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Data Article

Data on multiple body parameters, microclimatic variables, and subjective assessment of thermal sensation monitored in outdoor environment



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ABSTRACT

This paper describes two sets of data on multiple body parameters of five participants, on microclimatic variables, and on self-reported assessment of thermal responses, all monitored in the same outdoor urban environment. Data were collected during three seasons, summer, autumn and winter 2010–2011, in the city of Athens, Greece. Part of these data, collected during the summer period, is related to the research article entitled "Case study of skin temperature and thermal perception in a hot outdoor environment." (Pantavou et al., 2014) [1].

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Specifications Table

Subject area	<i>Biometeorology</i>
More specific subject area	<i>Outdoor thermal sensation</i>
Type of data	<i>Excel files</i>

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How data was acquired	<i>Data were collected during field surveys that involved measurements of body parameters and microclimatic monitoring along with a subjective assessment of thermal sensation based on questionnaires.</i>
Data format	<i>Raw, analyzed</i>
Experimental factors	<i>The participants were five volunteers, 3 males and 2 females, aged between 24 and 46 years old. They were wearing clothing of their choice and were mainly standing while undergoing light activity.</i>
Experimental features	<i>The measurements were taken in three seasons: summer, autumn, and winter 2010–2011.</i>
Data source location	<i>Athens (37°59'20"N, 23°43'41"E), Greece.</i>
Data accessibility	<i>Data is with this article.</i>

Value of the data

- The data can be used to examine the thermo-physiological responses of human body to meteorological variables.
- The datasets can be used to investigate the potential association of thermo-physiological responses of the human body to subjective thermal sensation and to explore potential differences between individuals.
- Meteorological data allow the estimation of thermal indices that can be compared to the thermal sensation reported by the participants.

1. Data

The present article contains data on body parameters, microclimatic variables, and subjective assessment of thermal sensation, overall comfort and preference regarding thermal sensation, reported through questionnaires answered by five individuals. The datasets are in two Excel files: [BodyParametersData.xlsx](#) and [QuestionnaireData.xlsx](#). The [BodyParametersData.xlsx](#) contains in different sheets per minute measurements of body parameters for each participant. The [QuestionnaireData.xlsx](#) file contains data on self-reported thermal responses based on a questionnaire and on meteorological variables monitored during the completion of the questionnaire.

2. Experimental design, materials and methods

2.1. General framework

The data were collected during field questionnaire-based surveys investigating the thermal sensation of a Mediterranean population [2]. Overall, five individuals (Table 1) volunteered to wear the multi-sensor device SenseWear Pro II Armband (BodyMedia Pittsburgh, PA) [1] and to self-report,

Table 1
Participants' characteristics.

Participants	Body Mass Index (BMI)	Handedness	Smoker
P1	20.90	Right Handed	Smoker
P2	27.68	Right Handed	Non-Smoker
P3	17.30	Right Handed	Non-Smoker
P4	22.99	Right Handed	Non-Smoker
P5	27.16	Left Handed	Non-Smoker

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