these differences, are highlighted with tags.

The change in the spectra obtained from the MRS technique, independent of frequency and based on amplitude, is analyzed in Figure 8. The difference in amplitude comparison independent of frequency shows a significant population difference in the activated brain region, unlike the deactivated region. This observation suggests that different parts of the brain are affected differently by the Faradarmani Consciousness Field. In Taheri's approach, the role of the brain, compared to the mind, is likened to an antenna that receives the processed information from the mind. After receiving this information, it is translated into the language of physics, resulting in metabolic changes and brain activity.

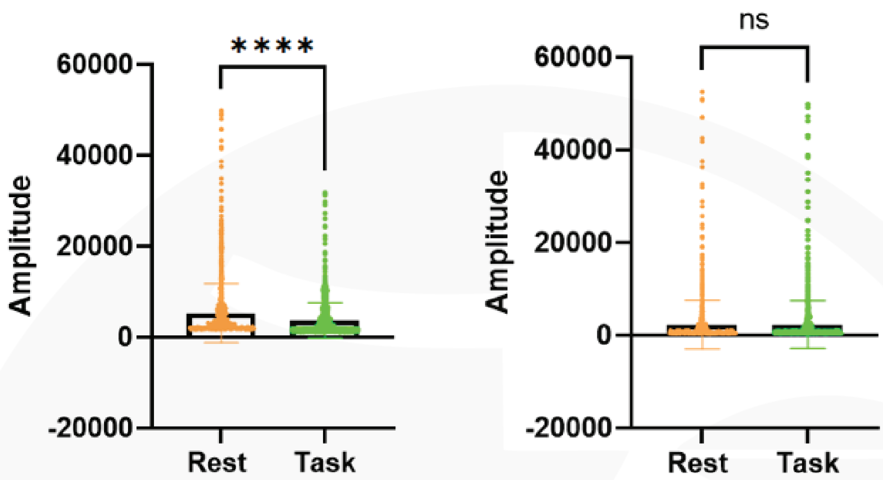

Figure 8. Comparison of the peaks of test and control samples in terms of population amplitudes independent of frequency during paired t-test statistical analysis. Left: Activated brain region. Right: Deactivated brain region. ****: p value < 0.0001.

To better examine the amplitudes within the range produced in this study, as shown in Figure 9, the amplitude values were analyzed in frequency intervals of equal ranges (with 2000-unit intervals).

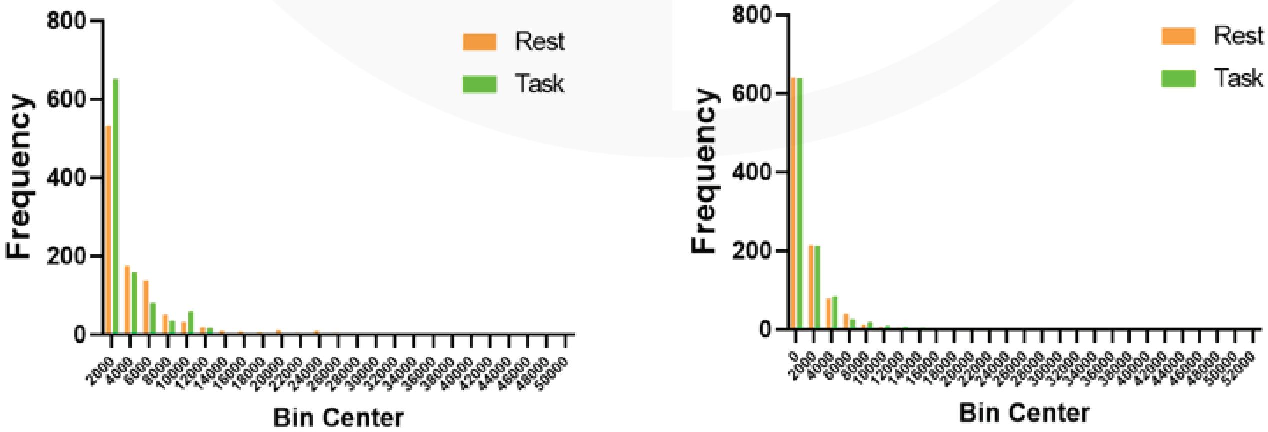

Figure 9. Histogram of amplitude frequency values in the task state (with Faradarmani) and rest state (without Faradarmani) at 2000 intervals. Left: Activated brain region. Right: Deactivated brain region.

In the activated brain region, the difference in the frequency of recorded amplitude values indicates that the effect of the Faradarmani Consciousness Field is associated with an increase in frequency in the first range and a reduction in amplitude values in the terminal ranges (bins between 14000 and 24000). The frequency analysis difference in the deactivated region is not significant. The Shannon entropy calculation based on the frequency analysis data shown in Figure 9 is provided in Table 2.

Table 2. Frequency analysis of amplitude values in different ranges along with the calculation of Shannon entropy.

Activation					Deactivation				
Bin Center	**Rest**	**Task**	**Pi.LnPi (Rest)**	**Pi.LnPi (Task)**	**Bin Center**	**Rest**	**Task**	**Pi.LnPi (Rest)**	**Pi.LnPi (Task)**
2000	533	651	0.339866	0.287967	0	641	639	0.293558	0.294269
4000	176	159	0.30267	0.289207	2000	215	213	0.327599	0.32661
6000	138	81	0.2701	0.200682	4000	78	84	0.196007	0.205132
8000	51	35	0.149396	0.115395	6000	40	26	0.126578	0.093269
10000	32	59	0.108304	0.164436	8000	12	18	0.052069	0.071035
12000	19	17	0.073978	0.068037	10000	6	9	0.030092	0.04161
14000	10	3	0.045204	0.017088	12000	5	6	0.025966	0.030116
16000	8	4	0.037906	0.021661	14000	3	5	0.017075	0.025986
18000	6	3	0.030116	0.017088	16000	4	3	0.021644	0.017088
20000	12	1	0.052108	0.006769	18000	1	2	0.006763	0.012184
22000	5	2	0.025986	0.012184	20000	2	2	0.012174	0.012184
24000	10	2	0.045204	0.012184	22000	2	2	0.012174	0.012184
26000	5	1	0.025986	0.006769	24000	2	2	0.012174	0.012184
28000	3	1	0.017088	0.006769	26000	1	0	0.006763	-
30000	2	2	0.012184	0.012184	28000	2	2	0.012174	0.012184
32000	1	3	0.006769	0.017088	30000	0	0	-	-
34000	2	0	0.012184	-	32000	2	1	0.012174	0.006769
36000	0	0	-	-	34000	0	1	-	0.006769
38000	2	0	0.012184	-	36000	1	1	0.006763	0.006769
40000	0	0	-	-	38000	1	2	0.006763	0.012184
42000	2	0	0.012184	-	40000	0	0	-	-
44000	1	0	0.006769	-	42000	2	1	0.012174	0.006769
46000	2	0	0.012184	-	44000	0	1	-	0.006769
48000	2	0	0.012184	-	46000	0	1	-	0.006769
50000	2	0	0.012184	-	48000	2	1	0.012174	0.006769
Sum	**1024**	**1024**	**1.622741**	**1.255511**	50000	1	2	0.006763	0.012184
					52000	2	0	0.012174	-
					Sum	**1025**	**1024**	**1.221799**	**1.237788**

The calculation of entropy values in the averaged task and rest states in the activated brain region indicates a decrease of approximately 20% in entropy during the task state in the amplitude range of this study. The entropy difference in the deactivated region shows an increase of about 1.3% during the task compared to rest. As mentioned in the introduction, regarding the mechanism of influence of this non-physical field, it is hypothesized that information is transmitted under the influence of the Faradarmani Consciousness Field. The received information leads to observable changes at the brain level. Entropy calculation allows us to infer changes in the content of information. One of the earliest models of information theory is the communication model introduced by Shannon and Weaver (1949). According to this model, a system, prior to receiving information, exists in a physical state characterized by maximum uncertainty and entropy. Upon receiving information, entropy decreases (Shannon and Weaver, 1949; Hoffman et al., 2023). Therefore, before delving into the detailed analysis of metabolite changes, this study provides evidence of the Faradarmani Consciousness Field's influence at the brain level.

In summary, the overall metabolite spectrum analysis indicates a significant and notable decrease in amplitude and entropy of their values as a result of the task in the activated brain region of the Faradarmangars. This metric does not show a significant difference between the test and control in the deactivated region. A detailed analysis of individual metabolites will be presented in subsequent studies.

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Examination of Changes in Key Brain Metabolites in Faradarmangars Under the Influence of Faradarmani Consciousness Field Using Proton Magnetic Resonance Spectroscopy (^{1}H-MRS)

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Abstract

The Faradarmani Consciousness Field is non-physical in nature. Although it cannot be quantitatively measured, its effects can be observed and examined through well-designed experiments. In this study, changes in key brain metabolites were investigated in a population of trained individuals known as Faradarmangars. In a previous study using fMRI, it was shown that certain regions of the brain were activated or deactivated under the influence of this field, while some regions remained unchanged. These specific areas were the focus of the present research. To do this, changes in the concentrations of key metabolites, including the combined NAA+NAAG, total choline, total creatine, the sum of Glu and Gln amino acids, and myo-inositol, were compared across activated, deactivated, and unaffected brain regions under two conditions: rest (without field influence) and task (with field influence). The results of this study show that most key metabolites in their total form exhibited a decreasing trend in both activated and deactivated brain regions under the influence of the Faradarmani Consciousness Field. Additionally, the correlation of changes between rest and task was initially assessed using Pearson correlation analysis. Subsequently, the overall study population was divided into two subpopulations based on the trend of changes in NAA levels—those in which NAA increased and those in which it decreased as a result of the Faradarmani treatment. Pearson correlation analysis was then repeated for the aforementioned metabolites within each subpopulation. The results indicated divergent trends between total choline and total creatine in the activation region, suggesting that these metabolites follow opposite trajectories—a pattern that may be key to the activation observed in specific brain regions among Faradarmani practitioners. The reduction in total creatine points to altered energy conditions under the influence of the Consciousness Field. A direct investigation of energy carriers using phosphorus MRS is currently planned by the authors.

Keywords: MRS spectrum, total choline, total creatine, myo-inositol, NAA, NAAG, Faradarmani

Introduction

Magnetic resonance spectroscopy (MRS) is a non-invasive technique derived from high-resolution nuclear magnetic resonance (NMR) spectroscopy (Barker and Li, 2006). While NMR has traditionally been employed to analyze the molecular structure of chemical compounds, it also laid the groundwork for applications in biological systems (Emwas et al., 2020). Building on this foundation, *in vivo* MRS was developed in the late 1970s, enabling the direct investigation of tissue metabolism and chemical composition within living organisms (Mansfield and Grannell, 1973). This advancement has proven especially valuable in neuroscience, where MRS is widely used to assess brain metabolites under both physiological and pathological conditions (Wilson et al., 2019).

In proton magnetic resonance spectroscopy (^{1}H-MRS) of the brain, the metabolites N-acetylaspartate (NAA), creatine (Cr), and choline (Cho) are key markers for assessing normal brain metabolism and identifying pathological changes. Changes in the relative ratios of these metabolites, such as a reduction in the NAA to creatine (NAA/Cr) ratio or an elevation in the choline to NAA (Cho/NAA) ratio, may reflect various neuropathological conditions (Weinberg et al., 2021).

The creatine (Cr) peak, resonating at approximately 3.0 parts per million (ppm), offers valuable insights into cellular energy metabolism (Verma et al., 2016). Creatine and phosphocreatine (PCr), primarily located in neurons and glial cells, play a key role in sustaining ATP levels. Therefore, alterations in the Cr peak may indicate disruptions in the brain's energy homeostasis (Dossi et al., 2019). Choline is essential to several critical biological processes, including maintaining cell membrane integrity, facilitating methylation reactions, and supporting the synthesis of key neurotransmitters. Therefore, monitoring choline peaks in MRS is a valuable tool for diagnosing brain tumors, as the rapid proliferation of cancer cells is typically associated with increased choline demand for membrane synthesis (Yao et al., 2023). Conversely, reduced NAA levels often indicate tumor infiltration into healthy brain tissue, reflecting impaired neuronal function (Lu et al., 2024).

Glutamate (Glu) and glutamine (Gln) are among the most abundant amino acids in the human brain, with concentrations ranging from 6–13 mmol/kg and 3–6 mmol/kg of wet weight, respectively (Ramadan et al., 2013). These two compounds are metabolically interconnected, with Glu being stored as Gln in glial cells. Their balanced cycling between neurons (Glu) and glia (Gln) is crucial for normal brain function and reflects essential neuron-glia metabolic interactions. (Soto-Verdugo and Ortega, 2021). Glu also serves as the brain's primary excitatory neurotransmitter, playing a central role in synaptic activity by being released from presynaptic neurons and binding to postsynaptic receptors to trigger neuronal activation (Zhou and Danbolt, 2014).

The present study was designed to investigate a novel hypothesis grounded in the theoretical framework proposed by Taheri. According to this perspective, various T-Consciousness Fields (TCFs)—subsets of the Cosmic Consciousness Network—exist as non-physical entities. Although these fields cannot be measured using conventional quantitative tools, their effects can be examined through laboratory-based experiments. The influence of these fields is initiated through the human mind, typically by a brief moment of attention lasting only a few seconds. In this model, the brain is not regarded as the source of consciousness, but rather as a detector that receives and processes information from the mind (Taheri, 2013). This processing can lead to observable changes in brain activity. Previous studies employing EEG and fMRI techniques have reported alterations in brain function following exposure to the Faradarmani Consciousness Field, a specific type of T-Consciousness Field (Taheri et al., 2022; Taheri et al., 2022a)

It is hypothesized that when an individual initiates the use of Faradarmani through a brief moment of attention, a connection is established that allows information to be transmitted from the Faradarmani (TCF1) (Taheri et al., 2024). This informational input is proposed to influence brain function, leading to measurable changes in activity. In this study, in addition to assessing changes in key brain metabolites under the influence of the Faradarmani Consciousness Field, metabolic variations were analyzed using Pearson correlation based on the increasing or decreasing trend of NAA across the entire population as well as within subgroups.

Method

MRI was performed on a 3.0-T clinical scanner (Magnetom Prisma, Siemens Medical Solutions, Erlangen, Germany) with a gradient strength of 40 mT/m. A body-connected coil enabled the transmission of excitation. Specifically, a ^{1}H phased-array head coil (125 MHz) was used for signal detection (Siemens Rapid Biomedical, Germany).

After acquiring scout images of the subjects, a T2-weighted imaging protocol was performed in axial and coronal planes to capture data from the regions of interest. The MRI protocols were also followed for the MRS experiments. Data acquisition was conducted in two phases: similarly to previous steps, from baseline up to 15 minutes before the onset of treatment (rest phase), and immediately after the initiation of the treatment up to 15 minutes (task phase).

The T2-weighted imaging protocol was based on a standard spin-echo sequence with the following parameters: TR/TE = 5000/77 ms, NEX = 2, FOV = 4 × 4 cm^2, matrix size = 256 × 256, and slice thickness = 1 mm. Prior to performing MRS, a voxel of 1×1×1 cm^3 was defined in each of the three target regions for each subject. Following manual shimming and water suppression adjustment, short-echo proton MR spectra with high signal quality were acquired using the PRESS technique (TR/TE = 6000/135 ms, 156 acquisitions).

