JURNAL UPI

JOMSIGN: Journal of Multicultural Studies in Guidance and Counseling

Journal homepage: http://ejournal.upi.edu/index.php/jomsign
ISSN 2549-7065 (print) || ISSN 2549-7073 (online)

Understanding Sleep Procrastination: Theoretical Approaches and Implications For Adolescent Well-Being and Counselling Perspective

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ABSTRACT

Sleep procrastination—the voluntary delay of sleep despite foreseeable negative consequences—has become increasingly prevalent among adolescents, especially in the digital era. This paper explores the concept, causes, and consequences of sleep procrastination among Nigerian adolescents. Drawing upon current literature and research, the study highlights how environmental, psychological, biological, and technological factors contribute to this behaviour. Sleep procrastination is linked to poor academic performance, emotional instability, reduced cognitive functioning, and overall health deterioration. The paper also discusses both bedtime and while-in-bed procrastination, emphasizing how adolescents sacrifice sleep for leisure, often due to poor self-regulation, stress, and excessive media consumption. Ultimately, the study underscores the urgent need for targeted interventions involving families, schools, and policy-makers to promote healthy sleep habits. Recommendations are provided to help mitigate the negative effects of sleep procrastination and support adolescent development.

ARTICLE INFO

Article History:
Submitted/Received 24-01-2025
First Revised 04-02-2025
Accepted 28-02-2025
First Available Online 01-03-2025
Publication Date 01-03-2025

Keyword:
Sleep procrastination,
Adolescents,
Counselling perspectives

1. INTRODUCTION

Sleep procrastination is the voluntary delay of sleep despite the absence of external constraints, it has become a growing concern among adolescents. This phenomenon, often linked to poor self-regulation and digital distractions, has significant implications for adolescent well-being, including cognitive impairment, emotional dysregulation, and reduced academic performance. Given the crucial role of sleep in physical and psychological development, understanding sleep procrastination through theoretical lenses is essential for developing effective interventions.

This paper explores sleep procrastination by drawing insights from self-regulation theory, the theory of planned behaviour, and the procrastination-health model. These frameworks provide a comprehensive understanding of the psychological and behavioural mechanisms underlying delayed sleep onset. Furthermore, the paper reviewed the implications of sleep procrastination for adolescent mental health and academic success, emphasizing the need for targeted counselling interventions. By integrating theoretical perspectives this paper aims to highlight the importance of addressing sleep procrastination to promote adolescent well-being and foster healthier sleep behaviours.

Sleep procrastination is the voluntary delay of sleep despite the absence of external constraints, has become a growing concern among adolescents. This phenomenon, often linked to poor self-regulation and digital distractions, has significant implications for adolescent well-being, including cognitive impairment, emotional dysregulation, and reduced academic performance. Given the crucial role of sleep in physical and psychological development, understanding sleep procrastination through theoretical lenses is essential for developing effective interventions.

Sleeping is a natural way of giving rest to the body and mind, it plays a crucial role in maintaining overall physical, health and well-being of a person by allowing for recovery and rejuvenation. sleeping is essential for cognitive functions such as concentration, productivity, and problem-solving, good mood and emotional stability. The sufficient length and good quality of night sleep play a vital role in maintaining effective functioning. Sleeping is a natural process that provides rest to the body and mind, playing a crucial role in maintaining physical health and well-being by allowing recovery and rejuvenation.". Sleeping however becomes procrastinated when it is delayed or postponed. Sleeping procrastination behaviour has become increasingly prevalent among adolescents, driven by both intrinsic and extrinsic factors. Sleep procrastination leads to sleep deprivation, which has been associated with various negative outcomes, including impaired cognitive function, emotional instability, and increased vulnerability to health issues (Tavernier & Willoughby, 2014; van der Helm et al., 2021). Sleep procrastination in adolescents refers to the delay or avoidance of going to bed, even when they are aware of the negative consequences on their health and well-being. This behaviour is common among adolescents and can be influenced by a variety of factors, both psychological and environmental. It can lead to insufficient sleep, which may result in issues such as poor academic performance, emotional instability, and weakened immune function (Tavernier & Willoughby, 2014; Saliu & Abdukareem, 2024).

