



WEB OF SCIENCE

THE INFLUENCE OF THE ATMOSPHERIC ENVIRONMENT ON THE QUALITY OF LIFE OF THE POPULATION IN SUCEAVA TOWN

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Abstract

Introduction Meteorological factors as well as meteorological elements may influence the quality of life of people in a geographical area. People's response to the action of these factors is shown first physically and then mentally.

The aim of this paper is to analyze how the physical and chemical parameters of the atmospheric environment influence comfort / discomfort and the quality of life for the people in Suceava town and in the neighboring villages.

Material and method. In a geographical sense, the study aims at the metropolitan area of Suceava from where the following were collected: meteorological data (Suceava Meteorological Station - for the years 2019-2020), air chemistry data (stations SV1 and SV2 belonging to the Environmental Protection Agency Suceava - from where data were taken for the five indicators for the period 2009-2020), the sample of patients consulted by doctors in the period 2019-2020 and the respondents at the biometeorological questionnaire (2019-2020). Air chemistry data were analyzed for a longer period 2009-2020, in order to find the major coordinates of air quality for the air environment of the analyzed geographical area. We worked on hourly and daily data in compliance with the technical requirements of data capture, the quality of results and their reporting to national regulations and to the ones of the EU. The diurnal meteorological data come from hourly data of the main meteorological elements monitored at the Meteorological Station in Suceava and that have an effect on the comfort / discomfort and on human pathology: air temperature, relative humidity (from the combination of the two elements we calculated the thermohygrometric index), cloudiness, pressure and wind. The study was conducted over a period of 2 years (2019-2020) and involved 18704 medical consultations registered in the medical registry. In order to fill in the online questionnaire during the two years, we counted for each day of the 731, a variable number of answers (but for each day ≥ 5), from different respondents who live in the metropolitan area of Suceava. In total we recorded 9321 responses. The inadequate responses were eliminated from our calculations.

Results and discussions. After processing statistical data (meteorological, medical, biometeorological), we found that air environmental factors influence: directly or indirectly the state of physical and mental health, but also the one of social relations. The air temperature, its humidity, the atmospheric pressure, the wind speed as well as the chemical composition of the air may influence the physical health but also the mental one, having consequences upon people's general health and quality of life.

Conclusions. The study points out the importance of physical and chemical factors in the atmosphere in protecting people's health and how the quality of their lives is influenced, especially during the episodes or intervals of the year with bad weather. In winter, when it is very cold in Suceava, the population is the most vulnerable to the weather conditions.

Key words: *atmosphere physical parameters, atmosphere environment, quality of life, health conditions*