Before starting the MRS test, water suppression was performed using second-order shimming and a Chemical Shift Selective (CHESS) pulse sequence. At the end of the MRS experiment, the reference water signal was acquired by disabling water suppression to allow for metabolite concentration calibration. The described MRI and MRS protocols were conducted similarly both before and after the treatment process. Rest and task imaging were performed sequentially without moving the subjects and with their eyes completely closed during both phases.

Experimental design

Based on fMRI data from previous studies, in order to investigate metabolic changes in the activated and deactivated brain regions of Faradarmangars, three regions were selected: one containing an activated area (right Precentral Gyrus), one containing a deactivated area (right Superior Temporal Gyrus), and a third region with similar dimensions located between the activated and deactivated areas, which, according to the obtained data, does not show activation or deactivation in response to the Faradarmani Consciousness Field (Figure 1). The third region was chosen to serve as a negative control for comparing potential metabolic changes with the other two regions. Images of the selected regions and the MRS spectra obtained during the rest state are presented in Figures 2 to 4.

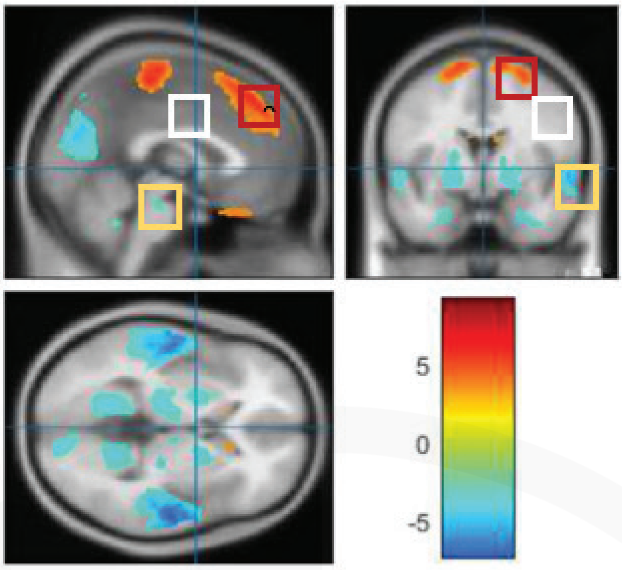


Figure 1. Three selected regions based on fMRI data. Red box: Activated region, Yellow box: Deactivated region, White box: Neither activated nor deactivated region (Taheri et al., 2022).

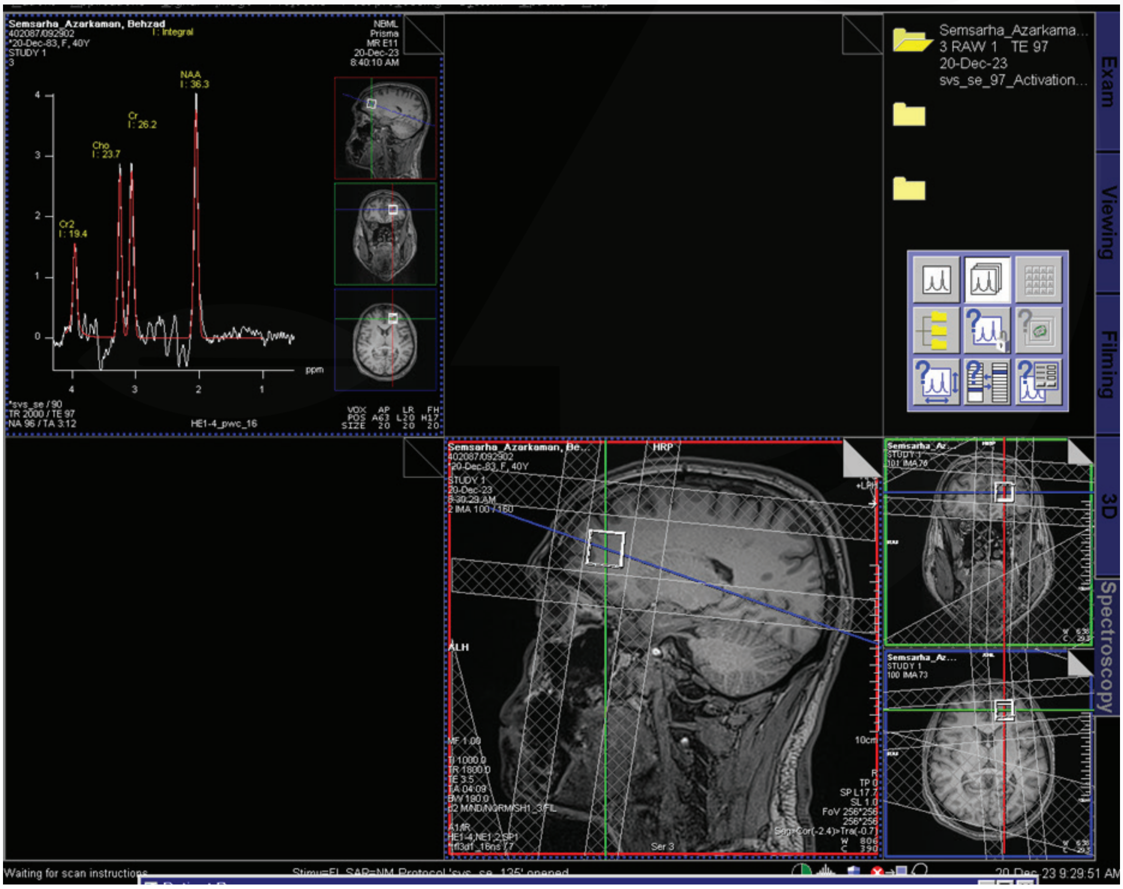


Figure 2. T2-weighted MR image of one of the study subjects, showing the placement of the MRS voxel on the selected activated region under Faradarmani Consciousness Field treatment, along with the proton spectrum obtained in the rest state.

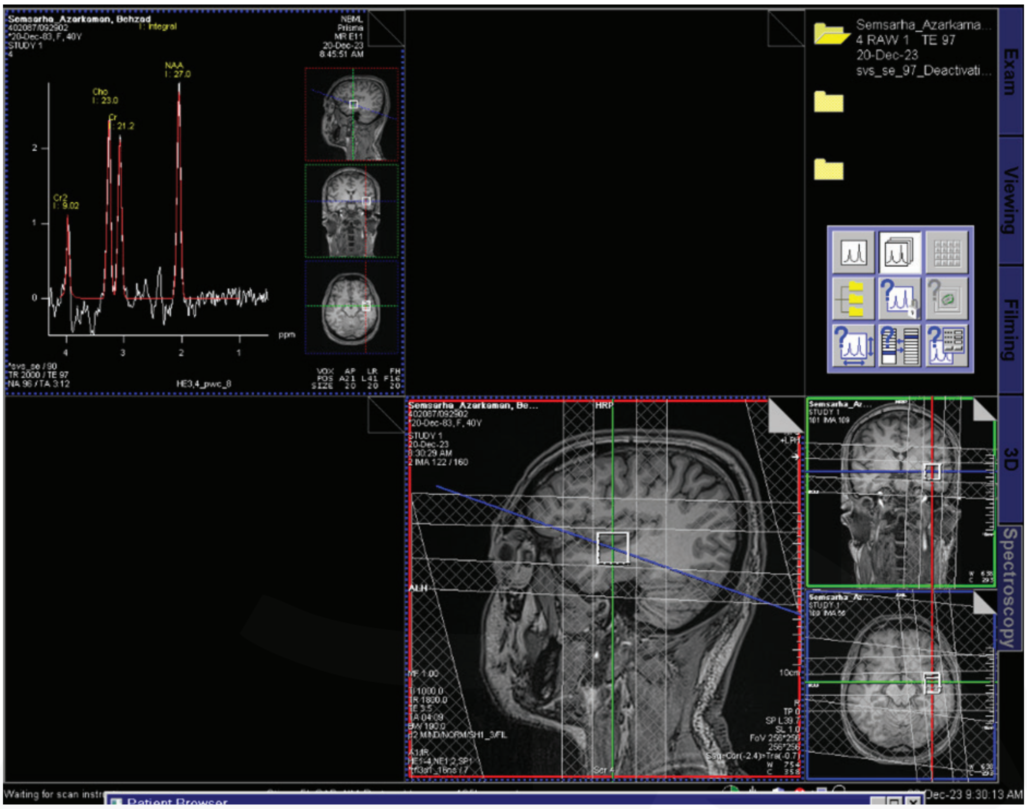


Figure 3. T2-weighted MR image of one of the study subjects, showing the placement of the MRS voxel on the selected deactivated region under Faradarmani Consciousness Field treatment, along with the proton spectrum obtained in the rest state.

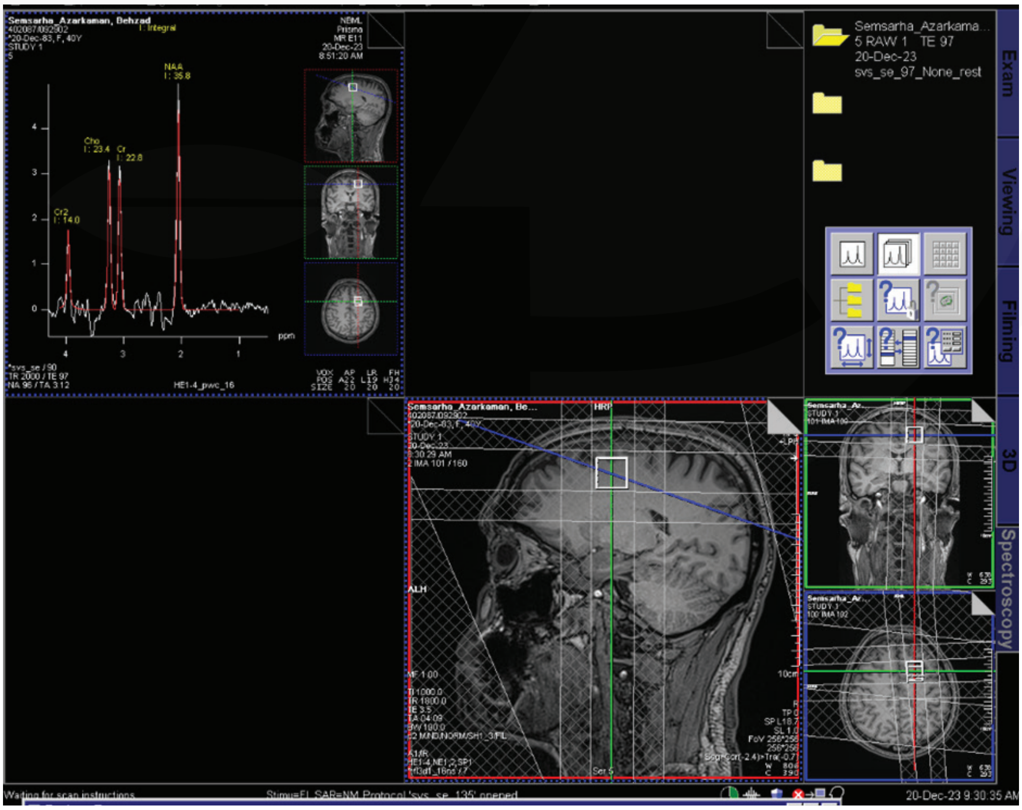


Figure 4. T2-weighted MR image of one of the study subjects, showing the placement of the MRS voxel on the selected neither activated nor deactivated region during Faradarmani Consciousness Field treatment, along with the proton spectrum obtained in the rest state.

Analysis of the MR spectrum

The volume of interest (VOI) for the MRS experiments was drawn on T2-weighted images. We attempted to create identical VOIs for the three regions across different subjects to ensure similar coverage of the target areas in each individual. Each spectrum corresponding to the selected regions was analyzed using a Java-based graphical user interface. This interface, used for the MRUI quantification package, contains a basic knowledge base of 57 peaks associated with at least 34 different metabolites. Metabolite concentrations were determined relative to the water signal used as a reference. Therefore, all amplitudes in each MR spectrum were expressed semi-quantitatively. It is also worth mentioning that the advanced method for accurate, robust, and efficient spectral fitting (AMARES) was used for quantification (Vanhamme et al., 1997).

The Application of Faradarmani Consciousness Field

In the present study, a population-level MRS analysis was conducted on Faradarmangars, comparing metabolite changes in selected brain regions during the task and rest phases. The task refers to the activity during which a Faradarmangar personally connects to the Cosmic Consciousness Network. This study was approved by the Ethics Committee of Iran University of Medical Sciences (Approval ID: IR.IUMS.REC.1402.940).

Thirty healthy adult participants (mean age: 42 ± 7 years), all with no history of neurological or psychiatric medication use in the six months prior to the test day, were included in the study group. Of these participants, 40% were male (n = 12) and 60% were female (n = 18). The design of the studies conducted using the MRS technique included a 15-minute rest phase (prior to connection with the field) and a 15-minute task phase, representing the state of connection with the Faradarmani Consciousness Field (initiated immediately after the rest phase). Further details about each phase of the study in chronological order are as follows:

1. **Rest**: A 15-minute initial phase in which Faradarmangars were instructed, while inside the MRI scanner, to keep their eyes closed and remain relaxed and stress-free, without engaging with any Consciousness Fields. The purpose of this phase was to obtain control data, representing the baseline state before connection with the field. This baseline plays a critical role in constructing population-level control data or "pre-connection" references.

2. **Task**: In this study, the second 15-minute phase—immediately following the rest phase without any temporal gap—is referred to as the task phase. In this phase, the individuals establish a connection with the Faradarmani Consciousness Field. This connection is initiated solely by the participants themselves upon hearing a predefined beep, which they had been informed in advance signals the beginning of the connection.

Data Analysis

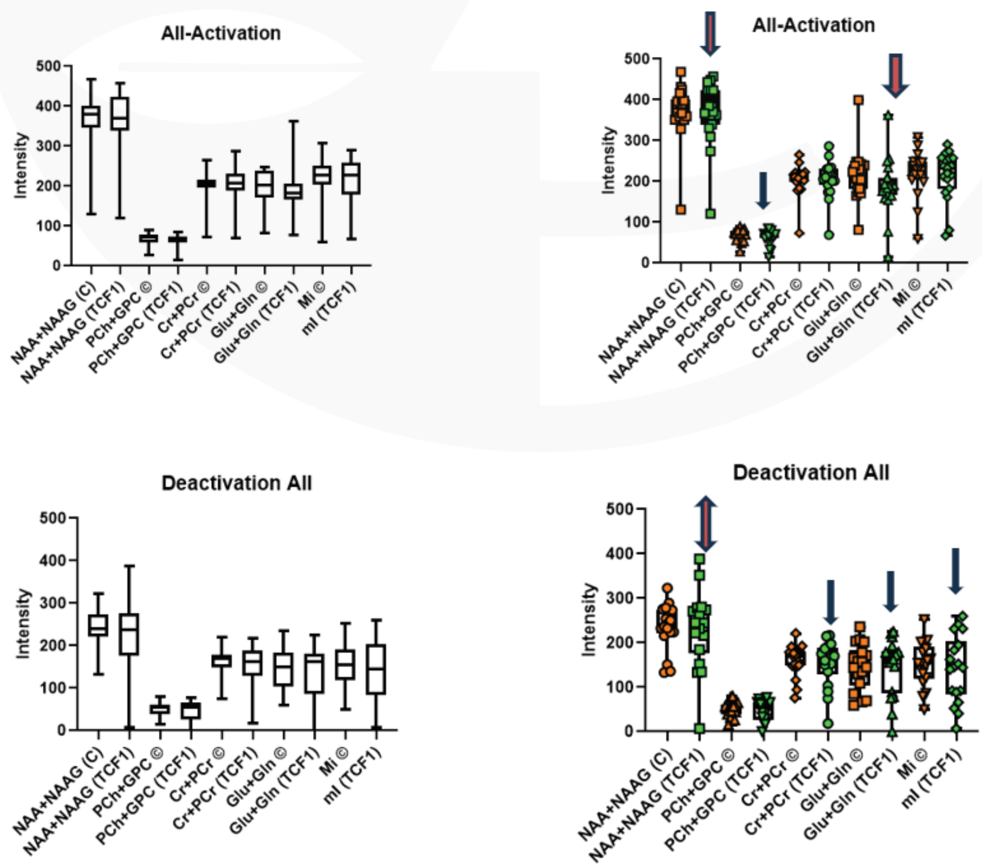
The data obtained from this study were statistically analyzed using GraphPad Prism software (version 9). One-way analysis of variance (ANOVA) was used to assess differences in metabolite levels between the rest and task phases. For each group's MRS dataset, the Wilcoxon test was applied at a 5% significance level to compare changes in metabolite concentrations between these two phases. Pearson correlation analysis and the calculation of correlation coefficients (r) were conducted using a two-tailed p-value. A p-value of less than 0.05 was considered statistically significant.

