

Journal of Health and Quality of Life





Comparison of Electromagnetic Radiation (EMR) Before and After Super Brain Yoga (SBY) between Female and Male

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ARTICLE INFO	ABSTRACT
Article history: Received 27 March 2025 Received in revised form 12 May 2025 Accepted 29 May 2025 Available online 30 June 2025	The purpose of this study is to compare Electromagnetic Radiation (EMR) in females and males before and after performing Super Brain Yoga (SBY). SBY is a simple squatting exercise known in Malaysia as "ketuk ketampi." As proven in previous research, SBY can improve mental health by strengthening, energizing, and activating the brain and body. A total of 28 volunteers, both male and female, aged between 19 to 26 years old, were chosen to take part in this study and performed SBY 20 times in the morning and 20 times in the evening for 14 days. Morning hours are from 7 a.m. to 9 a.m., and evening hours are from 5 p.m. to 6 p.m. A frequency detector was used to measure and record the volunteers' EMR. Data were collected and statistical analyses were performed using Microsoft Excel. From the visual inspection of the results, it can be seen that there were significantly different of EMR between genders. The current findings suggest that human bodies emit different types of radiation, with males emitting a higher range of frequencies than females after performing SBY. Hence, through all the analysis, it can be concluded that by performing the SBY, human health can be impacted positively for both genders. This support the short-term target
Electromagnetic Radiation (EMR); Super Brain Yoga (SBY); female; male; gender; frequency detector	of the research which is to shift the mind-set of the society that SBY is a punishment method to a beneficial yoga technique for health improvement.

1. Introduction

Yoga is a brain training that promises great improvement in brain performance which can reduce stress and anxiety [1-3]. Yoga has gained significant importance and in the recent times a specific yoga called Super Brain Yoga (SBY) which in Tamil is called as "Thoppukaranam" [1]. The position of the movement is like doing a yogic squat with the correct position [4]. The benefits of exercise have been best defined for learning and memory, protection from neurodegeneration, and alleviation of depression, particularly in elderly populations [5]. It also can improve physical, mental health and it is great for all circles regardless of age and factors [6,7]. SBY encourage our energy to free flow from

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https://doi.org/10.37934/jhqol.6.1.1324

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the brain through the spine and then goes to the peripheral nervous system [3]. SBY is well known around the world with different name and different style [4]. It is known as squats exercise or "ketuk ketampi" in Malaysia and is kind of punishment towards student during school life [8]. Even though "ketuk ketampi" is regarded as punishment there is still benefits behind the punishment [8]. This exercise can improve the health and capabilities of the brain and body [9].

Nowadays, men and women had different exercise habits and reasons for doing that exercise. Women do the exercise for weight loss to get a goal body, while for the men it doing for the enjoyable [10]. It is said for men; exercise is something good for their life. However, for women it just doing it under forced condition [10]. Men and women have their own cardiopulmonary which were classified by different gender, age and after exercise [10]. Previous research showed that males and females also have different frequency characteristic [11].

In this research, the main objective is to compare the EMR between the gender after performing SBY. Therefore, the electromagnetic radiation (EMR) around the human body will be measured (in megahertz, MHz) using frequency detector and were captured at 16 radiation points in the human body, namely left and right side.

1.1 Human Body Electromagnetic Radiation (EMR)

Electromagnetic (EM) can be measurably formed from a collection of electromagnetic waves but the human energy fields are defined as extremely weak EM fields. Electromagnetic radiation (EMR) is produced around the human body due to the movement or rotation of particles. It is also can be classified as a healthy body condition. Human EMR refers to the signal emitted by a human body and can be seen close to the physical body. It is described as an endogenous electromagnetic field that is generated in connection with the electrical properties of the human body. This radiation encircles the physical body and can be defined as endogenous energy fields produced by and contained within the body. The study shows that every living human body emit different frequency of EMR depending on their activity, lifestyle, and surrounding. EMR also provides information about human physical health [12-15]. Besides that, the EMR is the electromagnetic energy field that exists around the human body, plants, and animals.

A study purposed a new technique to identify human segmentation using human electromagnetic radiation analysis. The body is divided into three part which is left, right and chakras. The left and right parts are called sagittal and chakra refer to the energy center of humans [16]. Another study was to determine the health condition of down syndrome and non-down syndrome and the finding showed that EMR is highly characterized and affected by the emotional and physical condition of the person [17]. The vibrations of human EMR can be measured using highly sensitive frequency detectors and human health conditions can be identified based on the color of the frequency.

