



2000

2002

SOUTHWEST & GHOST HUNTERS ASSOCIATION

A multiphase study to find an effective method to evaluate electromagnetic field (EMF) sensitivity of people that have experienced paranormal events.

Contents

Abstract	3
Introduction	3
Materials and Methods	4
Results	5
Data Comparisons	6
Additional References and links	7

A multiphase study to find an effective method to evaluate electromagnetic field (EMF) sensitivity of people that have experienced paranormal

Abstract

A multiphase study was performed to find an effective method to evaluate electromagnetic field (EMF) sensitivity of people that have experienced paranormal events. The first phase developed criteria for controlled testing using an environment low in particulate and EMF pollution. Monitoring devices were used in an effort to ensure that extraneous EMF would not interfere with the tests. A second phase involved a single-blind challenge of 50 people who have experienced a paranormal event, plus 8 blank challenges. Twenty-five people were found who were sensitive to the fields, but did not react to the blanks. These were compared in the third phase to 20 healthy naive volunteer controls. None of the volunteers reacted to any challenge, active or blank.

In the fourth phase, the 16 EMF-sensitive people were re challenged twice to the frequencies to which they were most sensitive to during the previous challenge. The active frequency was found to be positive in 100% of the challenges, while all of the placebo tests were negative. Finally, the results were compared to frequencies that were recorded at allegedly haunted places. We concluded that this study gives strong evidence that electromagnetic field sensitivity exists, can be elicited under environmentally controlled conditions and may be responsible for some reported paranormal experiences.

Introduction

It has been suggested that low frequency electromagnetic fields may induce neurological effects that could explain many of the "experiences" that people have witnessed in haunted locations.

This article presents the preliminary data on electromagnetic field tests using a square wave generator to evaluate the EMF sensitivity of people who have had paranormal experiences under environmentally controlled and monitored conditions.

Materials and Methods

This study was carried out in four phases.

1. The tests were carried out in an environmentally controlled area. Portable EMF monitoring devices were used to find an area that would minimize background EMF which might disturb double-blind challenges and interfere with the testing process. The low-pollution room had a background of 1 V/m electric field and 2nT (Tesla) magnetic field.

The major emphasis of this study was the evaluation of the effects of the magnetic field generated by a coil fed from a sweep/function generator (Model 3030, B.K. Precision Dynascan Corp.). This equipment allowed us to test square wave frequencies from 0.1 Hz to 5 MHz.

The test subjects were tested while they were sitting comfortably upright in a chair with the generator on a table at least 4 feet away, with its output connected to a coil 2.5 inches in diameter and 6 inches tall, made of 13.5 inches of cable and positioned on the floor with its center approximately 6 inches from the feet of the person tested. The mean values of the alternating magnetic field generated by this arrangement were approximately 2900 nT at floor level, approximately 350 nT at the level of the chair seat and about 72 nT at hand level. The exposure period lasted approximately 4 minutes per challenge.

All subjects had been previously evaluated by questionnaire for food and chemical sensitivities in order to minimize possible confusion from coexisting problems.

2. This was a single-blind screening of 50 people who had a paranormal experience. They were challenged under low-pollution conditions using the sweep/function generator at 0.1, 0.5, 1, 3, 5, 8, 10, 15, 20, 25, 30, 35, 40, 45, 50, 60, and 100 Hz. There were twenty-one active challenges and five blanks (placebos) per person, giving a total of 1050 challenges.

3. Twenty subjects who were found to be positive in the phase 2 challenges and who had no more than one placebo reaction were then selected for a third phase of the study. In addition, 20 naive volunteers were challenged. Double-blind EMF challenges and placebos using the aforementioned parameters were performed. There were 1040 total challenges, of which 840 were active and 200 were blanks. The tests averaged 21 active frequencies and 5 blanks per subject.

4. Six subjects who reacted in phase 3 were then re challenged on two separate occasions in a double-blind manner, using only the frequencies to which they had responded most strongly. For each subject, the frequency of maximum sensitivity was inserted randomly into a series of 5 placebo challenges. Thus, there were a total of 12 active challenges and 30 blanks. All six subjects claimed to be psychic or have similar abilities.

Results

Phase 1. The EMF measurements were quite reproducible. Baseline studies on subjects were completed without remarkable result. Test subjects were also interviewed to obtain information on their paranormal experience(s).

Phase 2. Of the total of 50 people tested in the single-blind study, 25 reacted to several of the placebos in addition to the active challenges, and were excluded from further study. Five subjects who did not react to any active challenges were also excluded. A final 20 subjects who did react to active challenges, but not to blanks, were selected for the third phase of the study (Table 1).

Phase 3. The 20 subjects selected from phase 2 were re challenged, and 12 reacted positively to the active challenges. The total number of positive reactions to the 252 active challenges in the 12 subjects was 126 (50%). There were no reactions to any challenge, active or placebo, in the volunteer group of naive subjects .

When evaluating frequency response, 75% of the 16 test subjects reacted to 1 Hz, 71% to 5 Hz, 49 % to 10 Hz, 72% to 15 Hz, 69% to 18 Hz and 69% to 20 Hz. No test subject reacted to all 21 of the active frequencies in the challenges. The average was 11 reactive frequencies per subject, with a range of 1 to 19 positive responses.

The principal signs and symptoms produced were tingling, sleepiness, headache, dizziness, pain, tightness, spasm, flushing, pressure in ears, sadness, depression, tooth pains, tightness in chest, sensation of being touched, nausea, burning, sudden feeling of coldness, itching, prickling pain. Most reactions were neurological.

Phase 4 . In the 16 subjects again re challenged in a double-blind manner, using only the single frequency to which they were most sensitive, all reported reactions to the active frequencies when challenged. None reacted to the placebos.

Data Comparisons

Frequency data collected on investigations of allegedly haunted places shows similarities between frequencies collected and reactions from the test subjects when exposed to those frequencies. The frequencies and their effects are listed in table 2.

Table 1: Single blind challenge of 50 People

# of Subjects	# of active challenges	# of blank challenges	Positive reactions to active challenges	Positive reactions to blank challenges
25	525	125	325	50
25	525	125	213	25

Table 2: Paranormal experience and tested frequencies

Paranormal Experience/ Effects	Frequency	Subject Percentage
None	1Hz	72%
Deep feeling of sadness, dread or anxiety	5Hz	71%
Sensation of cold or heat, also ringing in the ears	10Hz	49%
Sensed presence, being watched	15Hz	32%
Sensation of being touched or pushed	18Hz	19%

Additional References and links

[Electrical Sensitivity as an Emerging Illness](#)

[Electromagnetic hypersensitivity](#)

[Electrical Sensitivity & Hypersensitivity](#)

[Overcoming Electrical sensitivity](#)

[Electrical Hypersensitivity](#)

[Electromagnetic Field Sensitivity](#)