Results and Discussion

Figure 5 shows the changes in key MRS peak metabolites under rest and task conditions. It can be observed that in the activation region, a decreasing trend in total NAA, total choline, glutamine, and glutamic acid was recorded under the influence of the Faradarmani Consciousness Field. In the deactivation region, as shown in the box plot, NAA levels during the task condition exhibited an increasing trend compared to the maximum threshold at rest, while also showing a decrease relative to the minimum threshold at rest. However, other metabolites—total creatine, myo-inositol, glutamine, and glutamic acid—displayed a downward trend during the task condition. In the 'None' region—defined as the brain area that showed no measurable change under the influence of the Faradarmani Consciousness Field—similar trends were observed between rest and task conditions, with only minor variations reflected in the median values of the box plot.

Under typical conditions, increased brain activity is accompanied by elevated turnover of key brain metabolites such as N-acetylaspartate, which reflects neuronal integrity and mitochondrial function (Paslakis et al., 2014); choline, which is involved in membrane synthesis and turnover; and glutamate, the brain's primary excitatory neurotransmitter (Wolinsky and Narayana, 2002). However, the reduction in these metabolites despite fMRI activation suggests that the brain may not be relying solely on conventional metabolic pathways. This observation aligns with Taheri's hypothesis of biological dark energy, which proposes the existence of an alternative energy source capable of supporting cellular and neural functions independently of conventional ATP production. Further experiments, especially those measuring real-time ATP production, mitochondrial function, and phosphorus-based MRS, are needed to validate this alternative energy hypothesis

The mean normalized values of metabolite changes are also presented in Table 1 and Figure 6. Similar values can be observed in the 'None' region during both rest and task conditions. In the activation region, these values are comparable to those in the 'None' region and, in some cases, even lower. In contrast, a clear decreasing trend is evident in the deactivation region when compared to the other areas.



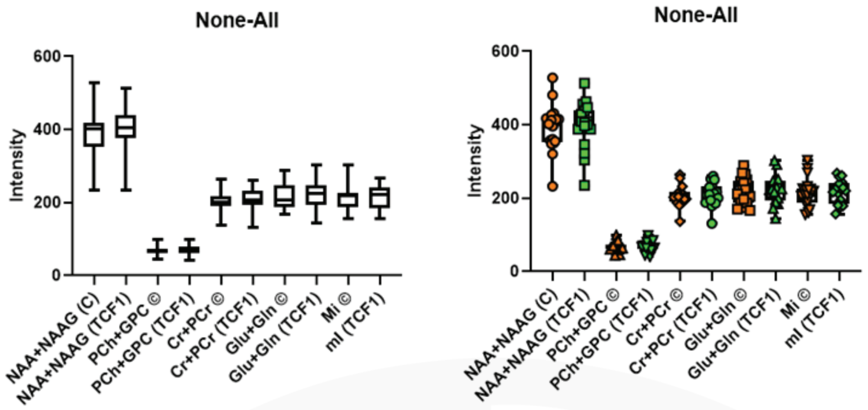


Figure 5. Comparison of changes in key metabolite levels across three different brain regions in Faradarmangars: top – activation region; middle – deactivation region; bottom – None region. C: rest; task: TCF1. (The left and right figures both illustrate metabolite changes, and the data distribution is presented in two formats to allow a clearer observation of the trends in variation.)

Table 1. The changes in the mean normalized values of key metabolomes across different brain regions in Faradarmangars. (c): rest or control; (TCF1): task condition.

	NAA+NAAG (C)	NAA+NAAG (TCF1)	PCh+GPC ©	PCh+GPC (TCF1)	Cr+PCr ©	Cr+PCr (TCF1)	Glu+Gln ©	Glu+Gln (TCF1)	Mi ©	mI (TCF1)
Ave-Activation	370.58	369.11	67.12	62.39	204.19	205.43	220.41	185.91	221.51	215.08
SD	68.78189909	77.58	14.61	18.71	37.72	44.53	87.35	69.61	56.66	60.65
Ave-Deactivation	235.2521667	228.0478333	50.535	47.70183333	160.1137	151.8888	145.7506	145.6489	152.2921	140.4383
SD	51.47	86.23	17.44	22.89	35.51	51.31	51.84	63.22	50.29	74.68
Ave-None	391.85	397.32	68.11	67.95	204.35	209.30	217.54	222.36	216.70	217.07
SD	63.80	64.21	13.22	13.63	28.14	30.58	36.95	39.31	39.42	32.15

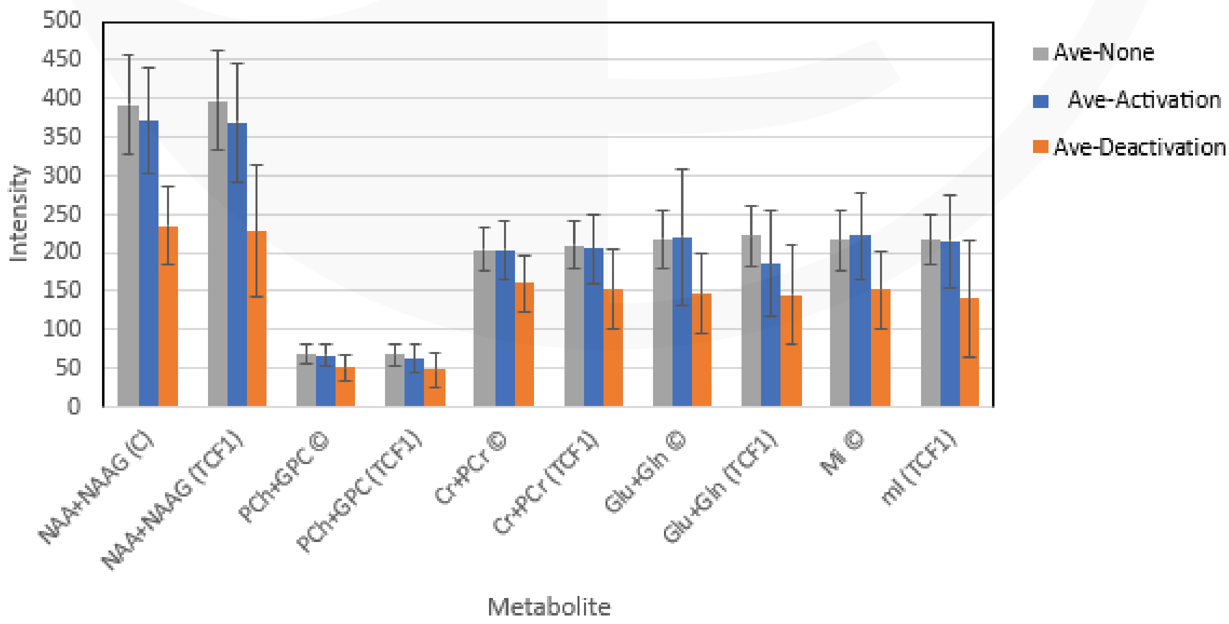


Figure 6. Bar chart showing changes in metabolite levels by subpopulation. C: rest; TCF1: task or under the influence of Faradarmani Consciousness Field.

According to the obtained data, the levels of key metabolites in the deactivation region are generally lower than those in the activation and None regions of the Faradarmangars' brain. This difference becomes more pronounced under the influence of the Faradarmani Consciousness Field or during the task condition, compared to the rest or baseline condition (Figure 6).

To gain a deeper understanding of the changes in key metabolites during the task condition, Pearson correlation analysis was performed, and correlation coefficients (r) were calculated. This analysis yields a score ranging from +1 to -1. A score of +1 indicates a strong positive correlation, meaning the two variables change in a similar manner. A score near zero suggests no correlation, while a score near -1 indicates a strong negative correlation, meaning the variables change in opposite directions. The Pearson correlation coefficient (r) for two paired-variable objects sums the product of their differences from their respective means and divides this total by the product of the square roots of the squared differences from their means. In Figure 7, the Pearson correlation of changes in key metabolite levels under rest and task conditions is presented for the overall population.

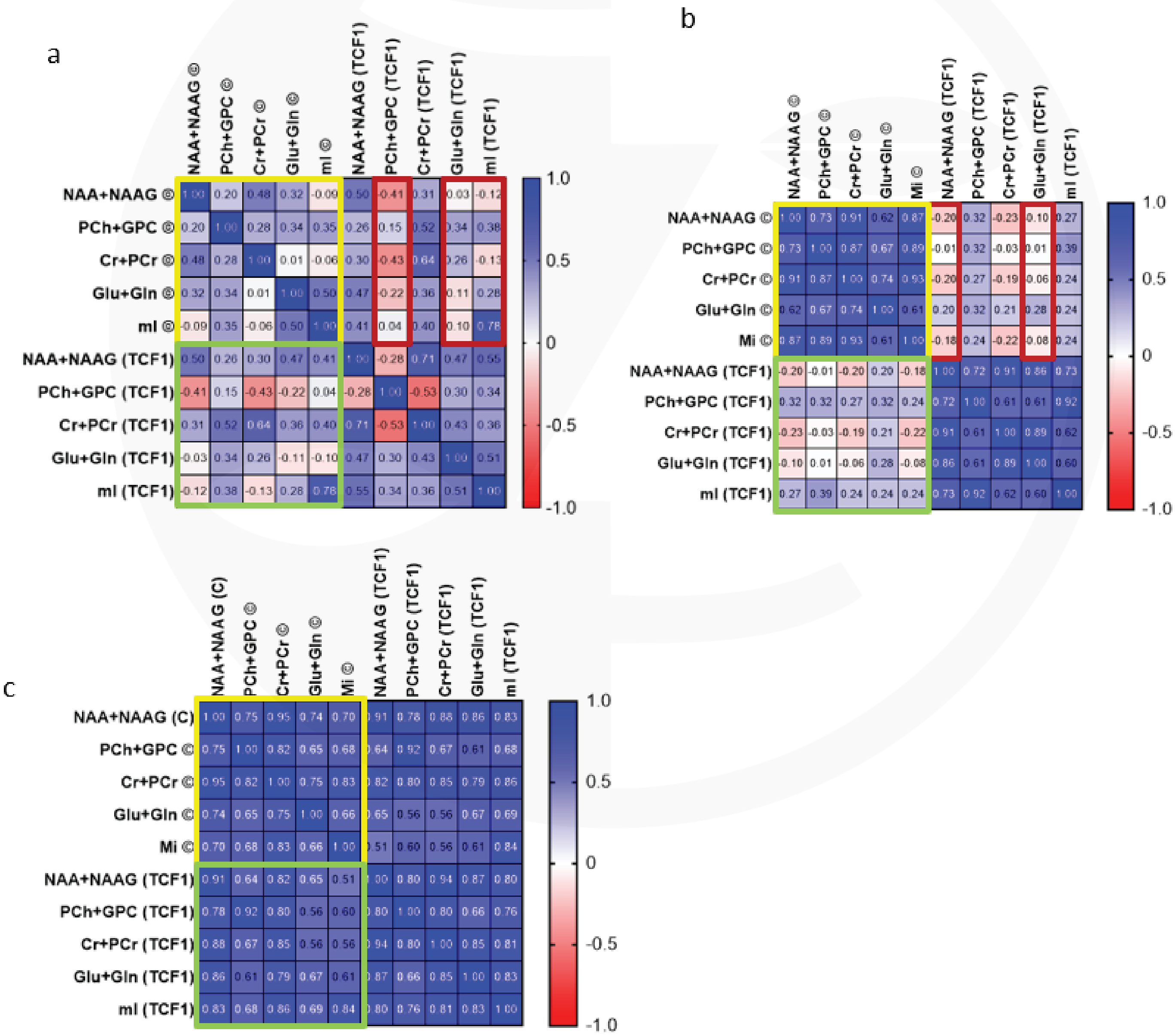


Figure 7. Correlation analysis of changes in key metabolites in the overall population. a: Activation region; b: Deactivation region, and c: None.

As shown in Figure 7, in the deactivation region of the brain under the influence of the Faradarmani Consciousness Field, the correlation of metabolite changes shifts from values above zero—seen in comparisons of rest-rest and task-task conditions—to values near zero or negative when comparing rest and task conditions. This shift is distinctly different from the patterns observed in the other two brain regions. In the 'None' region, the figure clearly shows consistently positive correlations across all sample comparisons. In the activation region, a different pattern of metabolite changes is observed in the Pearson correlation analysis. Specifically, the changes in total choline during the task condition show a tendency toward negative or near-zero values when compared to other metabolites in the rest condition—particularly for myo-inositol. Moreover, in the task-task comparison, an inverse trend is observed between total creatine and total choline, whereas these two metabolites showed a direct correlation in the rest samples.

In the continuation of this study and to conduct a more detailed and precise analysis of the correlations between metabolite changes in different brain regions, the overall population was divided based on the change in NAA levels—the most abundant and prominent brain metabolite in MRS analyses. The participants were categorized into two subpopulations: one showing an increase in NAA as a result of the Faradarmani treatment (NAA+) and the other showing a decrease in NAA due to the treatment (NAA-). Pearson correlation analysis was then performed separately within these subpopulations (Figure 8).

