A systematic review of ambient temperature and sleep in a warming climate
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A considerable literature has grown up about the prevention and treatment of depressive symptoms in adults with chronic illness. Among available no pharmacological treatments for alleviate these symptoms, cognitive behavioral therapy (CBT) and physical exercise interventions are empirically validated. Interventions combining cognitive behavioral therapy and physical exercise (CBTEx) have been shown promising results in improving depressive symptoms in various chronic illnesses.

**AIM**: To identify and summarize the literature on ambient temperature, notably heat, and sleep outcomes in a warming world

**Inclusion Criteria** (1) reported associations between objective indicators of ambient temperature and valid sleep outcomes measured in real-life, environments; (1) included adults, adolescents, or children; (3) were peer-reviewed.

**Exclusion Criteria** (1) experimental studies manipulating in-laboratory temperatures were also excluded, (2) association between ambient temperature and the prescription of hypnotics or indirect sleep measures.

**Databases** PubMed, Scopus, JSTOR, GreenFILE, GeoRef and PsycARTICLES

**Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies**

**Climate change projections** (2 studies)
- US data : climate change may 6-14 additional nights of insufficient sleep per 100 individuals by 2050 and 2099
- International data: 2099 ~ 13 (RCP4.5) to 15 (RCP8.5) excess short (<7h) nights of sleep/person/year
- Future sleep loss may also be larger for residents from lower-income countries (factor of 3), older adults (factor of 2) and women (25% higher)

**Foster adaptation to ambient heat**
- Individual level: sleep hygiene measures, lifestyle interventions
- Societal level: equitable adaptation +++, urban greening & water features, passive cooling improvement of buildings’ insulation, ventilation systems.

**Conclusion**
Given the absence of solid evidence on fast sleep adaptation to heat, rising average temperatures induced by climate change pose a serious threat to human sleep and therefore human health, performance, and wellbeing.

**References**
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