



Outdoor thermal comfort – review on the main relationships and methodological components of a comprehensive study

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Because of the rapidly growing global population more and more people have to live or work in urban areas. Balancing the harmful effects of the numerous stress factors in cities there is an increasing need for parks and squares offering places for relaxation, recreation and promoting the social activity. The usage of such open public areas in cities is more feasible if they offer comfortable conditions. As outdoor human comfort may be affected by a wide range of factors, the first aim of this paper is to illustrate the speculative relationship-network of the main objective and subjective parameters forming the thermal comfort outdoors consequently the area usage. On the objective side, environmental factors such as morphology of a given place, weather parameters and the resulted micro-bioclimatological conditions will be discussed. The subjective part deals with individual factors (demographic variables, health conditions, general feelings, elements of psychological adaptation etc.), with subjective assessments of the actual conditions (overall comfort, thermal sensation, perceptions of the place and weather parameters, preferences for any changes), finally with the area usage (forms and patterns of outdoor activities). After the theoretical background the paper focus on the main components of a comprehensive outdoor thermal comfort study. Advantages and disadvantages of the main methodological groups with their applicability in the practice will be detailed. This means the discussion of on-site meteorological measurements (with stationary or mobile station), human monitoring on the site (interviews and observations), as well as the modeling procedure (simulations of the thermal environment and area usage).