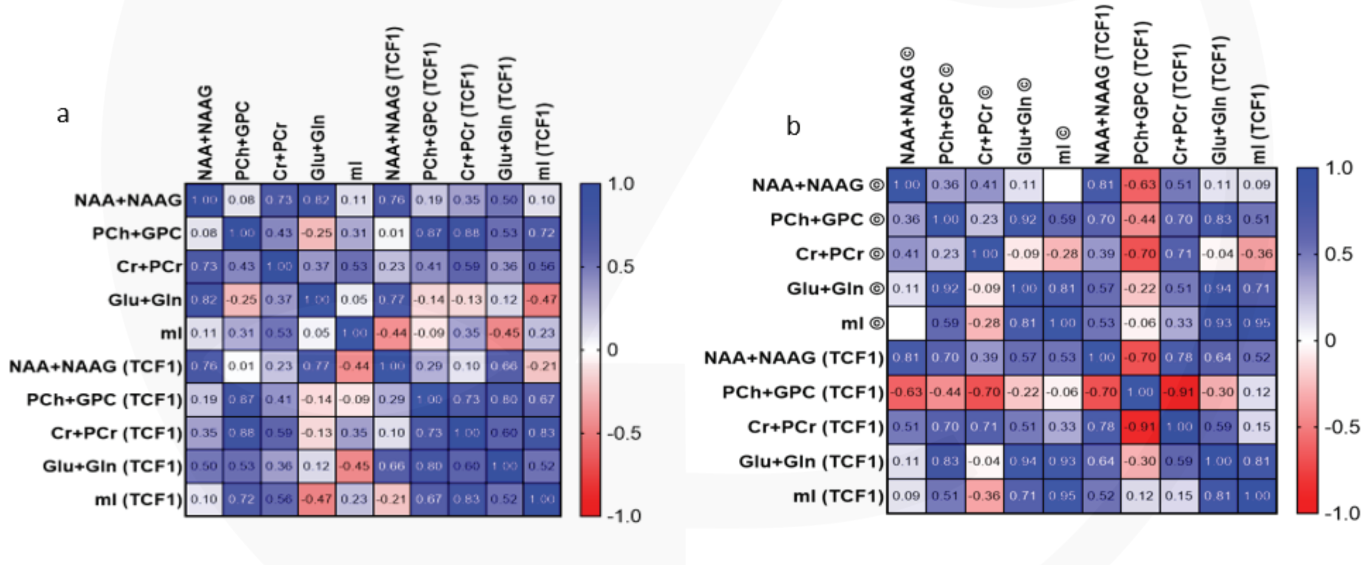


Figure 8. Correlation analysis of changes in key metabolites in the two subpopulations of this study within the brain activation region under the influence of Faradarmani Consciousness Field. a: NAA+; b: NAA-

Figure 8 illustrates the changes in metabolites across the two subpopulations. The most notable change is observed in the NAA− group, where an increase in total choline is evident, while other metabolites, particularly total creatine, show a decreasing trend. The divergent changes in total choline and total creatine in the activation region suggest that the opposing dynamics of these metabolites may play a key role in the activation of brain areas observed in Faradarmangars. Referring to the data presented in the first study of this issue, it becomes clear that this change is particularly prominent in the brains of male Faradarmangars, where, in contrast to the female population, greater activation was observed.

As mentioned in the introduction, creatine plays a central role in maintaining cellular ATP levels. In Figure 7b, a reduction in total creatine is observed during the task condition within the deactivation region. This reduction may reflect an adaptive energy redistribution strategy, where metabolic demand is downregulated in task-negative areas to support more efficient functioning in task-positive networks. Similar to the typical deactivation pattern of the default mode network (DMN) during cognitive engagement (Anticevic et al., 2012), the negative correlation between rest and task conditions could represent a compensatory response to energy demands. Paradoxically, however, our EEG data revealed increased activity in BA31 (posterior cingulate cortex), a key DMN hub, under the influence of the Faradarmani Consciousness Field, contrary to the DMN suppression usually reported in externally focused cognitive tasks (Taheri et al., 2022).

Additionally, in the activation region, a subpopulation with decreasing NAA levels (NAA–) showed a corresponding decline in total creatine during the task condition, further indicating a shift in energy dynamics (Figure 8). These observations suggest that an alternative energetic mechanism may be engaged under Faradarmani. As mentioned above, this observation aligns with the concept of biological dark energy introduced by Taheri and warrants further investigation.

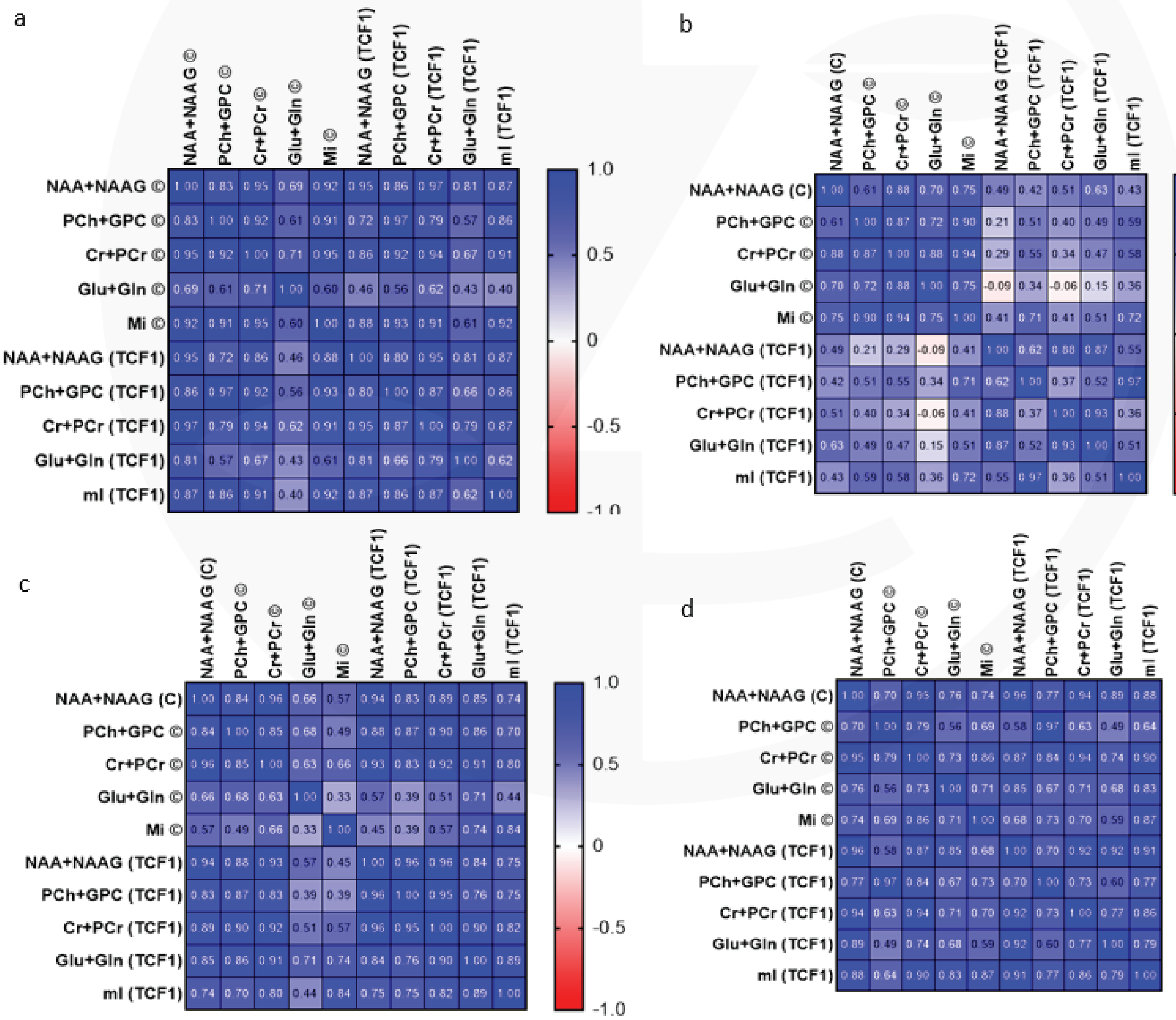


Figure 9. Correlation analysis of changes in key metabolites in the two subpopulations within the deactivation and None regions of Faradarmangars' brains. a: Deactivation NAA+, b: Deactivation NAA-, c: None NAA+, d: None NAA-

The Pearson correlation analysis of changes in key metabolites in the overall population, without division into subpopulations, primarily indicates a distinct difference in metabolic behavior between the activation and deactivation regions compared to the None region. This supports the influence of the Faradarmani Consciousness Field observed in the fMRI data. In fact, in the region where no effect of Faradarmani was detected at the brain level in the fMRI data (the None region), no corresponding metabolic changes were observed either. Secondly, the data reveal a significant and notable difference between the deactivation and activation regions. Clear and well-defined metabolic changes are observed in the deactivation region when comparing rest and task conditions. This observation aligns with the fMRI data, which also highlights the deactivation regions as more prominent in terms of the number of affected areas and the intensity of changes compared to the activation regions.

Although the Faradarmani Consciousness Field led to an increase in amino acid markers (Gln and Glu) in the deactivation region, it caused a significant rise in total choline in the activation region. The rise in glutamine (Gln) and glutamic acid (Glu) suggests enhanced glutamatergic turnover. According to Tani et al. (2014), synthesized Gln is transferred to presynaptic neurons, where it serves as the precursor for synaptic Glu; together, these processes form the glutamine–glutamate cycle (Tani et al., 2014). This observation indicates that a downregulation in neural activity does not necessarily imply metabolic inactivity. Instead, it may reflect a shift toward more efficient or reorganized neural processing, in which amino acid cycling and neurotransmitter regulation play key roles.

Overall, building on previous findings, the current study not only provides further evidence of Faradarmani’s effects on brain activity but also investigates how such non-physical informational input may alter the dynamics of brain metabolomes.

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Effect of Faradarmani Consciousness Field on Brain Metabolome via H-MRS with Focus on Energy-Related Metabolites

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Abstract

This study investigates the effects of the Faradarmani Consciousness Field on metabolite changes, with a focus on potential alterations in energy metabolism. A previous study using fMRI revealed that certain brain regions of trained individuals, referred to as Faradarmangars, become activated or deactivated during the task state or under the influence of this Consciousness Field. Proton magnetic resonance spectroscopy (^{1}H-MRS), as a non-invasive method, enables the evaluation of brain function and metabolic changes under the influence of the Faradarmani Consciousness Field. Based on the obtained results, a specific reduction in the need for and consumption of ATP molecules and related metabolic pathways, along with a significant change in brain cell energetics—particularly in the activated region—can be identified. In this context, increases in lactate, ascorbate, and the macromolecule MM09 in this area may support enhanced metabolic processes recorded by fMRI. On the other hand, in the deactivated region, despite no statistically significant change, decreasing trends in glycerophosphorylcholine (GPC) and ascorbate, along with increasing trends in Pch, glutamate, and Lip13b, reflect a distinct metabolic response compared to the activated brain region. Further investigation of energy-related metabolites, particularly ATP, in the rest-task comparison under the influence of the Faradarmani Consciousness Field using phosphorus MRS is planned by the authors.

Keywords: MRS; Energy; Faradarmani Consciousness Field, Brain Metabolome

Introduction

The human brain is one of the most complex and vital organs, governing not only basic physiological processes but also higher cognitive functions such as perception, emotion, and consciousness. Understanding its intricate workings has long been a central goal of neuroscience. Over the past decades, considerable progress has been made in uncovering the biochemical and functional dynamics of the brain (Pessoa 2014). Among several standard neuroimaging techniques, Magnetic Resonance Spectroscopy (MRS) has emerged as a powerful non-invasive tool for probing brain metabolism, providing insights into the biochemical underpinnings of neural function and dysfunction (Yen et al., 2023).

In parallel with these scientific developments, increasing attention has been given to the influence of mind-based and consciousness-related phenomena on the brain and body (Schwartz et al., 2005). Generally, two dominant perspectives exist regarding the emergence of consciousness. The prevailing view in neuroscience holds that consciousness is locally generated by the brain through neuronal activity (Koch et al., 2016). In contrast, the concept of non-local consciousness suggests that consciousness extends beyond the physical boundaries of the brain. This perspective is supported by a range of interdisciplinary studies, including research in quantum physics, near-death experiences, telepathy, and other consciousness-related anomalies (Dossey, 2014; Lohrey and Boreham, 2020; Wahbeh et al., 2022).

It is worth noting that recent research highlights that consciousness is fundamentally distinct from attention. While attention is regarded as a basic cognitive function—one of the earliest evolutionary developments of the nervous system—consciousness encompasses a broader and more intricate set of processes. It underlies essential functions such as decision-making, voluntary control of actions, future planning, memory recall, and the construction of self-awareness. Neuroscientific evidence suggests that phenomenal consciousness is primarily linked to synchronized activity across the temporo-parietal-occipital regions, whereas attention is governed by fronto-parietal networks that selectively amplify specific aspects of experience (Nani et al., 2019).

In Taheri's approach, consciousness is regarded as a fundamental element of the universe, from which information, matter, and energy originate. Within this framework, the human brain and nervous system are not producers of consciousness but rather act as detectors—analogous to hardware—responsible for receiving and processing information. This system operates in coordination with the mind, which functions as a kind of software that provides information indices necessary for the emergence of consciousness. When brain function is impaired, such as in the case of injury, the system's ability to receive and process information is disrupted—much like a damaged antenna failing to detect signals—thereby hindering conscious experience.

In this viewpoint, there are various T-Consciousness Fields (TCFs) with different functions. The current study used Faradarmani Consciousness Field as one of these non-physical TCFs. The application of this field is not based on learned mental techniques like breath control, sustained attention, or visualization—common in practices such as meditation or mindfulness. Instead, the engagement with TCFs is initiated by a brief moment of attention, typically lasting only a few seconds, with no further mental effort required from the participant. Therefore, any observed physiological or metabolic changes cannot be attributed to intentional mental activity or cognitive effort, as none are employed. Moreover, these findings support the hypothesis that the brain, acting as a detector, can receive information from Faradarmani Consciousness Field, and that such interactions may manifest as measurable changes in the brain's metabolic profile.

Method

MRI was performed on a 3.0-T clinical scanner (Magnetom Prisma, Siemens Medical Solutions, Erlangen, Germany) with a gradient strength of 40 mT/m. A body-connected coil enabled the transmission of excitation. Specifically, a ^{1}H phased-array head coil (125 MHz) was used for signal detection (Siemens Rapid Biomedical, Germany).

After acquiring scout images of the subjects, a T2-weighted imaging protocol was performed in axial and coronal planes to capture data from the regions of interest. The MRI protocols were also followed for the MRS experiments. Data acquisition was conducted in two phases: similarly to previous steps, from baseline up to 15 minutes before the onset of treatment (rest phase), and immediately after the initiation of the treatment up to 15 minutes (task phase).

The T2-weighted imaging protocol was based on a standard spin-echo sequence with the following parameters: TR/TE = 5000/77 ms, NEX = 2, FOV = 4 × 4 cm^2, matrix size = 256 × 256, and slice thickness = 1 mm. Prior to performing MRS, a voxel of 1×1×1 cm^3 was defined in each of the three target regions for each subject. Following manual shimming and water suppression adjustment, short-echo proton MR spectra with high signal quality were acquired using the PRESS technique (TR/TE = 6000/135 ms, 156 acquisitions).

Before starting the MRS test, water suppression was performed using second-order shimming and a Chemical Shift Selective (CHESS) pulse sequence. At the end of the MRS experiment, the reference water signal was acquired by disabling water suppression to allow for metabolite concentration calibration. The described MRI and MRS protocols were conducted similarly both before and after the treatment process. Rest and task imaging were performed sequentially without moving the subjects and with their eyes completely closed during both phases.

Experimental design

Based on fMRI data from previous studies, in order to investigate metabolic changes in the activated and deactivated brain regions of Faradarmangars, three regions were selected: one containing an activated area (right Precentral Gyrus), one containing a deactivated area (right Superior Temporal Gyrus), and a third region with similar dimensions located between the activated and deactivated areas, which, according to the obtained data, does not show activation or deactivation in response to the Faradarmani Consciousness Field (Figure 1). The third region was chosen to serve as a negative control for comparing potential metabolic changes with the other two regions. Images of the selected regions and the MRS spectra obtained during the rest state are presented in Figures 2 to 4.