1.2 Super Brain Yoga (SBY)

Super Brain Yoga (SBY) is a simple squatting technique that use a suitable energy to improve cognitive functioning of individual as shown in Figure 1. It involves 14 squats with one recommended breathing and rebalanced the energy level in the body to optimal functioning brain. In some country, SBY is a punishment method that was aimed at enhancing the brain function in slow learners. The method is catching hold of the right earlobe with the left hand while the hand left is catching hold of the left earlobe. It performs repeated squats likes breathing out as they come down and breathing in when it come back up to standing [18,19].

The previous study managed to improve the concentration, memory, and confidence of students by practicing SBY whereby the study consists of 1,945 school students from Mysore district, India. SBY was introduced to the students through the teachers for a period of 3 months. After three months, responses from the students were collected using a questionnaire centered on concentration, memory, and confidence facing examinations of students. The questionnaire was collected and analyzed with contingency coefficient and Chi-square tests. 86 % of the students reported that their memory and concentration have improved by practicing the SBY has helped them to face examinations more confidently. Thus, SBY has improved the overall performance of students in the school [20]. Another study investigated selective attention and psychological states. After employing the strategy, researchers noticed a significant improvement in attention and mindfulness and it can be reduced after only one session. These data imply that SBY resulted in enhanced cognitive performance and psychosocial states [21].



Fig. 1. Super Brain Yoga (SBY) technique

Next, there was a study, to determine the efficiency of the SBY with the yogic technique on mental activity in adolescence. The participant an assigned to a group where the range age is from 15 to 22 years from the Sanskrit College of district Haridwar, Uttarakhand. The activity is started in the early morning at 6:30 A.M for 21 minutes in 30 days excluded the weekends. They also told the participants not to undertake any other yogic activities by themselves. Based on the result, SBY can enhance the meditative state of mind which can further improve the overall performance of the secondary level students [22].

1.3 Frequency Detector

The frequency detector as shown in Figure 2, is an experimental electromagnetic measurement and imaging process that creates full-color bioenergy charts such as objects, plants, and animals. It is use to define the measure of the physiological level of the human body based on energy signal with the method of the different distances of the antenna. It can be interpreted into colors and bioenergies score from the frequency [23,24]. This frequency detector was used in this research.



Fig. 2. Frequency detector

The frequency detector is use by placing the detector parallel to the ground and horizontal to the human body. Figure 3 shows the process data acquisition using frequency detector [24]. In previous studies, frequency detector has been used to distinguish between stroke patients and non-stroke participants by comparing frequencies obtained from left and right sides and chakra points. Compared with stroke patient, non-store individuals had higher left and right frequency EMR, but lower chakra EMR [25]. Other studies have shown that frequency detectors can detect the unique signatures of body radiation frequencies [12-17,24,25].



Fig. 3. During the data acquisition using frequency detector

1.4 Females and Males

Females and males are genders conceptually that have been defined by various scholars and academics. It links to feminine and masculine aspects, name, a different role like responsibilities, identity, attitude, behavior, pattern, and requirements [6]. Males and females have a different distribution of frequency radiation. Females have a lower range of frequency on both the left and

right sides of the body compare the males [16]. For males' exercise is the best predictor of quality of life. Women have the low intensity to activity when women doing the engaging in the regular while women engaging in regular it has high-intensity activity [10]. Previously, a study aimed to investigate whether the gender differences motive and habits differentially affect the quality of life. This study found that the different gender assesses the predictability of quality life for exercise and exercise habits [10]. Another study investigates the possible risk and effect of activity status on different types of obesity in an elderly population. The finding shows that the female's elder and older males had a low physical activity level [7].

Consequently, another research discussed the analysis of human body radiation waves on the human torso and compares their frequency characteristics between genders and is comprised of 3 parts. The classifier's results show that it can classify the frequency radiation of the human torso using KNN analysis [24]. The data suggest that gender differences in EMR of the torso exists, particularly on the left and right torso. In 2014, there was a study targeted to explore the relationship between the implementation of gender-based yoga and the enhancement of employee wellness for improved productivity. The study concluded that the genders between a male and female character that everybody possesses not have a balanced manner [6].

2. Methodology

Figure 4 shows the flow of the research process. The first step was to obtain the required number of participants' females and males to participate in this research. The second step is to record the demographic data of the participant include names, age, and health conditions. The participant also needs to be divided into two classes by referring to the gender of female and male. The third step was to collect the EMR frequency reading before and after performing SBY at 16 points on the human body, which is 8 points on the right, and 8 points on the left as shown in Figure 5 [14]. These 16 points of the body include 4 points in the feet, 4 points on the hand, 2 points on the palms, 2 points in the trunk, and 4 points on the head. In the fourth step, the data was analyzed using Microsoft Excel after the participant finished the exercise, SBY for 14 days. Finally, the analysis of the data obtained can be used to make discussions and conclusions. There are few steps to be followed when performing the SBY [26]. The steps are as follow:

- i. Spread your feet shoulder-width apart.
- ii. Squeeze the right ear lobe with your left thumb and left index finger.
- iii. Squeeze the left ear lobe with your right thumb and right index finger.
- iv. The left arm must be inside and the right arm outside.
- v. When squatting down, inhale simultaneously.
- vi. When standing up, exhale simultaneously.
- vii. Repeat steps 1 to step 6 times per session until completed the 20 cycles.



