

Base Transceiver Station Antennae Exposure and Human Health

Dear Editor,

The effects of radiofrequency (RF) electromagnetic fields exposure on humans, due to its potential health hazards, become the focus of interest from several years ago.^[1-4] In recent years, using mobile phone has drastically increased the amount of human exposure from the microwaves radiation in everyday life.^[5,6] The mobile phone exposure has been shown to have effects on the immune functions, stimulating hormones, mammalian brain, sperm motility and morphology, and neurological pathologies syndrome.^[7-9] In addition, its protection questions and biological effects are reasons why too many researchers focused on work in this field. However, still, no clear mechanism has been found to explain the correlation between base transceiver stations (BTS) RF radiation and health consequences. This letter is aimed to find out the psychological and psychobiological reactions of the people with respect to exposure conditions such as the distance and length of time living near the antenna.

In this regard, cross-sectional studies were performed on the selected inhabitants in two cities of Isfahan and Hamadan, Iran. The inhabitants were requested to complete a standardized questionnaire which prepared by author and coworkers that focused on the relevant psychologically and psychobiologically reactions parameters.^[6] The questionnaire was also consisted of age and sex of the individuals, distances from BTS antenna and their location in relation to the antennas and the length of time living near the BTS antenna.

The results showed that most of the symptoms such as nausea, headache, dizziness, irritability, discomfort, nervousness, depression, sleep disturbance, memory loss, and lowering of libido were statistically significant in the inhabitants living near the BTS antenna (<300 m distances) compared to those living far from the BTS antenna (>300 m).^[6] Results also showed that the mobile phone BTS antenna may have health effects on inhabitants living near the station (5300 m distances).

Findings were in agreement with previous studies, which have shown that someone living at 200 m from a base station reported some symptoms such as chronic fatigue and sleep disturbances.^[6,7,10] On the basis of the presented results, placing of base stations should be such as to minimize exposure of neighbors. Of course, more accurate follow-up studies in larger series by considering more psychological and psychobiological reactions are recommended for the evaluation of the effects of the BTS antennae. It was suggested that cellular phone

BTS antenna should not be sited closer than 300 m to populations to minimize the exposure of neighbors. Indeed, more follow-up studies with larger samples in are needed for the evaluation of the effects of the BTS antennae.

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Conflicts of interest

There are no conflicts of interest.

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