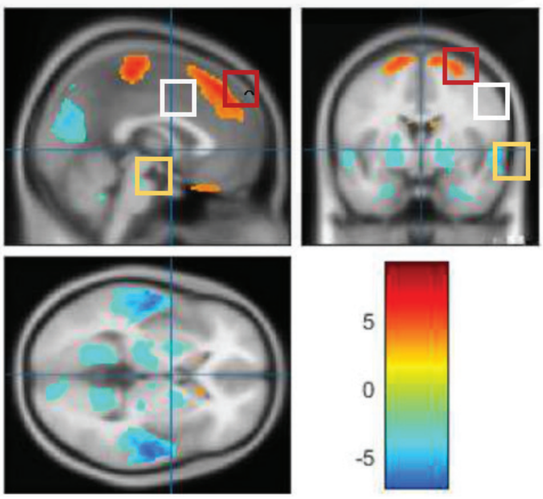


Figure 1. Three selected regions based on fMRI data. Red box: Activated region, Yellow box: Deactivated region, White box: Neither activated nor deactivated region (Taheri et al., 2022).

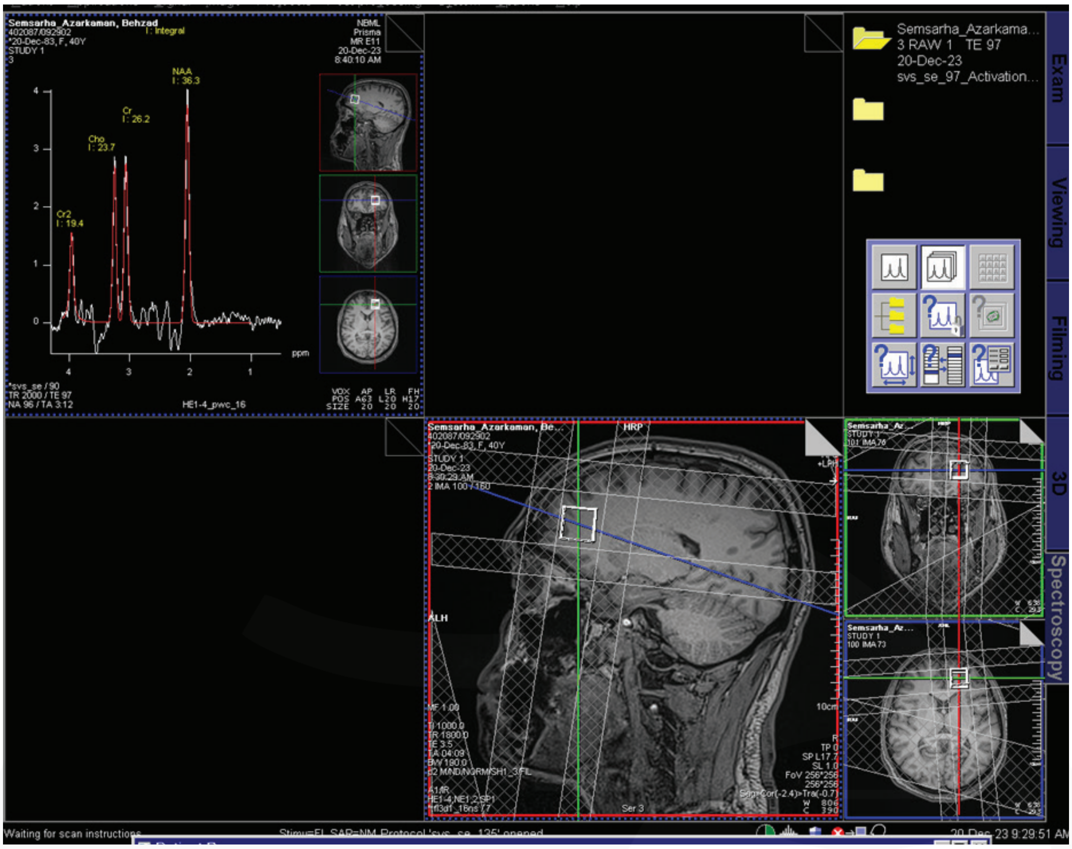


Figure 2. T2-weighted MR image of one of the study subjects, showing the placement of the MRS voxel on the selected activated region under Faradarmani Consciousness Field treatment, along with the proton spectrum obtained in the rest state.

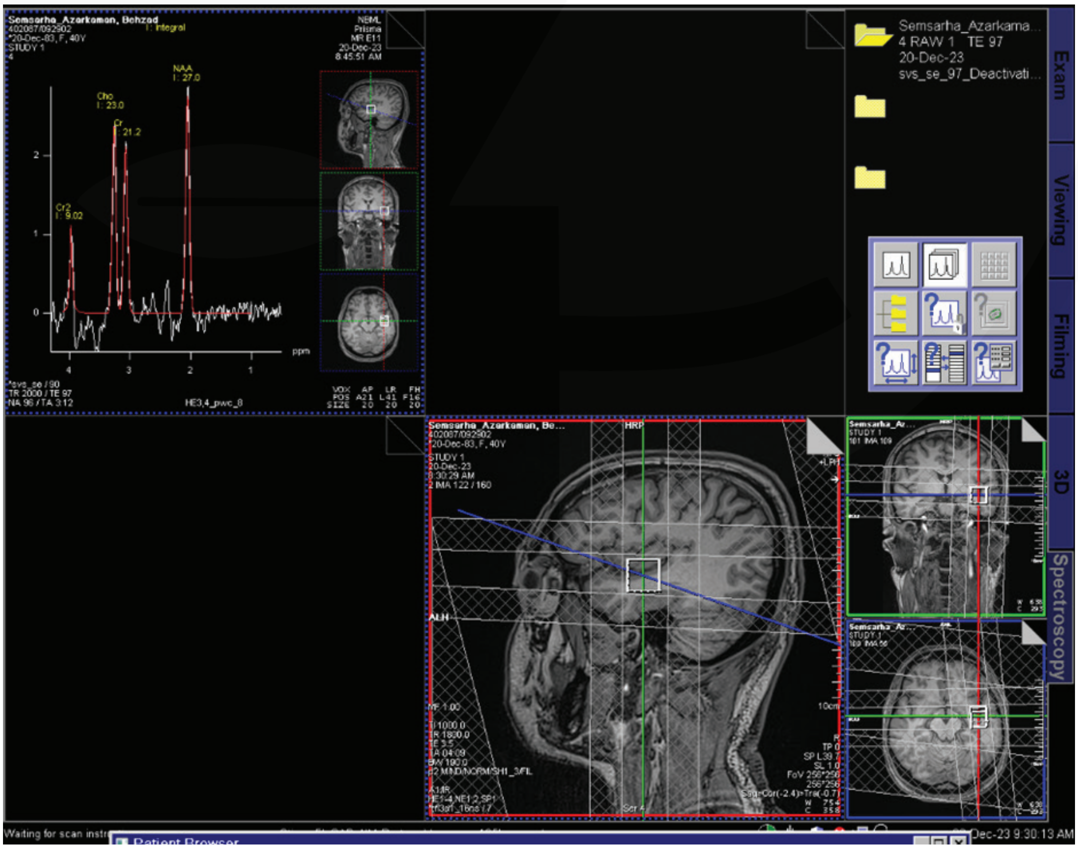


Figure 3. T2-weighted MR image of one of the study subjects, showing the placement of the MRS voxel on the selected deactivated region under Faradarmani Consciousness Field treatment, along with the proton spectrum obtained in the rest state.

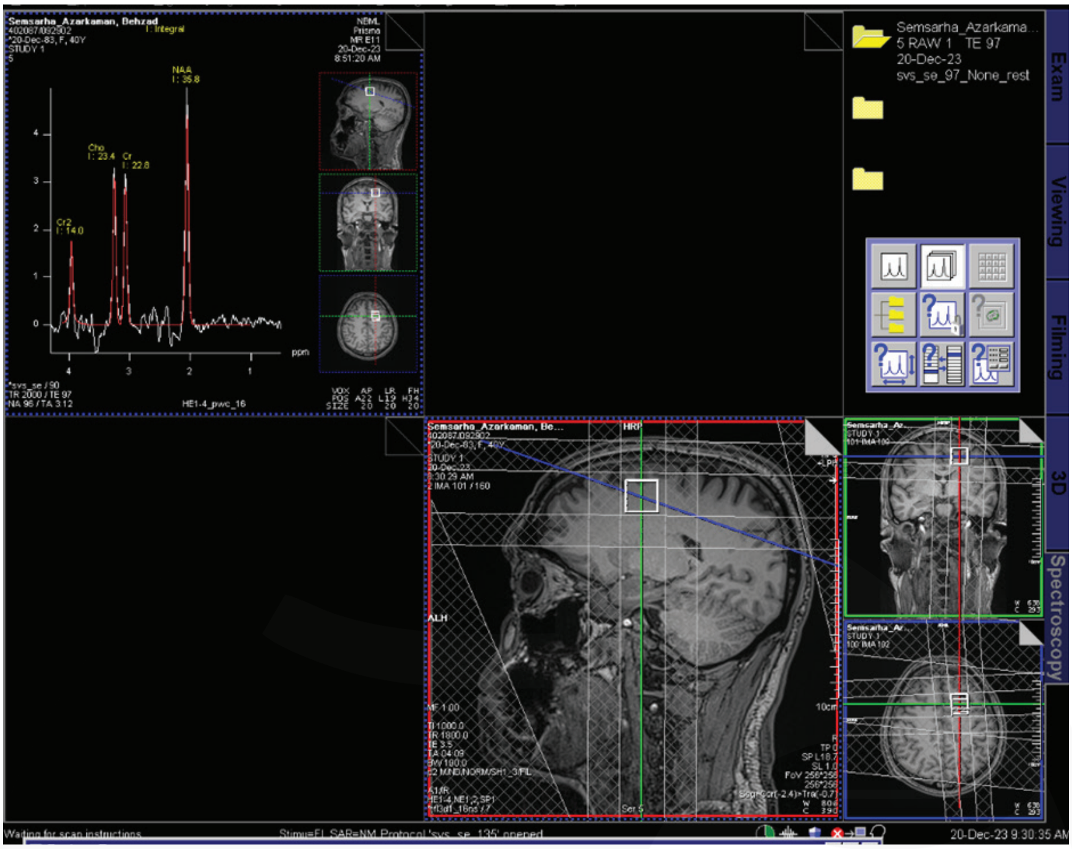


Figure 4. T2-weighted MR image of one of the study subjects, showing the placement of the MRS voxel on the selected neither activated nor deactivated region during Faradarmani Consciousness Field treatment, along with the proton spectrum obtained in the rest state.

Analysis of the MR spectrum

The volume of interest (VOI) for the MRS experiments was drawn on T2-weighted images. We attempted to create identical VOIs for the three regions across different subjects to ensure similar coverage of the target areas in each individual. Each spectrum corresponding to the selected regions was analyzed using a Java-based graphical user interface. This interface, used for the MRUI quantification package, contains a basic knowledge base of 57 peaks associated with at least 34 different metabolites. Metabolite concentrations were determined relative to the water signal used as a reference. Therefore, all amplitudes in each MR spectrum were expressed semi-quantitatively. It is also worth mentioning that the advanced method for accurate, robust, and efficient spectral fitting (AMARES) was used for quantification (Vanhamme et al., 1997).

The Application of Faradarmani Consciousness Field

In the present study, a population-level MRS analysis was conducted on Faradarmangars, comparing metabolite changes in selected brain regions during the task and rest phases. The task refers to the activity during which a Faradarmangar personally connects to the Cosmic Consciousness Network. This study was approved by the Ethics Committee of Iran University of Medical Sciences (Approval ID: IR.IUMS.REC.1402.940).

Thirty healthy adult participants (mean age: 42 ± 7 years), all with no history of neurological or psychiatric medication use in the six months prior to the test day, were included in the study group. Of these participants, 40% were male (n = 12) and 60% were female (n = 18). The design of the studies conducted using the MRS technique included a 15-minute rest phase (prior to connection with the field) and a 15-minute task phase, representing the state of connection with the Faradarmani Consciousness Field (initiated immediately after the rest phase). Further details about each phase of the study in chronological order are as follows:

1. **Rest**: A 15-minute initial phase in which Faradarmangars were instructed, while inside the MRI scanner, to keep their eyes closed and remain relaxed and stress-free, without engaging with any Consciousness Fields. The purpose of this phase was to obtain control data, representing the baseline state before connection with the field. This baseline plays a critical role in constructing population-level control data or "pre-connection" references.

2. **Task**: In this study, the second 15-minute phase—immediately following the rest phase without any temporal gap—is referred to as the task phase. In this phase, the individuals establish a connection with the Faradarmani Consciousness Field. This connection is initiated solely by the participants themselves upon hearing a predefined beep, which they had been informed in advance signals the beginning of the connection.

Data Analysis

The data obtained from this study were statistically analyzed using GraphPad Prism software (version 9). One-way analysis of variance (ANOVA) was used to assess differences in metabolite levels between the rest and task phases. For each group's MRS dataset, the Wilcoxon test was applied at a 5% significance level to compare changes in metabolite concentrations between these two phases. Pearson correlation analysis and the calculation of correlation coefficients (r) were conducted using a two-tailed p-value. A p-value of less than 0.05 was considered statistically significant.

Results and Discussion

N-acetyl-aspartate

Figure 5 illustrates the changes in NAA[1] and NAAG[2] in both activated and inactivated regions under the influence of Faradarmani Consciousness Field. NAA is one of the most important compounds assessed in MRS and is identified at the chemical shift of 2.0 ppm. As observed, in both the activated and non-activated brain regions, the population average of NAA shows a decreasing trend, in contrast to NAAG. However, a negative Pearson correlation between the decreasing levels of NAA and the increasing levels of NAAG is observed only in the activated brain region, not in the non-activated one. (A positive correlation between NAA and NAAG in the non-activated region suggests the metabolic consumption of NAAG.) This indicates that a reciprocal (seesaw-like) pattern of change between these two metabolites can be claimed for the activated region. The reciprocal increase in NAAG and decrease in NAA suggests that NAAG is not being hydrolyzed into NAA (Barker and Lin, 2006; Oz et al., 2014).

1 N-Acetylaspartate
2 N-Acetylaspartylglutamate

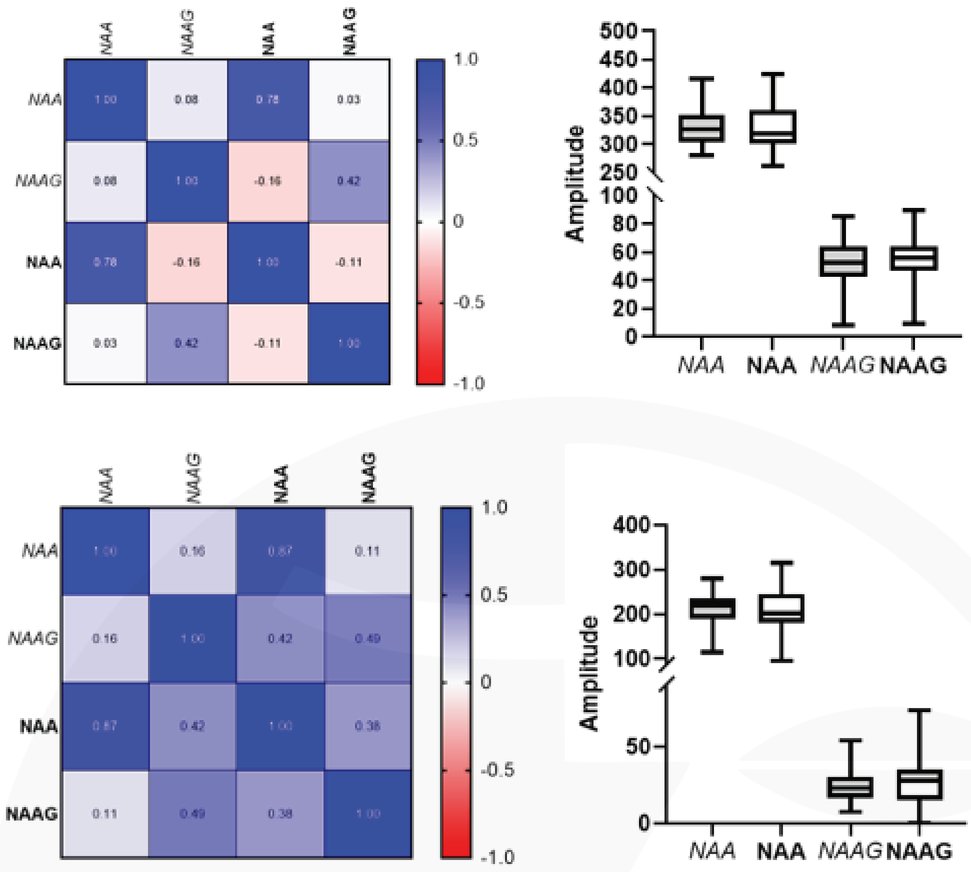


Figure 5. Box plot of changes in aspartate metabolite levels along with their Pearson correlations under rest and task conditions in the activated brain region (top) and the non-activated brain region (bottom). *Italic*: rest. **Bold**: task.

