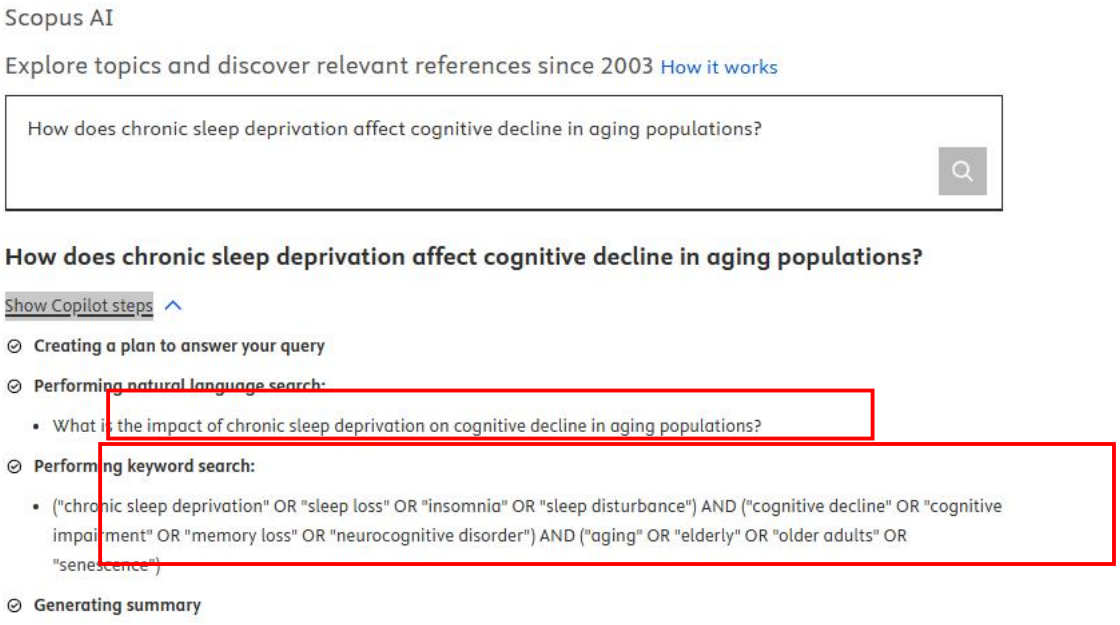
访问 Scopus AI

访问 www.scopus.com 即可进入 **Scopus AI** 页面，通过提问即可开始使用。

1. 全能科研助手

Scopus AI 可以用来查询你想知道的任何科学名词和科学问题。比如我们想了解“慢性睡眠剥夺如何影响老龄化人群的认知能力下降？”，就可以直接在 **Scopus AI** 对话框直接用英文或中文提问（可以参考 Show Copilot steps 中推荐的英文近似结果），打破原有检索式关键词的所搜方式。并可以通过 **Copilot** 功能将您的问题拆解成由关键词组成的检索式供您深度检索时参考使用。



点击后生成基于参考文献的 **summary**。

Summary

Effects of Chronic Sleep Deprivation on Cognitive Decline in Aging Populations

Chronic sleep deprivation has significant implications for cognitive decline in aging populations. The relationship between sleep and cognitive function is complex and multifaceted, involving various mechanisms and factors.

Key Findings:

- **Cognitive Impairment and Sleep Disorders:**
  - Chronic insomnia and other sleep disorders are prevalent among older adults and are associated with cognitive impairments. These impairments include deficits in memory, attention, working memory, and executive function [1] [2] [3].
  - Sleep disturbances, such as poor sleep quality and altered sleep patterns, are linked to accelerated cognitive decline and are considered early indicators of neurodegenerative diseases like Alzheimer's disease (AD) [2] [4].
- **Mechanisms of Cognitive Decline:**
  - Sleep deprivation leads to excessive neuronal activity without sufficient time for homeostasis, resulting in oxidative stress and neuronal damage, which predispose individuals to cognitive impairment [5].
  - The glymphatic system, which clears waste from the brain, is impaired in individuals with chronic insomnia, contributing to cognitive decline [3].
  - Sleep disturbances can lead to reduced levels of brain-derived neurotrophic factor (BDNF), which is crucial for cognitive function and neuroplasticity [6].
- **Bidirectional Relationship:**
  - There is a bidirectional relationship between sleep disturbances and cognitive decline. Poor sleep quality can exacerbate cognitive impairment, and cognitive decline can further disrupt sleep patterns [4] [7].
- **Protective Factors:**
  - Napping has been identified as a protective factor against cognitive decline, reducing the risk of