Fig. 4. Flowchart of the research



Fig. 5. 16 points of human body [12]

2.1 Data Collection

The data collected involved 56 participants which are including 28 females and 28 males. Data acquisition is taken before participants begin performing the SBY and after 2 weeks of performing SBY has been completed. EMR readings are taken 5 times at each body point, hence, the average readings were calculated, to discover the comparison of EMR before and after performing SBY between females and males. This method has been conducted in a control environment at the participant places as shown in Figure 3.

2.2 Data Analysis

Figure 6 shows the 15 types of bioenergy colours and frequencies that can be identified using a frequency detector [17]. Microsoft Excel was used in this research to analyse the data. Table 1 shows the range of the physical health scores which can be decided and divided into 4 categories which are excellent, good, moderate, and poor while Table 2 shows the total score range of 15 colours and the category of the participant can be decided between 0 of the lowest and 5 of the highest.

COLOUR	MHz	COLOUR	MHz	COLOUR	MHz	COLOUR	MHz
Gold	4.0-4.1	Gold	15.7-16.5	Gold	62.5-66.0	Gold	249.8-264.2
Yellow	4.2-4.3	Yellow	16.6-17.4	Yellow	66.1-69.9	Yellow	264.9-279.7
Green	4.4-4.6	Green	17.5-18.5	Green	70.0-74.1	Green	279.8-296.7
Cyan	4.7	Cyan	18.6-18.7	Cyan	74.2-74.9	Cyan	296.8-299.7
Gray/Black	4.8	Gray/Black	18.8-19.3	Gray/Black	75.0-77.5	Gray/Black	299.8-310.2
Cyan	4.9	Cyan	19.4-19.6	Cyan	77.6-78.5	Cyan	310.3-314.2
- Bilat	5.0-5.1	Blue	19.7-20.7	Blue	78.6-83.1	She	314.3-332.7
Navy	5.2-5.5	Navy	20.8-22.0	Navy	83.2-88.1	Navy	338.8-352.7
Purple	5.6-5.8	Purple	22.1-23.3	Purple	88.2-93.4	Purple	352.8-373.7
Orchid	5.9-6.1	Orchid	23.4-24.6	Orchid	93.5-98.6	Orchid	373.8-394.7
Silver	6.2	Silver	24.7-25.0	Silver	98.7-100.0	Silver	394.8-400.2
White	6.3	White	25.1-25.3	White	100.1-101.1	White	400.3-404.9
Burgundy	6.4-6.5	Burgundy	25.4-26.6	Burgundy	101.2-104.	Burgandy	405.0-419.4
Red	6.6-6.9	Red	26.3-27.7	Red	104.9-111.1	Red	419.5-444.5
Rose	7.0-7.3	Rose	27.8-29.4	Rose.	111.2-117.8	Rose	444.6-471.4
Orange	7.4-7.8	Orange	29.5-31.2	Orange	117.9-124.8	Orange	471.5-499.4
Gold	7.9-8.2	Gold	31.3-33.0	Gold	124.9-132.1	Gold	499.5-528.5
Yellow	8.3-8.7	Yellow	33.1-34.9	Yellow	132.2-139.8	Yellow	528.6-559.4
Green	8.8-9.2	Green	35.0-37.0	Green	139.8-148.3	Green	559.5-593.4
Cyan	9.3	Cyan	37.1-37.4	Cyan	148.4-149.8	Cyan	593.5-599.4
Gray/Black	9.4-9.6	Gray/Black	37.5-38.7	Gray/Black	149.9-155.1	Gray/Black	599.5-620.5
Cyan	9.7-9.8	Cyan	38.8-39.2	Cyan	155.2-157.1	Cyan	620.6-628.5
Blue	9.9.10.3	Blue	39.3-41.5	Blue	157.2-166.3	Shae	628.6-665.4
Navy	10.4-11.0	Navy	41.6-44.0	Navy	166.4-176.3	Navy	665.5-705.4
Purple	11.1-11.6	Purple	44.1-46.7	Purple	176.4-186.8	Purple	705.5-747.4
Orchid	11.7-12.3	Orchid	45.8-49.3	Orchid	186.9-97.3	Orchid	747.5-789.4
Silver	12.4-12.5	Silver	49.4-50.0	Silver	197.4-200.1	Silver	789.5-800.5
White	12.6	White	50.1-50.6	White	200.2-202.4	White	800.6-809.9
Burgundy.	12.7-13.1	Burgundy	50.7-52.4	Burgundy	202.5-209.7	Bargundy	810.0-838.9
Red	13.2-13.8	Red	52.5-55.5	Red	209.8-222.2	Red	839.0-889.1
Rose	13.9-14.7	Rose	55.6-58.9	Rose	222.3-235.7	Rose	889.2-942.0
Orange	14.8-15.6	Orange	59.0-62.4	Orange	235.8-249.7	Orange	942.1-1000