The brain is unique among organs in many ways, including its lipid synthesis mechanisms and energy production. The nervous system-specific metabolite N-acetylaspartate (NAA)—synthesized from aspartate and acetyl-CoA in neurons—is a key molecule underlying these distinct biochemical features of CNS metabolism. During early postnatal CNS development, the expression of lipogenic enzymes in oligodendrocytes, including aspartoacylase (ASPA), which breaks down NAA, increases in parallel with the elevated production of NAA in neurons (Moffett et al., 2007).

This molecule also plays additional roles, including a bioenergetic function in neuronal mitochondria. Its production occurs in the mitochondria of neurons and is ATP-dependent (Moffett et al., 2007; Ariyannur et al., 2008). NAA is the acetylated form of the amino acid aspartate and is found in high concentrations in neurons, serving as a marker of neuronal viability. Therefore, in any process that leads to neuronal loss—such as high-grade tumors, and neurodegenerative diseases—NAA levels decrease (Rigotti et al., 2007).

Reduction of NAA in both activated and deactivated brain regions of Faradarmani practitioners—despite the physiological health of the brain—indicates that the observed phenomenon in the brain is independent of this metabolite and intracellular ATP levels. Given the role of aspartate in ATP production, a decrease in NAA indirectly leads to reduced ATP levels. NAA reflects neuronal viability and neural osmotic regulation, while NAAG plays a role in glutamate release (a proposed pathway in the deactivated region based on observed changes in glutamate), neuronal protection, and synaptic plasticity (Castellano et al., 2012).

Total choline

Figure 6 shows a comparison of changes in total choline levels in the activated and deactivated brain regions of Faradarmangars. The comparison of total choline levels between the task and rest states in the activated and deactivated brain regions of Faradarmangars is also presented in Table 1. Choline is an essential biomolecule for all cells and is required for the synthesis of phosphatidylcholine and sphingomyelin, which are major components of the plasma membrane (Zeisel et al., 2009). The formation of new cell membranes requires a rate-limiting step of choline uptake followed by phospholipid biosynthesis (Inazu, 2019). Choline is also a precursor to the neurotransmitter acetylcholine and the methyl donor betaine, both of which play roles in several critical biological functions (Dymek et al., 2024).

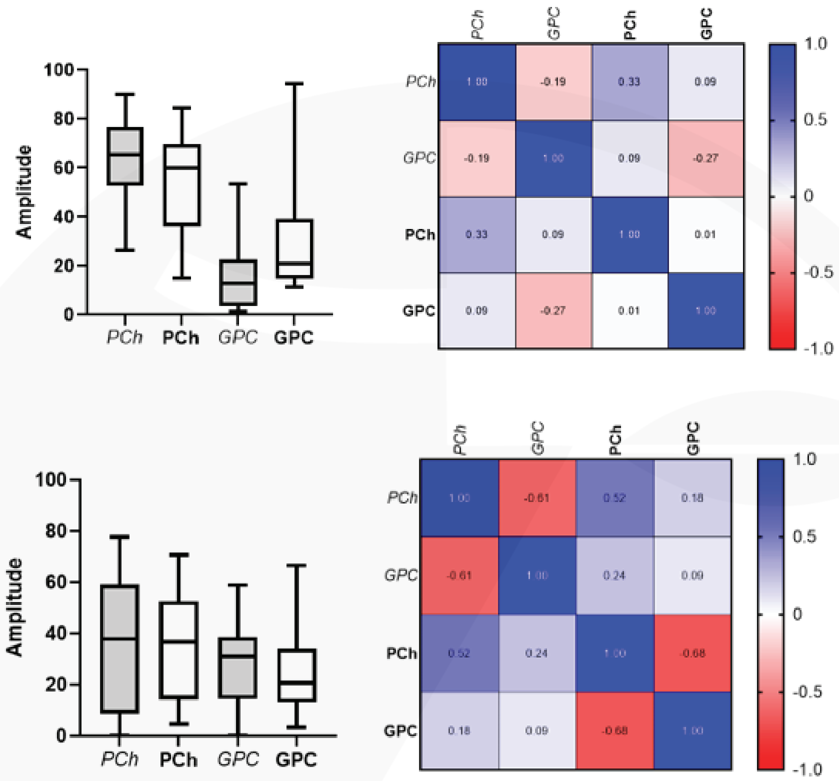


Figure 6. Box plot of changes in choline metabolite levels (phosphocholine and glycerophosphocholine) along with their Pearson correlation in the rest and task conditions for the activated brain region (top) and the deactivated brain region (bottom). *Italics*: Rest. **Bold**: Task.

Table 1. Total choline levels in rest and task conditions of activated and deactivated brain regions of Faradarmangars. *Italic*: rest; **Bold**: task.

	Activation		Deactivation	
	PCh+GPC	**PCh+GPC**	*PCh+GPC*	**PCh+GPC**
Minimum	14.67	28.23	15.7	16.8
Maximum	84.61	89.76	80.0	77.4
Range	69.94	61.53	64.3	60.6
Mean	62.19	66.05	48.3	48.1
Std. Deviation	19.51	15.57	16.3	18.3
Std. Error of Mean	4.364	3.482	3.39	3.82

The absence of change and the increase in total choline levels as a result of the task, respectively, in the deactivated and activated brain regions of Faradarmangars, indicate no limitation or deficiency of the choline metabolite in these areas. On the other hand, the decreasing trend of phosphocholine and the increasing trend of glycerophosphocholine in the activated brain region suggest a relative halt in the cycle of phosphocholine production from choline, effectively indicating inhibition of the enzyme choline kinase, which functions by consuming ATP. Moreover, the negative correlation between GPC levels during the task and rest conditions—considering the increase in GPC during the task—indicates a reduction of this metabolite during rest, suggesting its redistribution through metabolic pathways outside the choline–GPC cycle (i.e., acetylcholine synthesis: signaling; phosphatidylcholine synthesis: cell membrane formation).

Additionally, changes in total choline levels in the deactivated brain region of Faradarmangars show a phosphocholine trend similar to that of the activated region, though with a smaller decrease, and an opposite trend for GPC compared to the activated region. This observation, alongside the relative decrease in phosphocholine, suggests that GPC is entering a pathway outside the GPC–choline cycle (similar to the rest condition in the activated region), specifically into pathways related to acetylcholine and phosphatidylcholine synthesis.

The decrease in phosphocholine in both the activated and deactivated brain regions of Faradarmangars, despite no apparent limitation in choline, may indicate reduced activity of the enzyme choline kinase—possibly due to a decreased availability of ATP. On the other hand, based on these data, the key metabolite distinguishing between the activated and deactivated brain regions of Faradarmangars is the GPC molecule, which shows an increase in the activated regions—exactly opposite to the changes in its concentration observed in the deactivated regions.

Total creatine

The changes in creatine metabolite are shown in Figure 7 and Table 2. Creatine and its phosphorylated derivative, phosphocreatine (PCr), are essential for sustaining ATP levels in energy-intensive tissues like skeletal muscle, the heart, and the brain (Bonilla et al., 2021). An important point in comparing the activated and deactivated regions in the box analysis is the inverse relationship in metabolite changes between these regions in the brains of Faradarmangars, which confirms the contrasting types of activity in these areas. In the activated region, the decreasing trend of phosphocreatine in both the mean and distribution of test samples contrasts with the behavior of the creatine metabolite in the same samples. Similar to choline metabolites, the phosphorylated form of creatine decreases in comparison to its base form in these regions. In fact, the Faradarmani Consciousness Field treatment leads to a reduction in the phosphorylated form of creatine, which depends on intracellular ATP. The negative correlation between creatine and phosphocreatine observed during rest ($r = -0.49$) is also seen during the task, but with a stronger negative correlation ($r = -0.76$). In contrast, in the deactivated brain region of Faradarmangars, the level of phosphocreatine shows an increasing trend, unlike creatine.

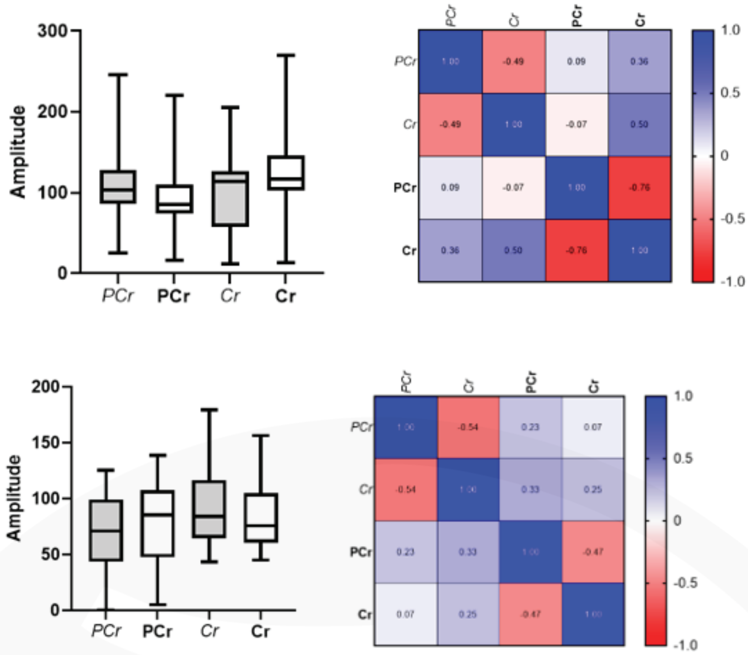


Figure 7. Comparison of creatine metabolite levels in the box analysis and Pearson correlation assessment in task (**Bold**) and rest (*Italic*) from the activated (top) and deactivated (bottom) brain regions of Faradarmangars. *Italic*: rest; **Bold**: task.

Table 2 presents the changes in total creatine levels in the rest and task conditions of activated and deactivated brain regions of Faradarmangars. Considering the lack of significant changes in total creatine levels between the rest and task conditions in both the activated and deactivated regions, the observed decrease in the activated region suggests a reduction in ATP availability or demand during task condition in this area. In contrast, in the deactivated regions, phosphorylated creatine increases and, similar to the GPC metabolite, plays a role as a distinguishing metabolite between the activated and deactivated brain regions of Faradarmangars.

Table 2. Total creatine levels in the rest and task conditions of activated and deactivated brain regions of Faradarmangars. *Italic*: rest; **Bold**: task.

	Activation		**Deactivation**	
	Cr+PCr	**Cr+PCr**	Cr+PCr	**Cr+PCr**
Minimum	68.76	73.74	76.2	18.5
Maximum	286.5	265.7	221	217
Range	217.7	191.9	145	198
Mean	203.1	203.0	159	153
Std. Deviation	46.20	41.06	35.1	47.8
Std. Error of Mean	10.33	9.181	7.32	9.97

Amino acids

Changes in the levels of the amino acids glutamate and glutamine, as well as various amino acid metabolites, are presented in Figure 8. As observed, the changes in amino acids between the rest and task conditions in both activated and deactivated regions are not significant. However, among all amino acids, glutamate and glutamine (with glutamate being predominant) show the highest levels across all samples. Additionally, in the deactivated regions, there is a general increasing trend of glutamate during the task compared to the rest condition.

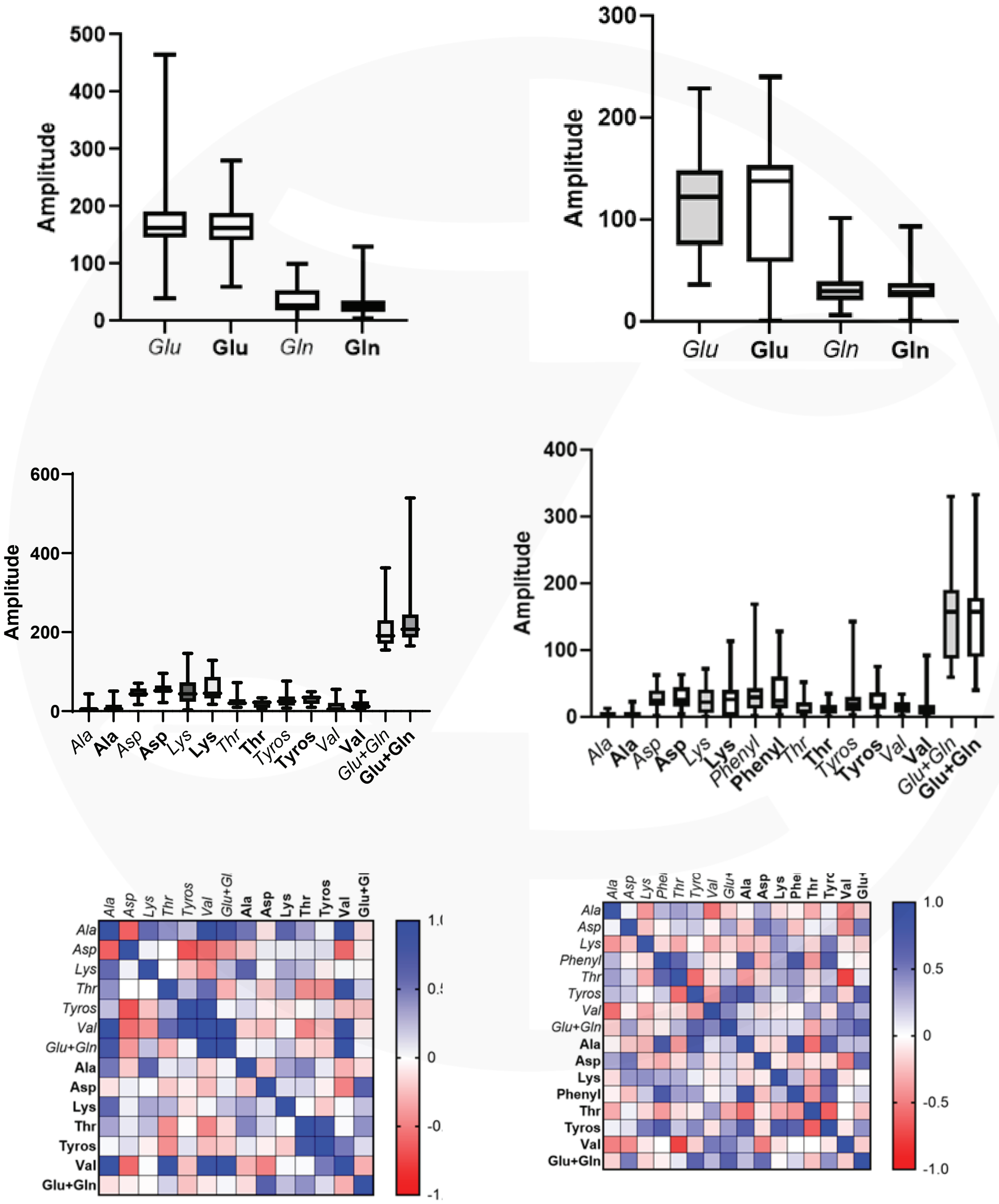


Figure 8. Comparison of glutamate and glutamine amino acid levels, along with various amino acid metabolites in the box analysis, and their Pearson correlation in task and rest conditions of the (left) activated and (right) deactivated regions. *Italic*: rest; **Bold**: task.