如果想进一步深入了解这一科学问题的相关情况，可以通过“**Expanded Summary**”来查看更详细的回答， **Scopus AI** 基于更多的相关文献能够生成更为细致的答案。

Expanded summary

Based on the user's query, I will address the impact of chronic sleep deprivation on cognitive decline in aging populations, the neurological mechanisms underlying this impact, behavioral and cognitive markers of cognitive decline, potential interventions or treatments, and the long-term consequences of chronic sleep deprivation on cognitive decline.

Impact of Chronic Sleep Deprivation on Cognitive Decline in Aging Populations:

- Older individuals may exhibit relative resilience to cognitive impairment when sleep deprived, possibly due to individual differences in performance impairment unrelated to age [1] [2].
- Sleep disturbances have been linked to cognitive decline and a higher risk of dementia, with poor self-reported sleep associated with accelerated cognitive decline, particularly in processing speed and verbal memory [3] [4].
- Longitudinal studies have shown that sleep disturbances, including short and long sleep durations, are associated with greater cognitive decline in older adults, suggesting that sleep duration changes among healthy baseline sleepers are associated with reduced cognitive function [5] [6].

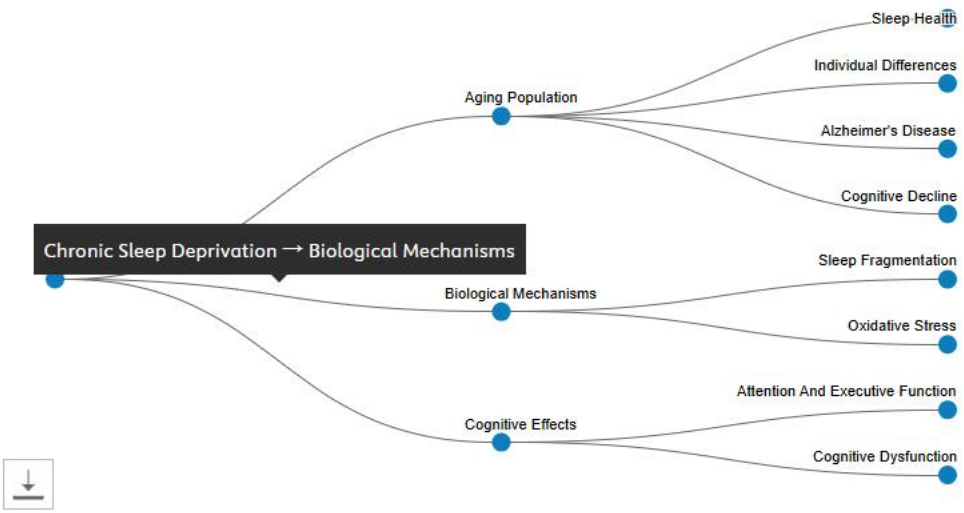
Neurological Mechanisms Underlying the Impact of Chronic Sleep Deprivation on Cognitive Decline:

- Sleep loss affects cognitive functions such as psychomotor and cognitive speed, vigilant and executive attention, working memory, and higher cognitive abilities, with functional neuroimaging revealing distributed changes in brain regions including frontal and parietal control areas, secondary sensory processing areas, and thalamic areas [7].
- Sleep disturbances, including sleep fragmentation and premature sleep curtailment, may lead to cognitive deficits that accumulate over time, with differences among individuals in cognitive vulnerability to sleep loss possibly involving differences in prefrontal and parietal cortices and genetic alleles associated with differential cognitive vulnerability to sleep loss [7].