Fig. 6. The colour and frequency identified by EMR [18]

Table 1				
Physical health score participants				
Range of total Score	Category			
>75	Excellent			
56-75	Good			
31-55	Moderate			
15-30	Poor			

Table 2						
The score range to categories of participants						
Category	Color	Score				
Excellent	Gold, Silver	5				
Good	White, Orchid, Cyan	4				
Moderate	Rose, Purple, Blue	3				
	Navy, Green, Yellow, Orange, Black	2				
Poor	Burgundy	1				
	Red	0				

3. Results and Discussions

The results were being divided into two parts according to the frequency detector reading. Part A concern with the difference in EMR before and after performing SBY and part B shows the finding based on a physical health score.

3.1 Difference in EMR Before and After Performing SBY between Females and Males

Figure 7 to Figure 10 shows the left and right statistics for both males and females before and after performing SBY. Figures 7 and Figure 8 illustrated that the range of frequency differences was bigger in females than in males. From the visual inspection, the female point displayed a wider frequency range, especially for R2, R5, L2, and L4. R8 and L5 are the data points for the male that demonstrate a significant rise. On the other hand, the frequencies for male were also higher as compared to females.



Fig. 7. Right side female before and after SBY



Fig. 8. Left side female before and after SBY



Fig. 9. Right side male before and after SBY



Figures 11 and Figure 12 show a gender comparison of EMR readings before and after the procedure. The frequency difference between males and females before SBY is very large for each point, especially points R2, R6, R7, and L2 while the frequency difference between males and females after SBY is small at the points R1, R2, R5, L3, and L4. According to this finding, another observation was that the frequency range for males before SBY is the same as the frequency range for females after SBY at points R1, L2, and L4. The points with the closest frequency range numbers are between R4, R8, L3, and L8, while the other numbers are not too far away. This shows that the value of frequency between females and males is not the same. These findings suggest that human bodies emit different types of radiation, with males emitting a higher range of frequencies than females which agreed with the previous finding and the relationship between males and females with their bodies' radiation produces different vibrations of that radiation [27]. In another research, it concluded that lack of energy was cited as the biggest obstacle to female respondents' physical activity whereas the biggest obstacle for male respondents was a lack of time [28].



Fig. 11. Right side both gender before and after SBY Fig. 12. Left side both gender before and after SBY

3.2 Physical Health Score between the Gender

Figure 13 illustrates the pre- and post-treatment gender disparities in health scores. The percentage of males with moderate health has increased from 61% to 86%, whereas the number of females with moderate health has remained constant both before and after the SBY, 82%. While the percentage of males with poor physical health has dropped from 14% to 3% and the percentage of women with poor physical health has decrease from 14% to 11%. After completing the SBY in both genders, the participant with a low health score before SBY was increased to an average health score

after SBY. This study, which demonstrates that males performed the SBY better than women, also indicates that males had more muscle strength in the aerobics group than women, suggesting that in the healthy state, men had superior physical coordination than women [29].



Fig. 13. The pre- and post-treatment gender disparities in health scores

4. Conclusions

From the visual inspection of the results, it can be seen that there were significantly different of EMR between genders. The current findings suggest that human bodies emit different types of radiation, with males emitting a higher range of frequencies than females after performing SBY. Hence, through all the analysis, it can be concluded that by performing the SBY, human health can be impacted positively for both genders. Males and females have different relationships with body radiation, resulting in different vibrations of body radiation. This shows a difference between the males and females categories in which the EMR readings of the male category seem to have a very large frequency range among the female category. Despite that, among the males and females, most of the participants who benefitted from performing SBY are in the male category. It can be proven based on the change in physical health score in the moderate category whether before and after performing SBY where both of the difference is highest and constant respectively in the male and female category. This shows that physical inactivity was higher in females compared to males. These findings agreed with previous research which concludes that practicing SBY has targeted the female population to consume physical activities should also be strengthened and males emit a wider range of frequencies than females with the different human bodies' types of radiation [28,29]. The conclusion from this research support the short-term target which is to shift the mind-set of the society that SBY is a punishment method to a beneficial yoga technique for health improvement.

Acknowledgement

The authors would like to thank members School of Electrical Engineering, College of Engineering, Universiti Teknologi MARA, Shah Alam, Malaysia for the guidance and support during this project.

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