Other metabolites 1

A set of metabolites categorized under the conventional group “Other Metabolites 1” is compared here between rest and task conditions in the activated and deactivated brain regions. As shown in Figure 9, a significant increase in ascorbate is observed under task conditions, accompanied by a positive correlation with GABA. On the other hand, in the deactivated regions, although no significant changes in metabolite levels are detected between rest and task conditions, the trend of ascorbate changes is notably opposite to that in the activated region. In fact, alongside GPC and PCh, ascorbate also exhibits distinct patterns of change between the activated and deactivated brain regions.

Ascorbate, also known as vitamin C, is one of the major non-enzymatic antioxidants present in high concentrations in the human central nervous system (Olufunmilayo et al., 2023). The maintenance of its millimolar-level homeostatic concentration highlights its important role in the brain, which is particularly vulnerable to oxidative damage (Rice, 2000). Several studies have shown that oxidative stress contributes to impaired brain function during normal aging and represents a constant risk factor for the nervous system and the onset of related diseases (Trofin et al., 2025).

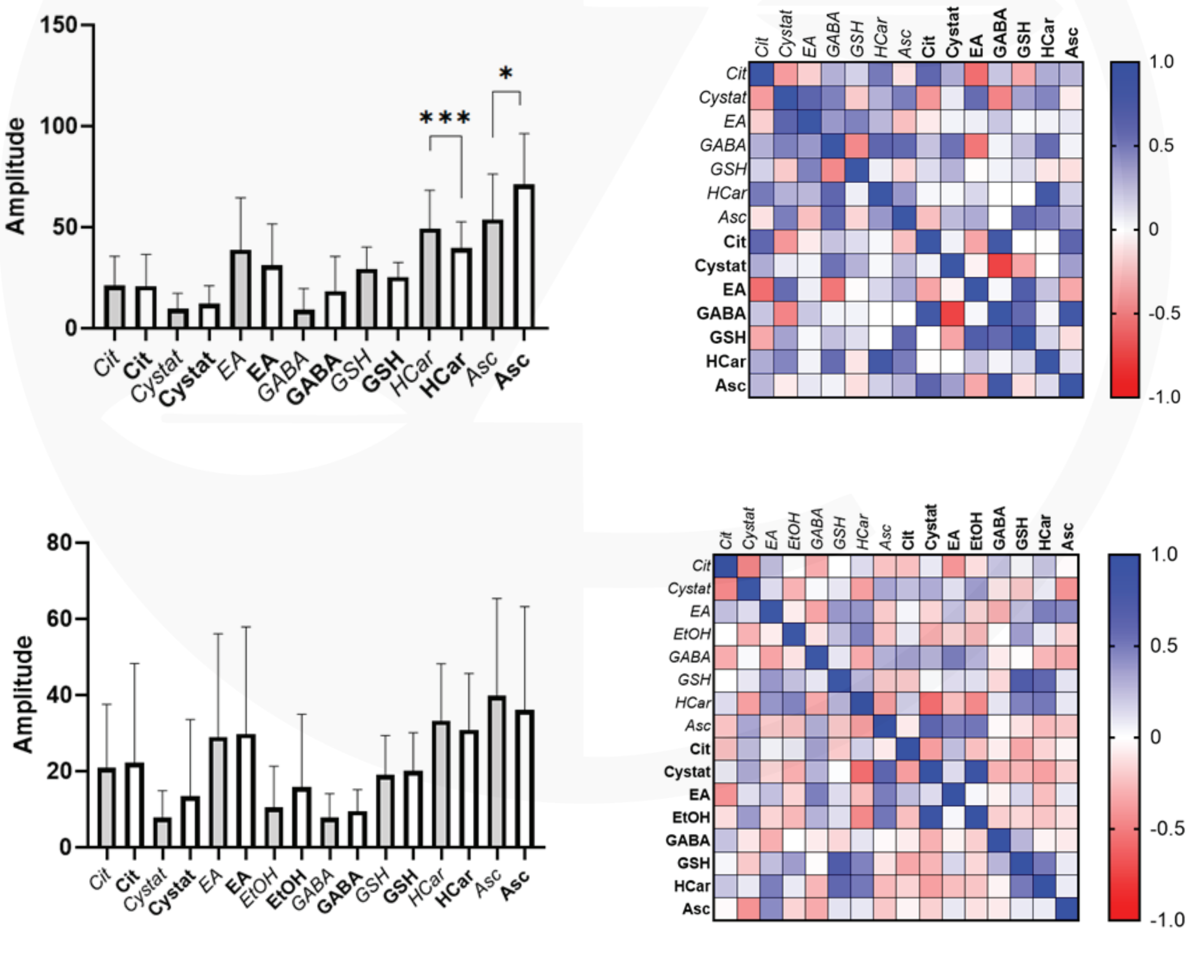


Figure 9. Comparison of various metabolite levels in the activated (top) and deactivated (bottom) regions of test and control samples, presented as box analyses along with their Pearson correlation. *Italic*: rest; **Bold**: task.

Homocarnosine is a unique dipeptide composed of GABA and histidine found in the brain, present in significantly higher concentrations in the human brain (0.3–1.6 mmol/L) compared to other mammals (<0.07 mmol/L) (Hetherington et al., 2000). It is synthesized in the cytosol of a subclass of GABA-producing neurons by the enzyme homocarnosine synthetase (Veiga-da-Cunha et al., 2014). The substrates of the enzyme are histidine, GABA, and ATP; its products include homocarnosine, ADP, free magnesium, and a hydrogen ion (Hetherington et al., 2000).

As shown in Figure 9, the significant decrease in homocarnosine—produced through the reaction of the substrates GABA, histidine, and ATP by the enzyme homocarnosine synthetase—is notable. Based on the findings in this section, inhibition of homocarnosine synthetase is suggested as a result of the Faradarmani Consciousness Field treatment, likely due to reduced ATP availability, since there appears to be no limitation in GABA or amino acids such as histidine.

Other metabolites 2

Another set of metabolites, categorized under the second group of "Other Metabolites 2," has been compared in this section under rest and task conditions in the activated and deactivated brain regions. As shown in Figure 10, the increase in lactate in the task condition from the activated region is the only significant and notable change among the compared metabolites.

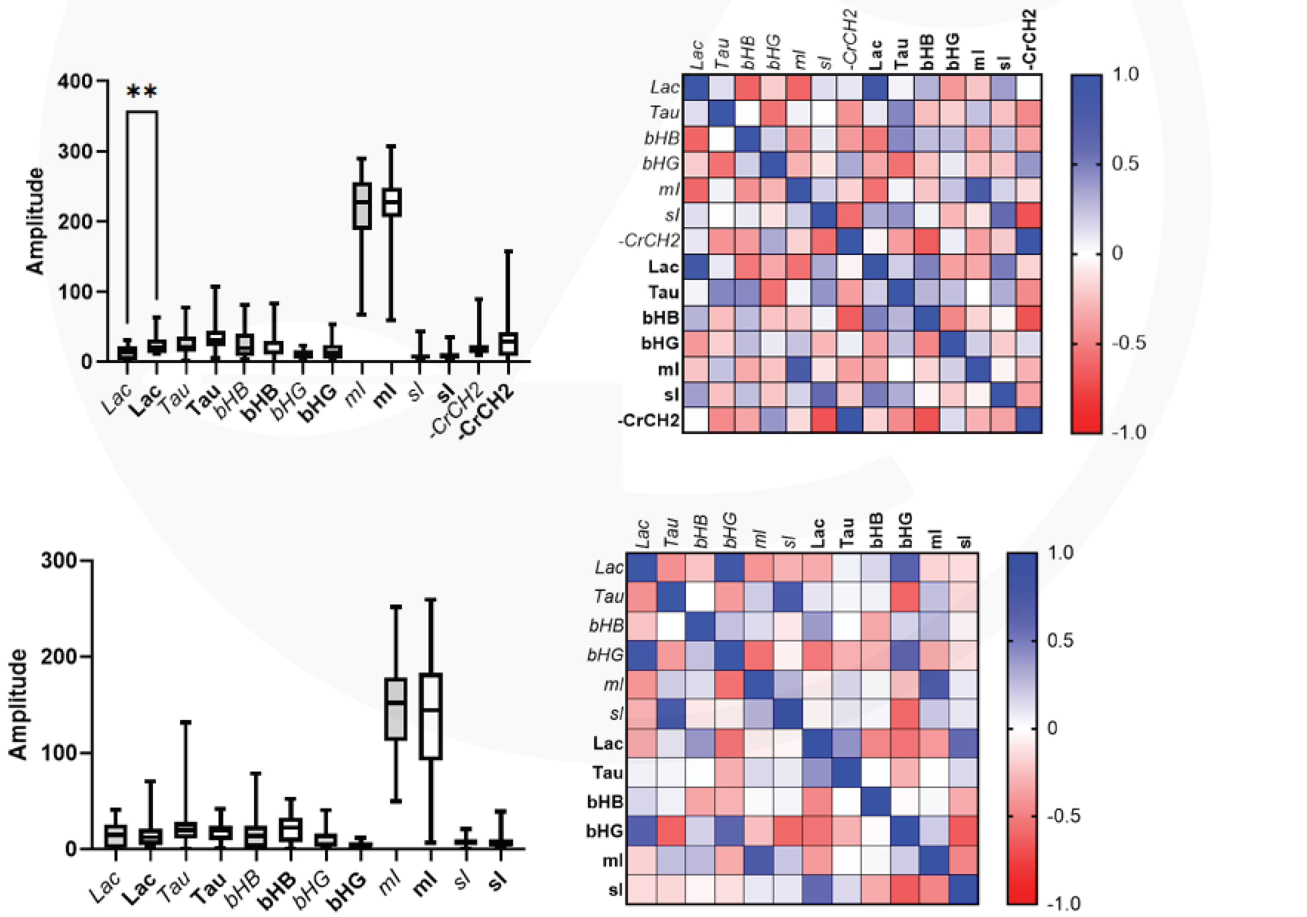


Figure 10. Comparison of selected metabolite levels presented as box plot analyses along with their Pearson correlations in rest and task conditions from activated (top) and deactivated (bottom) brain regions. *Italic*: rest; **Bold**: task.

During fetal brain development, lactate levels increase significantly from the mid-gestation stage onward. This highlights the vital role of lactate in brain growth and neural differentiation (Nordström et al., 2001). In the brain, astrocytes—a type of glial cell—primarily produce lactate from glucose or glycogen in response to neural activity signals. Neurons and astrocytes exhibit a strong metabolic partnership, with lactate being transferred from astrocytes to neurons to meet neuronal energy demands. Beyond supplying energy, lactate also modulates neural functions such as excitability, plasticity, and memory consolidation. In fact, lactate is increasingly recognized as a signaling molecule in the brain, linking metabolism, substrate availability, blood flow, and neural activity (Alberini et al., 2018; Beard et al., 2022; Benarroch, 2024).

Among this category of metabolites, myo-inositol exhibits the highest concentration under both task and rest conditions in both regions, with an overall trend showing opposite patterns of change between the activated and deactivated areas (Figure 10). Myo-inositol is a precursor of phosphatidylinositol (the main inositol-containing phospholipid) and phosphatidylinositol 4,5-bisphosphate (a key molecule in cellular signal transduction), and it also plays a significant role in osmotic regulation (Chhetri, 2019). This metabolite shows an increase in the activated brain region of Faradarmangars.

Macromolecular Metabolites

Various macromolecular metabolites, categorized based on their detection frequency, are compared in this section.

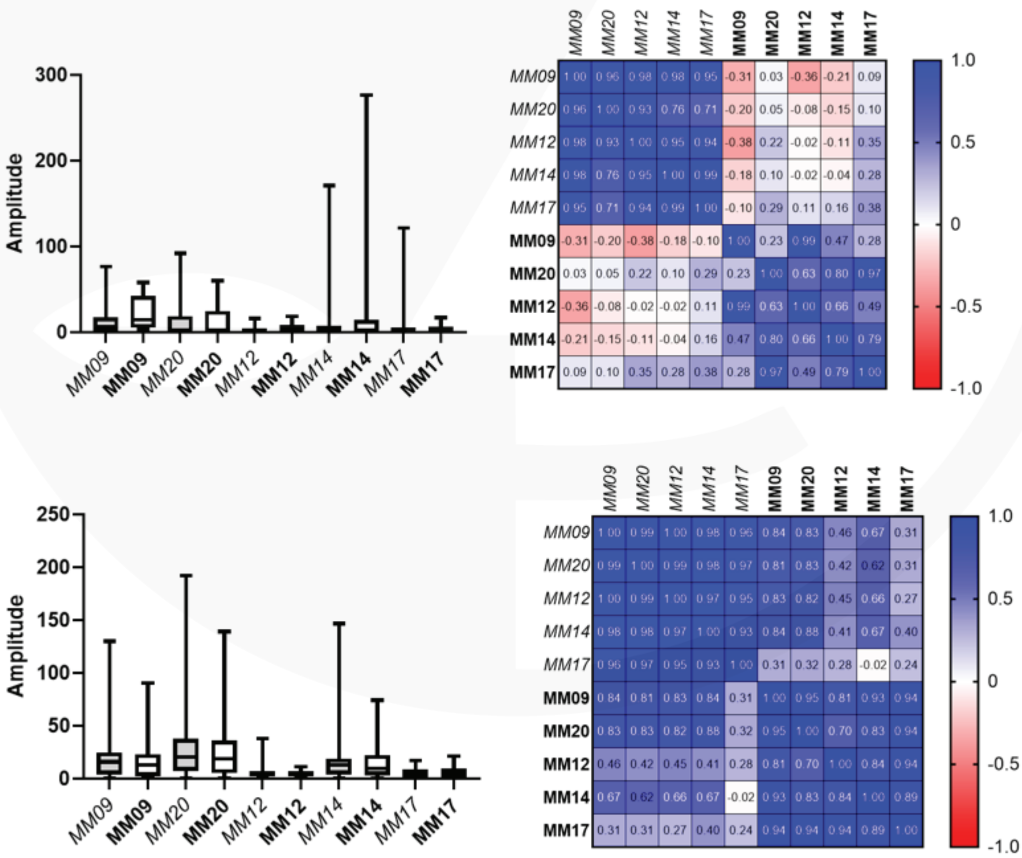


Figure 11. Changes in various macromolecules in task and rest conditions are shown through boxplot analysis and Pearson correlation in the activated (top) and deactivated (bottom) brain regions of Faradarmangars. *Italic: rest.* **Bold**: *task.*

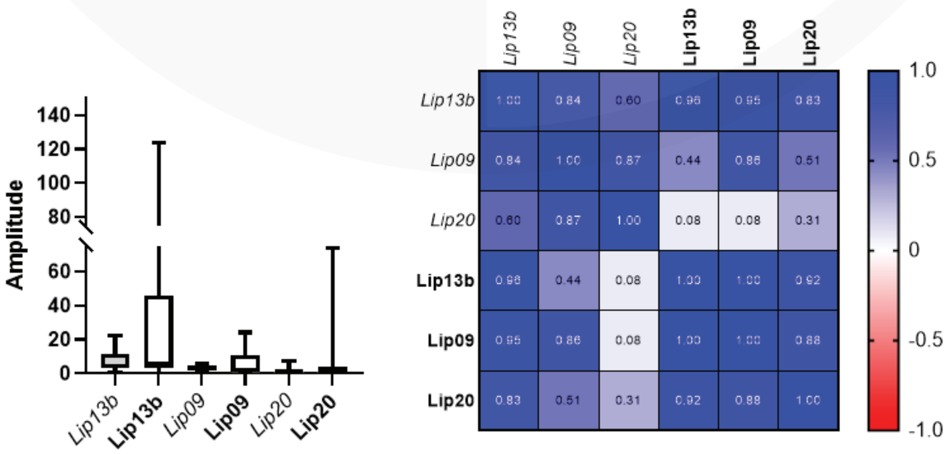
As shown in Figure 11, a difference is observed between task and rest conditions regarding macromolecular metabolites in the activated region. In fact, as illustrated by the Pearson correlation analysis, the contrast in metabolite trends between task and rest is reversed, indicating divergent alterations in macromolecular metabolite levels. Although a similar difference is also detectable in the deactivated region, it is not as pronounced as in the activated area. Notably, a rising trend in MM09 is evident in the activated brain region. As seen in the Pearson correlation, the negative correlation between task and rest values in the activated region clearly indicates the influence of the Consciousness Field treatment. Specifically, MM09 in the task condition shows a negative correlation compared to all macromolecular types in the rest group, reflecting an upward trend in the task group relative to the rest.