Behavioral and Cognitive Markers of Cognitive Decline in Aging Populations Affected by Chronic Sleep Deprivation:

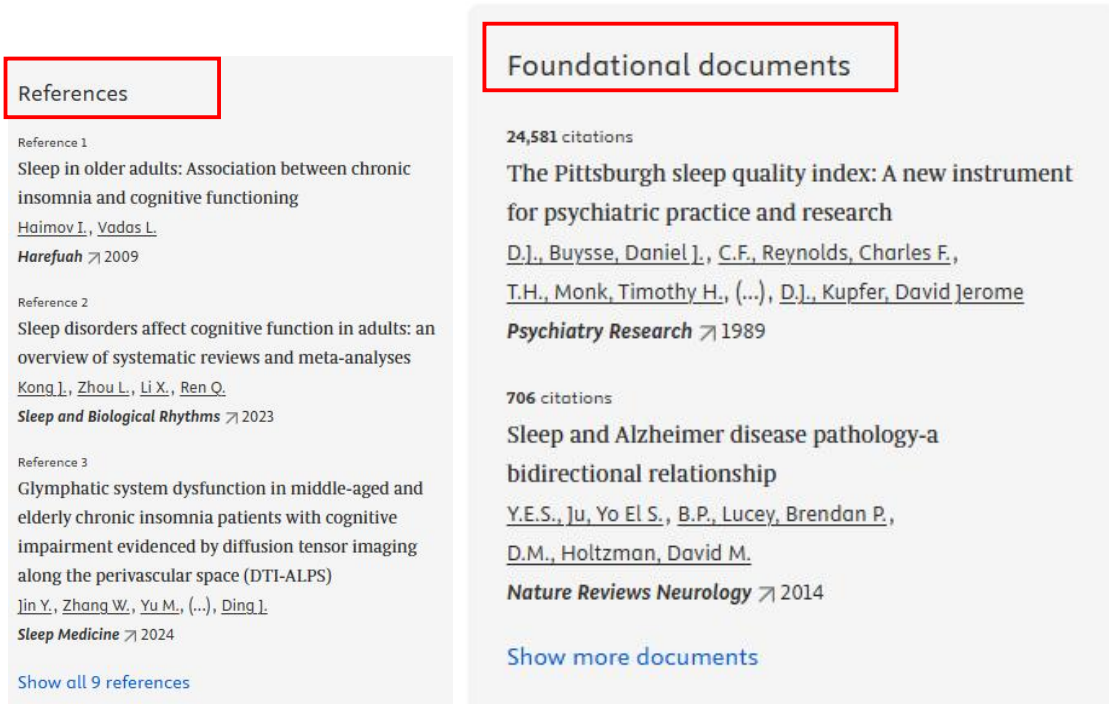
Scopus AI 提供独有的 “思维导图” （**Concept Map**），帮助您快速形成知识脉络。并且每个节点都可再次点击，了解相关详细内容。

Concept map

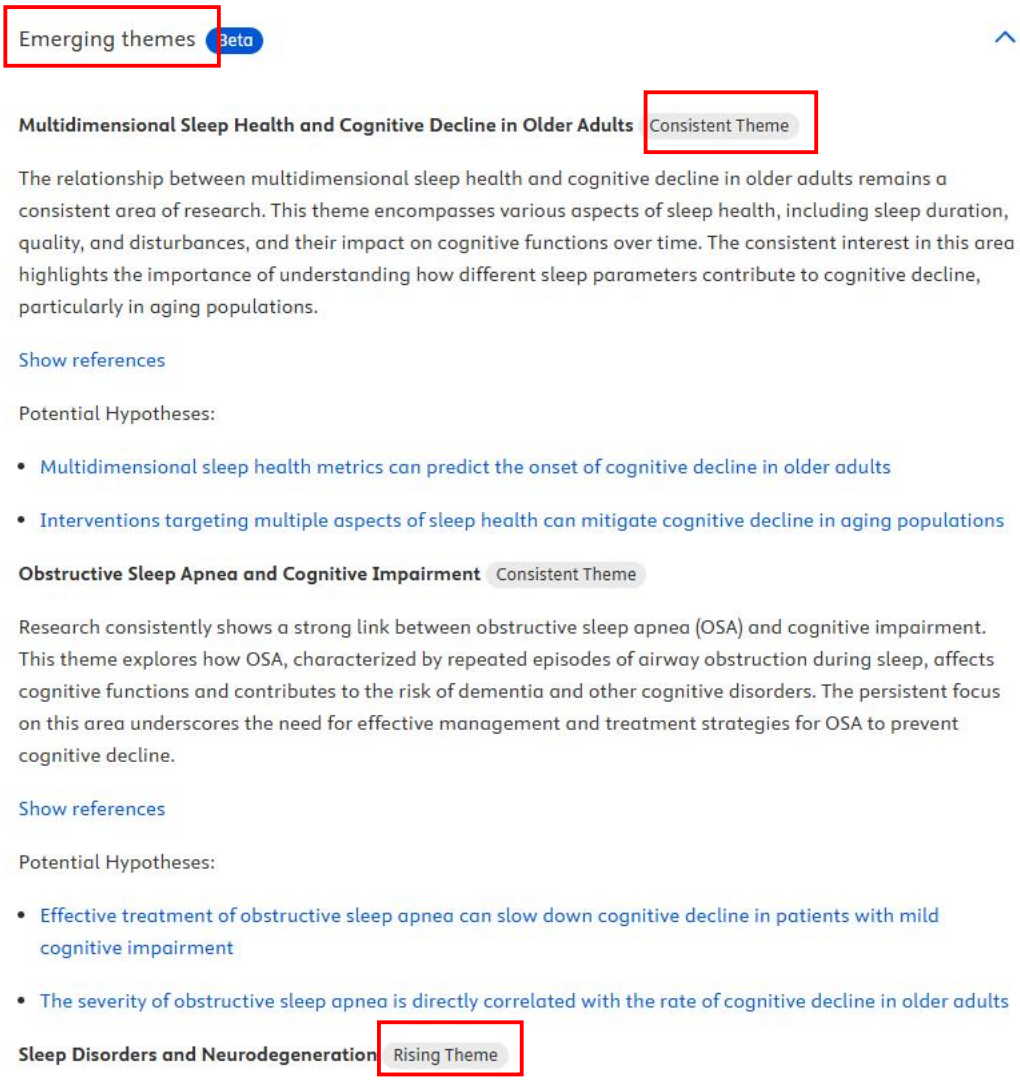


2. 可信数据源

Scopus AI 区别于 Chat GPT，生成内容有真实可靠的应用文献作为支撑，每一句描述都会标记文献来源，避免了 Chat GPT 生成深度赝品的问题。还是上一个问题： “Recent progress in network design parameter selection decision based on inflection point identification.” **Scopus AI** 除了生成一段 Summary 外，还会列出生成该段文字参考的相关引用文献，并且每篇文献都是真实可以被检索到的。**Scopus AI** 还开发了新的算法用于找出该研究领域的核心引用文章，帮助用户了解该研究领域的奠基性文献。

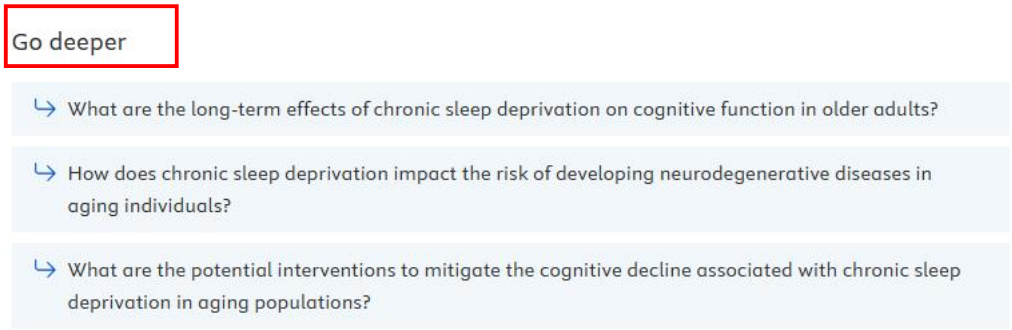


3. Scopus AI 新增 “**Emerging themes**” 功能，帮您快速总结领域内 “**Consistent Theme**”， “**Rising Theme**”， “**Novel Theme**”。



4. 猜你所想

同时，**Scopus AI** 还能根据您的问题，猜测你感兴趣的其它相关问题。帮助您进一步加深或者拓展对于某一科学问题的认知。



总结

Scopus AI 是一个能够显著提高科研发现效率的工具，能够用于文献调研、论文撰写、基金申请材料撰写等，希望老师和同学能够利用好 **Scopus AI** 试用时间，提升科研工作的效率。