

Unmasking the dangers of society's idealisation of sleep deprivation

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Abstract

This review explores the prevalence of sleep deprivation and the societal norms that perpetuate it, as well as the subsequent health consequences. A review of existing literature from databases such as PubMed, Science Direct and Google Scholar was conducted. This paper finds that factors such as social influences around perceived attainment from reduced sleep, socioeconomic disparities and urbanisation contribute to widespread sleep deprivation, disproportionately affecting individuals from lower-income and minority backgrounds. The glorification of reduced sleep, particularly in high-pressure professions, further exacerbates this trend. Findings highlight the urgent need to challenge societal perceptions of sleep and implement public health initiatives. Addressing sleep deprivation requires a cultural shift that prioritises health over the relentless pursuit of productivity.

Abbreviations

CRP – C-Reactive Protein

HPA – Hypothalamic-Pituitary-Adrenal Axis

IL-6 – Interleukin-6

Introduction

Sleep is a crucial physiological process for both mental and physical well-being. Insufficient sleep significantly elevates the risk of long-term health complications, such as an increased risk for cardiovascular disease, depression and cancer.¹ Nevertheless, modern society venerates sleep deprivation and boasts about heightened productivity and achievement resulting from reduced sleep duration. Since embracing a 24/7-hour work culture in our modern society, our focus has shifted toward career advancement at the expense of prioritising health, when, in fact, sleep deprivation undermines productivity and well-being.² The societal idealisation of sleep deprivation refers to the way in which society promotes overworking and functioning on minimal sleep as a sign of dedication, productivity and success. The recommended sleep duration for adults stands at 7–9 hours per night.¹ However, a substantial portion of adults fail to meet this recommendation. A study analysing the average sleep duration among American adults from 2010 to 2018

revealed that 33.6% reported sleeping 6 hours or less, with this figure escalating to 35.6% when looking solely at the data from 2018.³ This presents an increasingly substantial challenge, influenced in part by demographic factors such as culture and socioeconomic status.

Research indicates that individuals from lower socioeconomic backgrounds often experience shorter sleep durations due to work-related pressures and urban migration. Sleep disparities are further compounded by racial and ethnic inequalities. In the UK, for example, Black, African, Caribbean or Black British employees earned a lower median hourly wage than their White counterparts as of 2022, making it more likely for them to work overtime or multiple jobs, especially amid the current cost of living crisis, ultimately reducing their sleep duration.⁴ Similar pay gaps are observed in the USA.⁵ Findings from multiple studies reinforce the idea that these disparities in sleep patterns contribute to broader health inequalities.⁶ Ultimately, this societal shift neglects natural sleep cycles, warranting an examination of its origins and strategies for improving individuals' health outcomes concerning sleep quality and adequacy.

The idealisation of sleep deprivation

Historically, our sleep duration has significantly changed, with notable observed deviations between the mid-20th century and contemporary times. During the 1950s, the average duration of nightly sleep approximated 8 hours, markedly contrasting with prevailing trends in modern-day culture where adults typically allocate approximately 6.5 hours to sleep.⁷ We are increasingly abstaining from our natural circadian rhythm, and a multitude of factors have been postulated to account for this deviation, such as urbanisation and technological advancements.⁸ However, a pivotal determinant contributing to this trend lies in the societal pressure emphasised on economic attainment, coupled with the pressures of competitive working environments.²

An illustrative manifestation of this is seen in the widespread propagation of the '5am routine' phenomenon across various social media platforms, thereby instigating feelings of culpability among individuals who fail to adhere to these ostensibly health-oriented trends.⁹ This tendency is especially pronounced in certain professions, where compromised sleep quality is revered if it translates to

heightened productivity or accomplishment. Medical students represent a pertinent example, renowned for prioritising their academic responsibilities over adequate sleep. A study conducted among a cohort of 177 medical students found that 49.7% reported poor sleep quality, with 26.5% reporting nightly sleep durations of less than 6 hours.¹⁰ The reasons for this trend were found to be a pursuit of enhanced academic success and the persuasive influence of peer norms within the medical community. However, the findings of this study found that compromised sleep duration correlated inversely with academic attainment, as well as detrimental effects on both physical and mental health.^{2,10}