Altered macromolecular (MM) signal intensity—such as that seen in aging or neurological disorders—has been associated with changes in total protein concentration or mobility (Cudalbu et al., 2021; Akiyama et al., 2021). However, in the present study, participants were healthy adults aged 42 ± 7 years, and the Faradarmani Consciousness Field (FCF) was applied for a brief duration of only 15 minutes. Given these conditions, the observed increase in MM09 cannot plausibly be attributed to pathological or age-related processes. Instead, this short-term modulation during the task phase likely reflects an FCF-induced shift in intracellular protein dynamics or glial–neuronal interactions, suggesting a functional, state-dependent neurochemical response that merits further investigation.

Lipid Metabolites

The comparison of lipid metabolites in active and inactive regions of the brain resulted in analyzable data in Magnetic Resonance Spectroscopy (MRS), which is presented in Figure 12. As seen in the charts, the average value changes in the active brain regions do not show any significant variation or trend; furthermore, the correlation of value changes is generally positive, with the exception of Lip20, which shows no correlation with other lipids as a result of the task.

On the other hand, in the inactive region of the brain, notable changes are observed. For Lip13b, the highest lipid level among the samples is seen in the inactive brain region, and during the task condition, an increasing trend in its average is observable. Additionally, this lipid shows a negative correlation with the levels of other lipids in both task and rest conditions, indicating a reverse pattern—such that with an increase in Lip13b under task conditions, the other lipids tend to decrease. This reflects a distinct pattern in the Faradarmani-treated state compared to the rest condition in the inactive brain region.



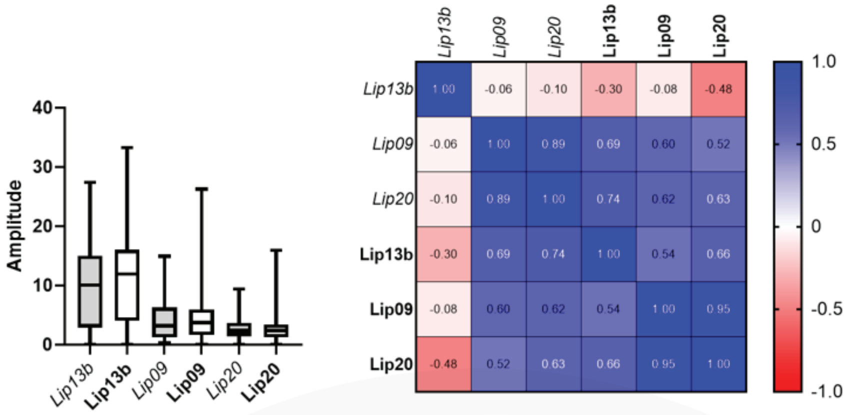
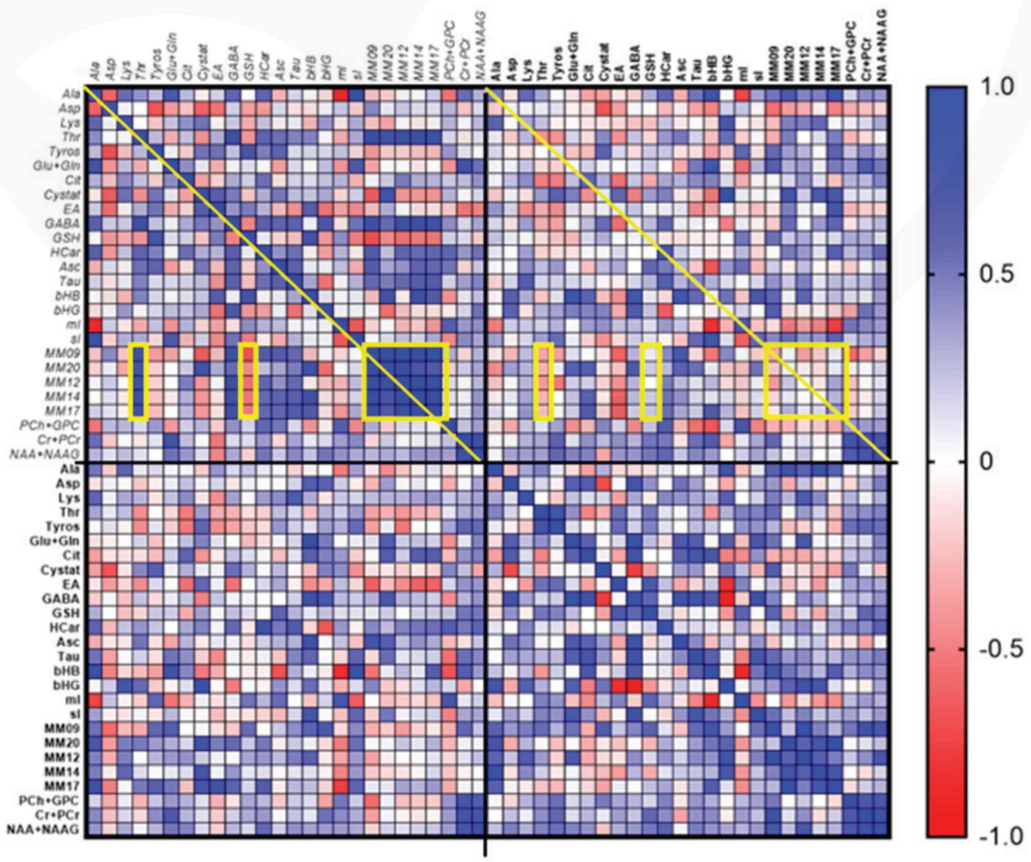


Figure 12. Changes in lipid metabolites under task and rest conditions in box plot analysis and Pearson correlation in the active (top) and deactivated (bottom) brain regions of Faradarmangars. *Italic:* rest. **Bold**: task.

Combined Correlation Analysis of All Metabolites

Finally, in the Figure 13, the overall Pearson correlation profile of changes in the activated and deactivated brain regions of Faradarmangars during rest and task is presented. As observed, the Pearson correlation analysis of all metabolites together in the activated and deactivated brain regions reveals changes in the metabolite value profiles. In both activated and deactivated regions, the perfect correlation (+1) between identical metabolites generally disappears (yellow lines in Figure 13); this occurs in 19 out of 26 metabolites in the activated region and 14 out of 26 metabolites in the deactivated region. This means that in more than 50% of the metabolites, there is a change in the pattern of value shifts between task and rest conditions in both regions. These data support the impact of the Faradarmani Consciousness Field on the brain metabolome of Faradarmangars within the time frame of this study.



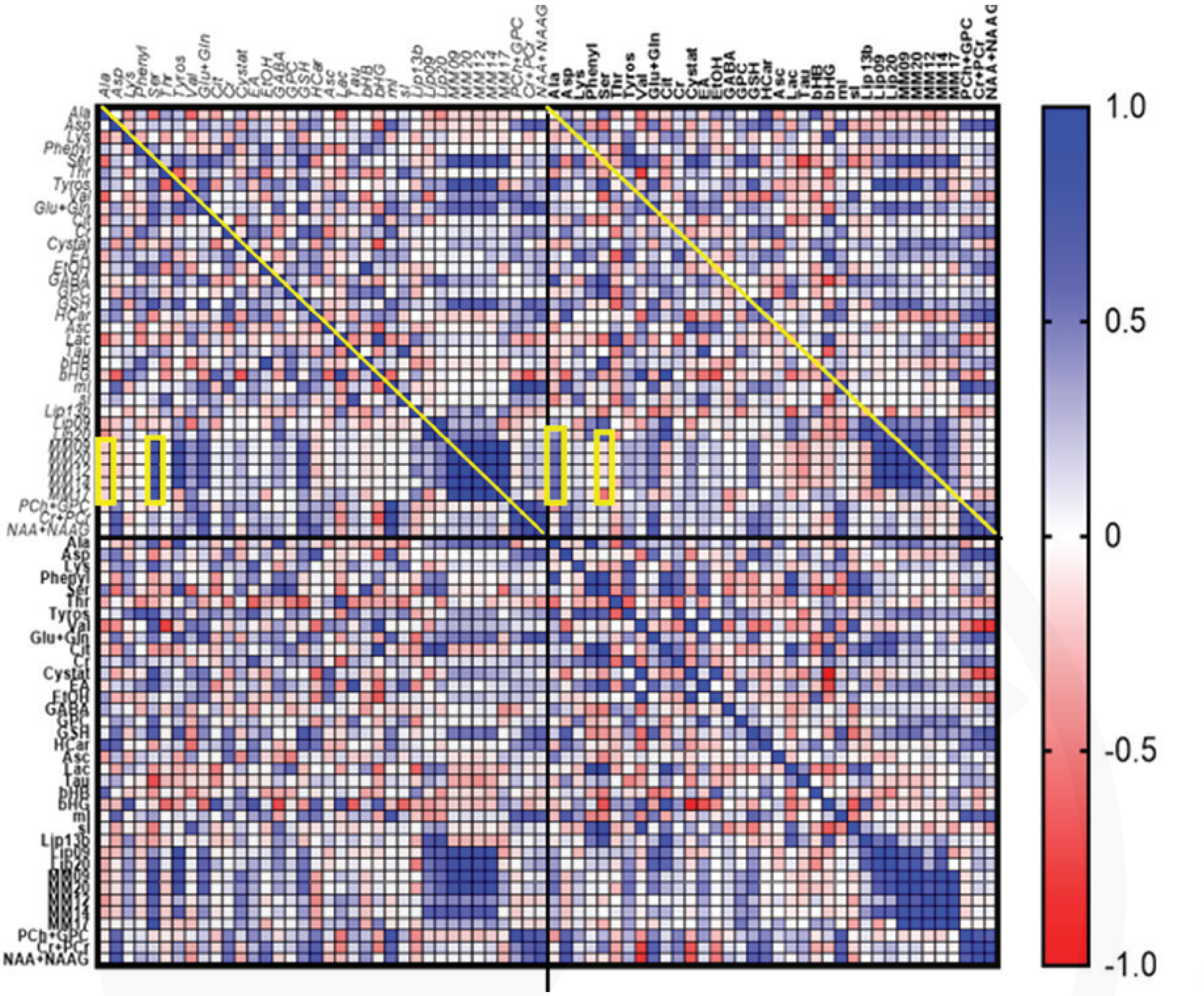


Figure 13. An overview of the changes in all metabolites examined across all studies in this issue under rest and task conditions in the activated (top) and deactivated (bottom) brain regions of Faradarmangars.

On the other hand, in the Pearson correlation analysis of all metabolites together, a distinct behavior—particularly within the macromolecule range—is observed in contrast to other metabolites (yellow boxes in Figure 13). Specifically, in the activated region and in the task vs. rest comparison, macromolecules exhibit not only significant changes in correlation within their own category (as also analyzed in direct comparisons), but also notable shifts in correlation with the amino acid threonine and the molecule GSH. In the deactivated region, considerable changes in the correlations between macromolecules and the amino acids serine and alanine are also evident. Furthermore, based on the lipid analysis in this region, notable correlation shifts are observed between Lip09 and Lip20 and the amino acid alanine. While these changes in correlation, considering the previous significance analysis, are not independently conclusive, they are important in highlighting substantial fluctuations within the macromolecule group in relation to the brain–Faradarmani Consciousness Field interaction. This interaction appears to involve, in addition to the mentioned macromolecules, the amino acids threonine, serine, and alanine.

Conclusion

Overall, the change in Pearson correlation of the macromolecule set in the comparison between rest and task in both the activated and deactivated regions serves as a significant criterion for examining the effect of the Faradarmani Consciousness Field, particularly in the activated brain region. In addition, specifically, the increase in the MM09 macromolecule and its negative correlation with other macromolecular metabolites in the activated region is another marker of the task in this area. Moreover, the change in correlation between macromolecules and the amino acids threonine (in the activated region), serine, and alanine (in the deactivated region) indicates a specific role of these amino acids in connection with the Faradarmani Consciousness Field in both studied regions. Moreover, a specific reference can be made to the reduced demand for and consumption of the ATP molecule and its related metabolic pathways, as well as a notable shift in the energetics of brain cells, particularly in the activated region. Among these, the increase in lactate, ascorbate, and MM09 in these areas may support the enhancement of metabolic processes recorded in fMRI. On the other hand, in the deactivated region, without any significant changes, the decreasing trends of GPC and ascorbate and the increasing trends of PCh, glutamate, and Lip13b indicate a distinct metabolic response of this region compared to the activated region of the brain.

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Investigation of Metabolite Changes in the Brains of Faradarmani Practitioners under the Influence of the Faradarmani Consciousness Field Using Proton Magnetic Resonance Spectroscopy

The nature and emergence of consciousness at the human level has long been one of the major scientific challenges. Numerous efforts in neuroscience have focused on the human brain in an attempt to understand the nature and function of consciousness by examining neuronal electrical activity and biochemical changes. In Taheri's approach, T-Consciousness is considered a fundamental element of the universe. It not only lacks any physical aspect but is also regarded as the source of matter, energy, and information. With respect to human-level consciousness, this perspective likens the brain to an antenna that functions as a receiver and detector. The mind, acting as a manager or operator, transmits information to the brain, leading to observable changes in the brain's electrical and biochemical activity.

Investigating brain metabolites under the influence of the Faradarmani Consciousness Field provides an objective means to observe the brain's biochemical response following the transmission of information from the mind. In this issue, the obtained data first demonstrate changes in various brain regions and subsequently offer a detailed examination of alterations in key metabolites under the influence of this T-Consciousness Field.

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