

Ethical issues arising in research into health and climate change

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Pecha Kucha presentation

Study of socioeconomic disparity on the effect of heat on health in persons working in the same organisation

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Brief description of context

This study will examine health issues faced by the workers of Pondicherry Medical College and hospital staff who work in different settings during the peak of summer. The work environment is different for distinct categories of staff, though they work in the same organisation. Some work in the field (outdoors – either in the community or in the garden), some in a non-air-conditioned environment in outpatient or inpatient areas of the hospital. Yet others work in air-conditioned environments. This study seeks to understand the health issues being faced by these diverse groups of employees. The socioeconomic background of each will also be investigated, as the exposure to severe heat depends on the type of housing they live in. Many of them from the lower socioeconomic background live in houses with tin roofs. The study will also investigate the non-communicable disease status of study participants like hypertension, diabetes mellitus, cardiovascular diseases, neurological disorders, renal problems, skin problems and electrolyte imbalances. The study will also factor in family income, housing and size of family. These factors are relevant to the study as a study participant who lives amongst a large family staying in a small, poorly ventilated house will face more adverse effects than their counterparts who are living with a small family in a fairly larger house with AC and other facilities.

Objectives of the study: To study the impact of heat on the health of hospital staff during the peak of summer.

Period of study: May and June of 2025

Study participants: Doctors at various levels, health care workers at various levels, staff working in non-patient care areas like the garden, engineering, administrative and purchase sections.

Methodology: Representatives of each group will be recruited after obtaining informed consent. A face-to-face interview will be conducted to obtain information on various issues based on a pre-validated questionnaire. The results will be tabulated, and subject to statistical analysis to identify associations between ambient heat and health issues faced by different individuals working in different settings, including any correlation between health issues and socioeconomic status.

Impact of the study: This study will help us identify health issues faced by distinct groups of personnel working in a medical college and hospital, with respect to their working environment and based on their socioeconomic strata.

Discussion of ethical issues

1. Obligations to research participants

Despite the results showing that different socioeconomic groups have deleterious effects on their health because of the heat, can the researchers provide actionable solutions to their problems? If not, what, if any, ethical obligations arise for researchers in this context? The workplace and the home environment may be more challenging for those from lower socioeconomic groups. Generally, those who are in the lower socioeconomic group are the ones working in the field and garden as they are less qualified. Study participants exposed to severe heat are at greater risk of getting dehydrated and getting renal stones, skin rashes etc.

Ethical questions raised:

- i. **Do researchers have a responsibility to the study participants beyond informing them that they are at risk?** For example, is there a duty to educate those at risk regarding modifications that can be made by them in their environment or their lifestyle (e.g. fluid intake, clothing etc.)? Separate education sessions for the two distinct groups facing effects of heat must be held by the researcher.
- ii. However, the question remains **whether they are willing and/or able to make changes in their work and lifestyle** to respond to the findings of the study?
- iii. **Is it the duty of the researchers to discuss with the people in governance to help implement modifications to the employee's environment?** Is the researcher accountable to the study group in bringing about a change in their work environment to mitigate the effects of extreme heat in their lives by making the leaders aware of the problems faced by the distinct groups of study participants and advocating for change?

For example, mitigation measures might include:

- a) Can work timings be changed so that participants adversely affected by heat can work at time when heat is less?
- b) Can they be given more frequent breaks?

The leaders have to be made aware of the problems faced by those working in extreme heat in relation to the health issues.

We can disseminate our study findings to other institutions, to the administrators of the state and publish it in journals so that all can make the necessary changes.

2. Unintended consequences of research

The questions raised by the study might adversely affect the work environment and ethos of the workplace. The study participants will be aware that the conditions they are working in are not equitable. This might create divisions between the different groups, with ensuing challenges for management.

When the study identifies difficulties faced by the employees, action may be required. But the administration might not be able to provide solutions to the affected individuals.

3. Research governance

Are the criteria and procedures for research ethics oversight adequate to the complex ethical challenges of research in the climate and health field? What adaptations may be necessary?

- a. Does the Research and Ethics Committee verify whether the data collected will bring out the benefits and risks faced by the distinct groups of employees?
- b. Does the Research and Ethics Committee ensure that follow up action is taken by the researcher based on the findings of the research?

Conclusion and recommendations

According to principles of justice and fairness, the research finding should be communicated to the study participants and the findings have to be discussed with the administrators and others in leadership roles so that changes can be made to mitigate the employees' exposure to heat.

Challenges likely to be faced:

The unintended effects of the research – as brought out by the research findings:

- a. may affect the ethos of the workplace
- b. may require action to be taken by administration which might not be feasible.

In such cases should such a research project be permitted?

My reflections would be that the education of employees would still help to mitigate the harmful effects of heat in their life by just simple lifestyle modifications. Those affected by heat should be made to understand that not all their problems related to extreme heat will be mitigated.

The outcomes of the research must be made known to all stakeholders – even if there might be a negative impact in some aspects.

Reference

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