Adherence to societal pressures can largely be attributed to conformity to social norms. Studies have explored the neural mechanisms underlying conformity, revealing that most individuals are highly influenced by majority opinion, particularly when it is consistent with prevailing trends.¹¹ People conform to the majority to avoid negative consequences or social rejection. It is human nature to seek acceptance, especially when misinformation leads us to believe that certain behaviours, such as reduced sleep, are beneficial.¹¹ However, it is important to acknowledge that the neural mechanisms behind social conformity are not yet fully understood.¹² Additionally, the populations studied may be more susceptible to compliance in environments where a dominant opinion is expressed. While some individuals may challenge these norms, the sharp rise in poor sleep duration across Western populations suggests that conformity plays a significant role in perpetuating this trend. Therefore, it is crucial to challenge these societal beliefs and dispel the misinformation surrounding sleep deprivation and its true impact on health and well-being.

The impact of sleep deprivation on health

Sleep deprivation not only impacts productivity but also entails significant long-term health implications, including cardiovascular disease, dementia and respiratory disorders.¹ Several hypothesised mechanisms explain how sleep deprivation affects cardiovascular health; one of the primary theories is via inflammation. Research has linked insufficient sleep with increased levels of biomarkers such as C-reactive protein (CRP) and interleukin-6 (IL-6), both of which are key inflammatory molecules. Elevated CRP is a biomarker for individuals at risk of cardiovascular disease, while IL-6 has been linked to impairments in cortisol regulation. This disruption negatively affects the cortisol awakening response and its daily decline, leading to fatigue and further difficulties with both falling asleep and waking up.^{13,14}

Additionally, inflammation resulting from sleep deprivation has been found to heighten activity in the hypothalamic-pituitary-adrenal (HPA) axis. The HPA axis plays a crucial role in sleep modulation and cardiometabolic regulation through its effects on inflammatory mediators. When overactive, the HPA axis has been associated with elevated blood pressure and increased central adiposity.¹⁵ Furthermore, its activation is theorised to contribute to inflammatory mechanisms involved in the pathogenesis of atherosclerosis. These factors collectively increase the risk of developing cardiovascular disease.¹⁴

Beyond cardiovascular disease, there are also correlations between sleep deprivation and depression, which is underscored in numerous studies, with this association closely linked to burnout.¹⁶ Moreover, sufficient sleep has been identified as a crucial factor in lifespan. A meta-analysis involving 1,382,999 participants of both genders examined the relationship between sleep duration and mortality risk, with the findings indicating that shorter sleep duration was associated with an increased mortality risk.¹⁷ As well as this, the 24/7 work culture disrupts our natural circadian rhythms, and chronic disturbances of these rhythms have been theorised to contribute to the development of cancer.¹⁸

Beyond its enduring health ramifications, sleep deprivation

significantly compromises performance, particularly in terms of concentration and reaction time. Multiple studies have investigated the comparative effects of alcohol consumption and sleep deprivation on reaction time and alertness. One study revealed that reaction times when sleeping less than 6 hours equated to those after consuming three pints of beer, while others discerned slower response speeds in sleep-deprived individuals compared to those drinking alcohol.¹⁹ The danger posed by sleep deprivation manifests in its potential impact on driving safety and occupational performance, with ramifications extending to medical practice. Notably, it was reported that over 5 years, 29,834 fatalities were attributed to accidents involving drowsy drivers.²¹ Collectively, these studies underscore the profound effects of sleep deprivation, advocating for heightened awareness of its detrimental consequences to mitigate the societal idealisation thereof.

Barriers to healthy sleep

Numerous factors impede individuals from prioritising sleep, including work demands, urbanisation and socioeconomic deprivation. The migration of individuals from rural to urban areas for employment has surged significantly, particularly in developing nations, with the urbanisation rate skyrocketing from 14% to 50% since the 20th century. This demographic shift is closely linked to disruptions in circadian rhythms, as urban environments encourage sedentary lifestyles and expose individuals to noise pollution and irregular work schedules.²² A review of multiple studies found that individuals in urban settings are significantly more likely to develop insomnia than those in rural areas.²³ One reason for this is that urban residents are more likely to live alone or in densely populated cities with higher crime rates, making them more sensitive to potential dangers at night. Additionally, urban living may be inherently misaligned with human evolutionary adaptations, as rapid urbanisation disrupts natural sleep cycles.²³ Research has further highlighted behavioural factors contributing to poor sleep in urban areas, including reduced physical activity and increased screen time.

While the mechanisms linking exercise to sleep quality are not fully understood, physical activity has been shown to produce anti-inflammatory cytokines, improve mental health and promote brain neurogenesis, all of which benefit sleep.²⁴ In addition to urbanisation, socioeconomic pressures further exacerbate sleep deprivation. The prevalence of these behaviours can be attributed to the longer working hours of individuals in cities, driven by the widespread belief that reduced sleep enhances productivity. Additionally, the escalating cost of living in urban areas necessitates longer work hours, reinforcing the pervasive sleep deprivation culture. This trend is particularly pronounced among individuals of Black ethnicity, exemplified by the stark income disparity between Black and White households, where in the United States, the median Black household income is ten times less than their White counterparts.⁵ Consequently, individuals of Black ethnicity frequently report nightly sleep durations of 5 hours or less compared to people of White ethnicity.²⁵ Socioeconomic disadvantages often compel individuals to undertake multiple jobs or night shifts, significantly disrupting their natural sleep cycle. Disparities in sleep duration across ethnicities contribute to the heightened prevalence of chronic health conditions among non-Hispanic Black, non-Hispanic Asian and non-Mexican Hispanic/Latino people, all of whom report considerably shorter sleep durations than non-Hispanic White people.²⁵ Due to the imperative of maintaining employment and sustaining basic living standards, individuals experiencing socioeconomic deprivation often struggle to obtain sufficient sleep as the necessity to work to support themselves and their families impedes their ability to prioritise rest.³ Consequently, accessible support mechanisms need to be available to address the adverse impact of sleep deprivation on their well-being. These could include community programs that provide support for sleep hygiene and education, as well as workplace initiatives that promote more flexible schedules. Additionally, workplaces should offer education on the health impacts of sleep to raise awareness within the community about the importance of a good night's rest.

Challenging the sleep deprivation epidemic

To address the sleep deprivation epidemic, it is imperative to implement strategies aimed at promoting optimal sleep health and raising awareness about the dangers of inadequate sleep, commencing from childhood. While most health promotion initiatives prioritise exercise and dietary habits, the significance of adequate sleep and sleep hygiene rarely receives attention.²⁶ Efforts directed towards enhancing public understanding of sleep's vital role in overall well-being may facilitate the mitigation of this pervasive issue. For individuals having trouble falling asleep, numerous studies have underscored the efficacy of several methods such as relaxation techniques, mindfulness and listening to soothing music in improving sleep duration and quality.^{27,28} Greater accessibility and encouragement of such methods could potentially precipitate a transformation in societal norms surrounding sleep. Promoting a balanced approach to work and personal life, coupled with educational endeavours aimed at guiding individuals towards seeking support when their lifestyle impedes adequate sleep, could yield substantial benefits.²⁶ While immediate changes may not be evident, reshaping societal attitudes towards recognising the health benefits of a good night's sleep represents a pivotal starting point.²⁸

Conclusion

The idealisation of sleep deprivation in contemporary society poses significant threats to both individual health and societal well-being. Despite clear evidence highlighting the importance of adequate sleep, modern culture often celebrates reduced sleep duration as a symbol of productivity and success. Societal pressures, economic demands and disparities in access to resources further exacerbate the problem, putting people at risk for long-term health problems, particularly among those experiencing socioeconomic deprivation. In essence, recognising the detrimental consequences of sleep deprivation and taking proactive measures to address them is paramount for fostering a healthier and more resilient society. By implementing public health initiatives, such as introducing sleep education programmes in schools and encouraging workplaces to adopt flexible working hours into their policies, we can begin to reshape societal attitudes toward sleep. By promoting the 7–9 hours of sleep needed per night, we can begin to mitigate the adverse effects of sleep deprivation and promote overall well-being for individuals and communities alike. This harmful idealisation can be halted by spreading awareness of the importance of adequate sleep.

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I am a second-year medical student at the University of Plymouth. I began this piece in my first year during a Student Selected Unit and developed a strong interest in the topic, particularly in the role of public health campaigns and education in improving health. I have thoroughly enjoyed the writing process and hope to continue conducting further research and writing projects in my current fields of interest: cardiology and neurology. In my free time, I enjoy dancing, particularly ballet, which has been a lifelong passion of mine.