INPLASY

Characteristics of sleep among university students: protocol of a systematic review of Malaysian studies using Pittsburgh Sleep Quality Index

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ADMINISTRATIVE INFORMATION

Support - IMU University.

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 25 February 2025 and was last updated on 25 February 2025.

INTRODUCTION

*R*eview question / Objective What are the characteristics of sleep among university students in Malaysia as measured using PSQI, and what are the associated factors of those with poor sleep quality?

Rationale This study aims to document the characteristics of sleep among Malaysian university students, including sleep quality and its associated factors. These data will assist future interventional studies for this health problem in Malaysia.

Condition being studied Sleep quality can be defined as an individual's general level satisfaction with the sleep experience. It is often assessed using Pittsburgh Sleep Quality Index (PSQI), a 19-item scale that evaluate the quality and disturbances of sleep over one month. It can be categorized into 7 components: 1) sleep quality, 2) sleep latency, 3) sleep duration, 4) sleep efficiency, 5) sleep disorders, 6) medication use to sleep, and 7) daytime sleepiness. Each component is classified in a score ranging from 0 to 3. The sum of the scores for these 7 components produces a score ranging from 0 to 21. Poor sleep quality is set at the threshold of PSQI>5.

METHODS

Search strategy We plan to search bibliographic databases for Malaysian prevalence studies that evaluated sleep quality using the Pittsburgh Sleep Quality Index (PSQI). The reason for choosing this scale is that it is the most commonly used rating for investigating sleep quality in Malaysia. Bibliographic search using combinations of these terms: sleep quality, Pittsburgh Sleep Quality Index, PSQI, university, student and Malaysia. All publications up to 31 December 2024 will be included.
Participant or population: Adults who were university or college students in Malaysia.

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Intervention None.

Comparator None.

Study designs to be included Cross-sectional studies.

Eligibility criteria (a) Study participants are adults; (b) Studies conducted in Malaysia; (c) Used Pittsburgh Sleep Quality Index (PSQI) to measure sleep quality.

Information sources An extensive literature search will be carried out on two electronic databases (PubMed, Scopus), and supplemented by a Google Scholar search.

Main outcome(s) Sleep quality based on Pittsburgh Sleep Quality Index (PSQI).

Additional outcome(s) Other sleep characteristics, e.g., sleep quality, sleep latency, sleep duration, and sleep efficiency.

Data management References retrieved will be processed using citation manager Endnote 20. Relevant data (number of participants with and without poor sleep quality, mean score of PSQI and additional outcomes) in the included studies will be extracted by a pair of investigators independently, to minimize potential bias and error as well as to resolve any disagreements.

Quality assessment / Risk of bias analysis The studies identified will then be assessed for methodological validity using JBI critical appraisal checklist for prevalence studies.

Strategy of data synthesis Meta-analysis will be performed using MedCalc Statistical Software for proportion (prevalence of poor sleep quality). MedCalc uses a Freeman-Tukey transformation to calculate the weighted summary proportion under the fixed and random effects model.

Subgroup analysis For poor sleep quality: (a) Gender; (b) Ethnic groups (if data are available).

Sensitivity analysis None.

Language restriction None.

Country(ies) involved Malaysia.

Other relevant information This systematic review will be prepared following PRISMA guidelines.

Keywords Adult; Malaysia; Meta-Analysis; Sex Factors; Sleep Quality; Students; Universities.

Dissemination plans Publication of manuscript in a journal.

Contributions of each author
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