Although adequate sleep quantity is important, the quality of sleep is equally crucial for preventing sleep disorders (Centers for Disease Control and Prevention [CDC], 2022). However, insufficient sleep can result in irritability, heightened stress, reduced alertness and concentration, leading to confusion, impaired cognitive functions, and an inability to perform complex tasks or engage in logical reasoning. These deficits contribute to poor work efficiency, low academic performance, and hinder daytime awareness (Rehman, 2023). As

DOI: https://doi.org/10.17509/jomsign.v9i1.80145
p- ISSN 2549-7065 e- ISSN 2549-7073

sleep deprivation negatively affects an individual's overall health and well-being, it has been recognized as a significant public health issue (CDC, 2020). This issue is particularly prevalent among adolescents in Nigeria, who often delay bedtime and consequently get less sleep than necessary.

Adolescence represents a transitional phase from childhood to adulthood, marked by significant hormonal, somatic, neurological, and behavioural changes. These transformations occur alongside the maturation of sleep mechanisms and other complex bodily processes (Keenan et al., 2021). Studies indicate that sleep plays an essential role in brain maturation, especially during periods of significant developmental changes (Dahl & Lewin, 2019). During this stage, sleep patterns and behaviours change due to a combination of biological and social factors, both of which contribute to sleep deprivation (Aumann et al., 2019). This developmental period is characterized by changes in sleep architecture, as evidenced by EEG data (Jenkins et al., 2020). Additionally, adolescents tend to experience a shift in their chronotype towards evening, which appears to be biologically driven rather than influenced by external or cultural factors, linked to changes in circadian and homeostatic processes (Goel et al., 2022).

2. METHOD

This article employed a qualitative conceptual review method to explore the phenomenon of sleep procrastination among adolescents, particularly within the Nigerian context. The authors synthesized and critically analyzed existing literature, theories, and empirical findings from multidisciplinary sources including psychology, counselling, sleep medicine, and cultural studies. Peer-reviewed journal articles, institutional reports, and global health databases were reviewed to identify the key psychological, social, cultural, and technological factors contributing to sleep procrastination. Additionally, theoretical frameworks such as Cognitive Behavioral Therapy (CBT), Self-Regulation Theory, Theory of Planned Behaviour, Motivation Theory, and Social Cognitive Theory were examined to contextualize adolescent sleep procrastination behaviour. The method allowed for an integrative understanding of the issue, paving the way for culturally sensitive counselling interventions and recommendations aimed at improving adolescent well-being and sleep hygiene.

3. RESULTS AND DISCUSSION

3.1. Exploratory Study on Sleep Procrastination

Sleep insufficiency among adolescents may stem from several factors, including poor sleep environments, negative emotions, available entertainment, biological misalignments, and behavioural issues such as procrastination. Procrastination refers to the voluntary delay of intended actions despite awareness of the negative consequences (Steel, 2020). It often involves engaging in more appealing activities that replace the task at hand (Amoako & Quaye, 2021). This delay may be linked to emotional discomfort and avoidance behaviours (Loa, 2012). Schraw, Wadkins, and Olafson (2017) further define procrastination as the intentional postponement or deferral of tasks, which could extend to sleep. Those who engage in sleep procrastination may also demonstrate procrastination tendencies in other areas of life, suggesting a broader habit of delaying important activities. Procrastination is widely recognized for its negative impact on an individual's ability to accomplish tasks and achieve goals (Perpetua & Agoja, 2021). Sleep procrastination, therefore, reflects a delay in

DOI: https://doi.org/10.17509/jomsign.v9i1.80145
p- ISSN 2549-7065 e- ISSN 2549-7073

sleep initiation and can be viewed as a form of procrastination where individuals prioritize other more stimulating activities over sleep (Krzywoszanski, 2019). A key factor in sleep procrastination is human behaviour, as noted by Sirois and Pychyl (2016), who suggest that procrastination habits often extend into the sleep domain.

Sleep procrastination which often takes the form of bedtime procrastination, is a psychological phenomenon where individuals deliberately delay going to bed despite being aware of the negative consequences of doing so (Kroese et al., 2016). Another form of sleep procrastination is while-in-bed procrastination, where individuals engage in activities like browsing the internet, reading, or watching movies, which delay the onset of sleep (Marples, 2021). This behaviour can be attributed to several factors, including environmental, biological, technological, medical, and behavioural influences. These include exposure to noise and light at night, shift work, daily routines, lifestyle choices (Irish et al., 2015), and the use of electronic devices (Gradisar et al., 2013). The increasing time spent on media consumption reduces the time available for sleep, contributing to sleep deprivation. According to Bozkurt (2024), one of the most significant consequences of excessive media use is sleep displacement, which occurs when media activities lead to later bedtimes and reduced sleep duration. Additionally, excessive mobile phone use before bed not only delays the onset of sleep but may also replace the time that would otherwise be spent sleeping.

3.2. Prevalence of Sleep Procrastination

Research on sleep procrastination has increasingly focused on understanding its psychological causes, consequences, and potential intervention strategies. This section reviews key studies on the prevalence, predictors, and effects of sleep procrastination among adolescents, as well as counseling approaches designed to mitigate its negative impact. Sleep procrastination is prevalent across various populations, including adolescents, students, young adults, and adults. Hirshkowitz (2015) reports that about 70% of adolescents sleep for less than eight hours per night, whereas teenagers require between 8 to 10 hours of sleep. Approximately 45% of adolescents between the 6th and 12th grades suffer from sleep insufficiency. A survey by Itmar (2023) found that 74% of individuals, including adolescents, admitted to going to bed later than planned at least once a week without any external reasons for the delay. The onset of sleep is often delayed due to various factors, such as psychological and psychiatric issues (e.g., insomnia, affective disorders), and even neurodegenerative diseases (Krzywoszanski, 2019). These delays have significant negative effects on adolescent well-being, as sleep procrastination has been linked to increased psychological stress, lower academic performance, and higher risks of depression and anxiety.

In Nigeria, bedtime procrastination is a common issue among adolescents. Camerini et al. (2021) found that adolescents who engage in online social entertainment tend to spend more time on these activities, allocate less time for sleep, and exhibit higher levels of problematic smartphone use over time. Paula et al. (2020) also noted that sleep procrastination can lead to increased stress, depression, and the use of sleep-inducing drugs, while also diminishing the ability to maintain healthy habits such as exercise and proper nutrition.

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p- ISSN 2549-7065 e- ISSN 2549-7073

Many adolescents struggle with time management and self-regulation, and these challenges are exacerbated by environmental stressors, such as irregular power supply, uncomfortable room temperatures, family issues, peer pressure, and academic stressors. Socially, adolescents often attend clubs, ceremonies, and engage in social networking, spending extensive time chatting with friends, watching movies online, or scrolling through social media. The nature of social media applications, combined with adolescents' low self-control, increases the likelihood of procrastinating, thereby delaying sleep (Bernecker & Job, 2020). Economically, some adolescents engage in online businesses, responding to transactions that cause them to stay up late. Activities like online shopping, social media browsing, and watching streaming services all contribute to sleep procrastination (Kendra, 2023).

These behaviours and their consequences affect adolescents' development, growth, and overall functioning. In sum, sleep insufficiency is a significant issue with far-reaching consequences on adolescents' lives. Sleep procrastination often leads adolescents to neglect their academic responsibilities during the day, resulting in delays and unfinished tasks. Research highlights that sleep procrastination is associated with shorter sleep duration, poorer sleep quality, and higher levels of daytime fatigue (Vanessa et al., 2022). The repercussions also include academic underachievement, failure in exams, depression, anxiety, inferiority complexes, and social withdrawal. Engaging in sleep procrastination can lead to hostile attitudes, moral decline, and addictive behaviours, as well as a lack of motivation (Mateo, 2021). Similar to general procrastination, sleep procrastination is linked to poor self-regulation, increased susceptibility to temptations, and difficulty concentrating on goal-directed activities (Mann et al., 2013; Herzog-Krzywoszanska & Krzywoszanski, 2019). Adolescents who struggle with sleep procrastination also experience severe insomnia, higher levels of depression, anxiety, and stress, and often suffer from reduced sleep duration (Omer & Aynur, 2023). Additionally, bedtime procrastination is negatively correlated with trait self-regulation, sleep duration, and self-control, while being positively associated with perceived insufficient sleep and daytime fatigue (Kadzikowska, 2018; cited in Paula, 2020), as well as general procrastination.

In conclusion, sleep procrastination is a problematic behaviour with significant negative consequences for Nigerian adolescents. Its prevalence and detrimental impact on physical, emotional, social, and academic development call for increased attention to address the issue. This paper aims to explore potential strategies for overcoming sleep procrastination among adolescents in Nigeria.

3.3. Concept of Sleep Procrastination

Sleep procrastination refers to the psychological tendency of unnecessarily and voluntarily delaying bedtime, even when individuals are aware that the delay will result in negative consequences (Kroese et al., 2016). This behaviour can occur for various reasons, such as losing track of time or seeking control over the nighttime as a response to a lack of control during the day, a phenomenon recently termed "revenge bedtime procrastination" (Sleep Foundation, 2021). The term "revenge bedtime procrastination" originated on the Chinese social media platform Weibo in 2014, referring to the act of sacrificing sleep to enjoy

DOI: https://doi.org/10.17509/jomsign.v9i1.80145
p- ISSN 2549-7065 e- ISSN 2549-7073

personal leisure time as a form of retaliation for the pressures of a busy daytime schedule (Evan, 2022).

Sleep procrastination, often interchangeable with "bedtime procrastination," involves intentionally delaying sleep without external reasons for doing so, despite knowing the harm it might cause. The phenomenon is characterized by both cognitive and emotional aspects that reflect poor self-regulation, reduced conscientiousness, and impulsivity (Alshammari, 2023). Individuals who engage in sleep procrastination often prioritize activities like watching TV or using social media instead of going to bed, knowing that such behaviour leads to negative consequences (Kroese et al., 2016; Paula et al., 2020).

The concept of sleep procrastination includes two main forms: bedtime procrastination and while-in-bed procrastination. Bedtime procrastination refers to unnecessarily delaying going to bed, often due to activities like preparing the home or eating late, and involves a delay without external factors (Kroese et al., 2016). While-in-bed procrastination, on the other hand, happens after an individual has already gotten into bed but delays falling asleep by engaging in activities such as watching videos or responding to messages (Paula et al., 2020). Both forms contribute to the overall phenomenon of sleep procrastination, with distinct causes and outcomes, requiring different strategies to address them (Itmar, 2023).

3.4. Factors Inducing Sleep Procrastination Among Adolescents

Sleep procrastination among adolescents can be triggered by a variety of factors, often influenced by both internal and external conditions. Some of the key factors include:

Lack of Awareness: Adolescents may not fully comprehend the importance of sleep or may underestimate how much sleep they need. They might delay sleep without realizing the negative effects it has on their health and well-being, considering it a way to enjoy their free time with socializing or entertainment (Ma et al., 2022).

Psychological Factors: Stress and anxiety are significant contributors to sleep procrastination, as these emotional states make it difficult for adolescents to wind down and relax. Some adolescents may delay sleep as a coping mechanism to distract themselves from negative emotions (Campbell & Bridges, 2023). High levels of anxiety or performance pressure might result in staying up late, avoiding sleep due to the anticipation of poor sleep quality (Uygur et al., 2022).

Lack of Free Time: Adolescents often feel that they do not have enough personal time during the day, leading them to stay up late to reclaim some control over their time. This leads them to engage in leisure activities like gaming, reading, or watching TV, making it harder to go to bed at a reasonable hour (Kadra, 2023).

Natural Sleep Patterns: Adolescents are biologically predisposed to be "night owls," which can conflict with societal demands for early wake-up times. This natural tendency, combined with poor self-regulation, can result in difficulty going to bed at an appropriate time (Kadra, 2023).

Smartphone and Digital Device Addiction: The presence of smartphones, tablets, and other digital devices in the bedroom can significantly delay bedtime. Adolescents often get absorbed in social media, gaming, or watching videos, making it easy to lose track of time (Paula et al., 2020). The "fear of missing out" (FOMO) often compels them to stay awake, checking social media or news updates, further disrupting their sleep schedule.

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p- ISSN 2549-7065 e- ISSN 2549-7073

Low Self-Control: Adolescents with low self-control may prioritize short-term pleasures like screen time over the long-term goal of proper sleep. Their difficulty in delaying gratification contributes to delayed sleep onset (Ma et al., 2022; Kadra, 2023).

Use of Stimulants: Consumption of stimulants like caffeine or energy drinks can delay sleep onset by suppressing the body's natural sleep mechanisms. These substances interfere with the sleep cycle, making it more difficult for adolescents to fall asleep at night (Kendra, 2023).

Biological Factors: Circadian rhythm disruption can also play a significant role in sleep procrastination. Adolescents' natural sleep-wake cycles, influenced by factors like melatonin production, may not align with societal demands for early waking, causing difficulty in adhering to regular sleep schedules (Kadra, 2023).

3.5. Consequences of Bedtime Procrastination among Adolescents

Emotional Impact: Bedtime procrastination can result in sleep deprivation, which impairs cognitive functions such as attention, memory, and decision-making, and leads to emotional disturbances like stress, anxiety, and irritability (Kadra, 2023). Chronic sleep deprivation, often stemming from procrastination, can negatively affect both physical and mental health, leading to issues such as depression and decreased emotional regulation (Shields & Cicchetti, 1998). Sleep-deprived adolescents tend to experience reduced willpower and self-control, which can manifest in low motivation and high dissatisfaction with daily tasks (Kadra, 2023).

3.6. Social Impact

Sleep procrastination can also affect adolescents' social functioning. It can lead to poor social reasoning, judgment, and reduced interpersonal skills, which may contribute to social withdrawal (Kadra, 2023). In turn, sleep-deprived individuals may struggle to engage in pro-social behaviour, find it harder to navigate social challenges, and exhibit impaired problem-solving skills.

3.7. Health Impact

The physical health consequences of bedtime procrastination include an increased risk of developing conditions like high blood pressure, diabetes, and obesity, as well as a weakened immune system (Kadra, 2023). Prolonged sleep deprivation is also linked to mental health disorders such as anxiety, depression, and bipolar disorder (Kadra, 2023). Additionally, it can impair cognitive abilities such as focus, working memory, and problem-solving, further exacerbating academic and daily functioning (Shields & Cicchetti, 1998).

3.8. Steps to Overcome Bedtime Procrastination

Adolescents can benefit from several strategies to mitigate bedtime procrastination. First, adopting a consistent sleep schedule, including regular wake-up and bedtime hours, helps the body adjust and improve sleep quality (Kadra, 2023). Establishing a bedtime routine—such as practicing relaxation techniques, avoiding screen time, and turning off digital devices—can also signal to the brain that it's time to sleep (Kadra, 2023). