



The latest results of research on the prevalence of electromagnetic hypersensitivity in Poland

Grzegorz Tatoń* ⁽¹⁾, Gabriela Kanclerz ⁽²⁾, Kamila W. Undas ⁽³⁾, Rafał Pawlak ⁽⁴⁾

(1) Jagiellonian University Medical College, Cracow, Poland, e-mail: g.taton@uj.edu.pl

(2) Jagiellonian University, Cracow, Poland, e-mail: gabriela.kanclerz@doctoral.uj.edu.pl

(3) Jagiellonian University Medical College, Cracow, Poland, e-mail: kamila.undas@student.uj.edu.pl

(4) National Institute of Telecommunications, Warsaw, Poland, e-mail: r.pawlak@il-pib.pl

In recent years, the phenomenon commonly called electromagnetic hypersensitivity (EHS) has been established in public consciousness. It is due to the increasing number of sources of electromagnetic field (EMF) around us. In particular, this applies to telecommunications devices and newly developed technologies (e.g. 5G and 6G), but also to other types of electrical and electronic equipment.

EHS is a phenomenon that relies on attributing a wide range of nonspecific symptoms to EMF emitted by a variety of sources. Symptoms can vary in severity and can significantly hinder the normal functioning of some people. The mechanism of EHS is unknown, and there are also no objective and reliable methods that allow the diagnosis of this syndrome. This creates considerable methodological difficulties in scientific research on EHS, but also significantly hinders effective help for people perceiving themselves as hypersensitive to EMF. Currently, the diagnosis of EHS is based on self-declaration and qualification to the group of hypersensitive individuals is strongly dependent on the way the interview is conducted.

The purpose of the presented research was to verify the effectiveness of various criteria for assessing people as hypersensitive to EMF, to select the best criterion, but mainly it was an attempt to estimate the scale of this phenomenon in Poland over the last few years. Secondary objectives were to identify the most commonly reported EHS symptoms and the devices associated with these symptoms.

The project was carried out as a survey conducted in groups representative of the Polish society. The CATI (computer-assisted telephone interview) method was used. A total of 6200 people participated in the study in three phases conducted in 2020, 2022 and 2023.

As expected, it was found that the estimated prevalence of EHS is significantly dependent on the criteria applied to qualify subjects as hypersensitive to EMF. Depending on the criterion adopted, the number of such people may oscillate from 1,9% to 21,9% when considering the data achieved in 2020 and from 1,1% to 18,7% based on the 2023 survey. It seems that, at least in Poland, the number of people who perceive themselves to be affected by EHS has been decreasing in recent years, and not increasing, as one might expect facing the growing number of EMF sources in the human environment. If the strongest and most restrictive qualification criterion were applied, the prevalence of EHS in Poland would be estimated at 1.9%, 1.6% and 1.1% in 2020, 2022 and 2023 respectively.

The most frequently reported symptoms of EHS were headache, fatigue, eye pain, and irritability. At the same time, headache was statistically indicated more often than other symptoms, and the differences between subsequent symptoms were generally statistically nonsignificant. In each study year, headache was first in the ranking of symptoms and the order of subsequent symptoms changed between study phases.

The devices most frequently reported by potentially hypersensitive people as the cause of their deterioration in well-being are mobile phones, computers, and television sets. Interestingly, mobile telephony base stations, which seem to be considered one of the most significant health risks according to media reports, are further down the rankings.