



Human thermal perception of Coastal Mediterranean outdoor urban environments

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This research evaluates the perception of human thermal sensation in the Mediterranean climate in an attempt to calibrate the scale of human thermal sensation for this climate, by applying the Physiologically Equivalent Temperature (PET) index. A field survey was conducted in the city of Tel Aviv, Israel in several outdoor urban spaces during summers and winters of 2007-2011. Empirical data of climatic variables were collected by meteorological stations and accompanied by subjective thermal sensation questionnaires. The relations between the calculated PET values for the investigated sites and the Thermal Sensation Vote (TSV) were examined. Analytical results indicate that the "neutral" TSV range for the Mediterranean climate is between 20-25 °C PET, higher than that of the temperate climates and lower than that of the hot and humid climates. The PET boundaries for the cold classes of thermal perception in the Mediterranean are relatively high in comparison to Western/Middle Europe but are relatively low in comparison to Taiwan. However, the differences in PET boundaries for the hot classes of thermal perception decrease as the temperature values increase, towards an almost identical definition of "very hot" in Western/Middle Europe, the Mediterranean and Taiwan.