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PII: S2210-6707(19)33534-6  
DOI: <https://doi.org/10.1016/j.scs.2019.101993>  
Reference: SCS 101993

To appear in: *Sustainable Cities and Society*

Received Date: 9 June 2019  
Revised Date: 26 November 2019  
Accepted Date: 26 November 2019

Please cite this article as: Guan H, Hu S, Liu G, Zhang L, The combined effects of temperature and noise on the comfort perceptions of young people with a normal Body Mass Index, *Sustainable Cities and Society* (2019), doi: <https://doi.org/10.1016/j.scs.2019.101993>

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## The combined effects of temperature and noise on the comfort perceptions of young people with a normal Body Mass Index

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### Highlights

- Experiments were conducted in a controlled chamber under conditions of cool conditions, neutral conditions, warm conditions and construction noise (55, 65, 75, 85dB).
- Subjects' thermal sensation vote (TSV), thermal comfort vote (TCV), acoustic comfort vote (ACV) and total annoyance sensation vote (TASV) were collected.
- Heart rate (HR) as a physiological change index was tested to explain the interaction between thermal environment and noise.
- The combined effects of temperature and noise on human perceptions were more significant in the warm environment.

### Abstract:

This study aims to investigate the combined effects of temperature and noise on human perceptions. Eighteen subjects participated in the experiments, which contained three temperature conditions (20°C:RH50%, 25°C:RH50%, 30°C:RH50%.)

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