

ENERGY POVERTY IN GREECE. APPLICATION TO THESSALONIKI

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INTRODUCTION

Energy poverty is a situation in which a person cannot obtain the necessary energy to keep their home at a comfortable temperature and meet the basic needs to maintain the health and well-being, because of inadequate resources or living conditions. The aim of this study is to reveal the phenomenon of energy poverty, a new form of poverty, in Greece.

(1),(2),(3)

METHODS

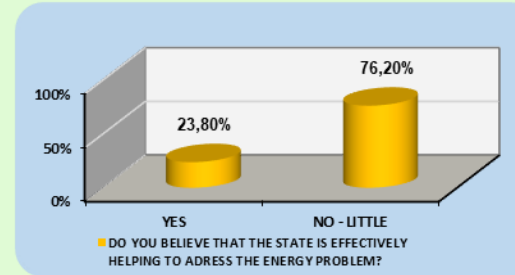
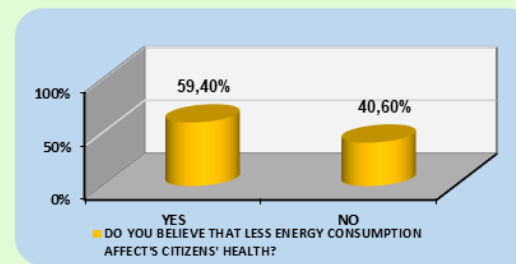
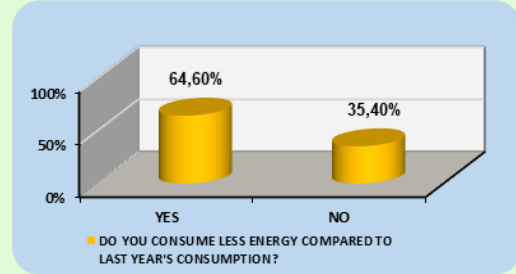
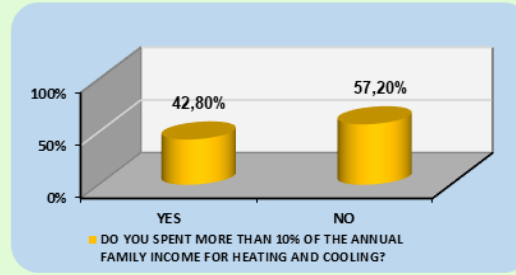
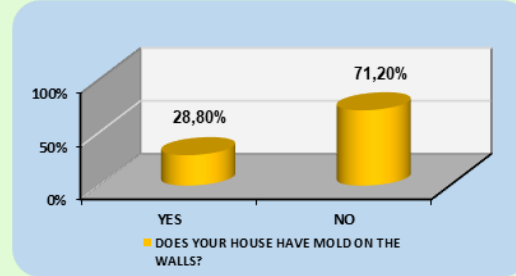
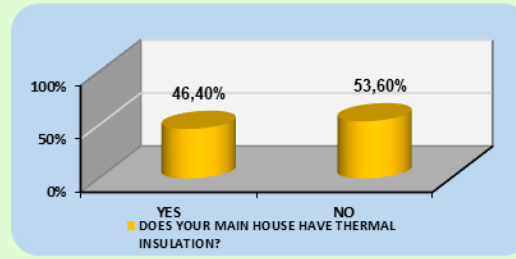
All the necessary data were collected through an appropriately designed questionnaire during 2023-2024, in the Prefecture of Thessaloniki, representative of the demographic profile of the population. The total number of valid questionnaires is 500. The questionnaire contains 55 questions, collecting data on the technical characteristics of the residence, e.g. heating/cooling system, on energy costs, on household income, on the energy behaviors of household residents, and in general on their standard of living.

RESULTS

Characteristics of sample

The mean age of the participants is 47 years; the 49% of the respondents are male and 51% female; the 49% of the sample consists of families with 2-4 persons; the 89% consists of employed people; the 29% has a university degree; the 42% of the sample has an annual income of 10-20.000€.

Five out of ten citizens answered that their home has no thermal insulation with mean date of construction in 1981. Because of the above, the 29% of Greek households declare that have mold on the walls. Also 24% of the respondents stated that have openings with single glazing and 64% with uninsulated aluminum frames.



The 32% of households state that have not taken any action to reduce thermal losses. Using the threshold of energy poverty as the 10% of income spend on domestic energy, it is found that the **43%** of the respondents are **energy poor**. In other words, 6 out of 10 households are unable to meet sufficiently their energy needs and reduce it.

Another face of energy poverty is that almost 60% of the respondents declare that less energy consumption affects their health. The health problems faced by citizens due to poor thermal comfort conditions have a direct negative dependence on their incomes. This is a clear impact of the economic crisis in Greece on energy poverty. Therefore 7 out of 10 citizens believed that the state has not effectively helped address the energy problem.

CONCLUSIONS

A large proportion of households in Greece (43%) are affected by the problem of energy poverty and should benefit from targeted policies to alleviate it. Furthermore, special care should be paid to analyze the characteristics of these energy poor households. The first concern of the state should be the gradual increase of the standard of living of citizens by increasing

incomes, containing prices of basic goods and reducing unemployment.

Then the Greek energy policy should focus more on energy upgrade of buildings through providing real incentives to households and especially low-income ones. (6),(7).

REFERENCES

1. Determination of public opinion on energy poverty. Application in Athens, Greece, E. Kaidatzis, Z. Iliopoulou, Z. Gareiou, E. Drimili, N. Matsouki, R. Martin, E. Zervas, 1st International Conference on Environmental Design, 24-25 Oct 2020, Athens, 2020.
2. Analysis of the world scientific production on Energy Poverty, Fuel Poverty and Energy Vulnerability, Z. Iliopoulou, N. Rapsomanikis, E. Zervas, IOP Conference Series: Earth and Environmental Science 1123 (1), 012059, 2022.
3. Bibliometric analysis of scientific production on energy sustainability and climate change, T. Kalyvas, E. Zervas, Low Carbon Energy Technologies in Sustainable Energy Systems, 287-307, 2021.
4. Energy use and saving in residential sector and occupant behavior: A case study in Athens, C. Vogiatzi, G. Gemenetzi, L. Massou, S. Pouloupoulos, S. Papaefthimiou, E. Zervas, Energy and Buildings, 181, 1-9, 2018.
5. Assessment of the Greek national plan on energy plan of energy and climate change- Critical remarks. E. Zervas, L. Vatikiotis, Z. Gareiou, S. Manika, R. Herrero-Martin Sustainability, 13 (23), 13143, 2021
6. Environmental Kuznets Curve in Greece in period 1960-2014, E. Kotroni, D. Kaika, E. Zervas, International Journal of Energy Economics and Policy, 10 (4), 364-370, 2020
7. Evaluations of energy upgrading interventions in social housing neighborhoods in Greece: An approach that takes into account residents' views, A. Kipourou, S. Giannarou, E. Zervas, E3S Web of Conferences 436, 01010, 2023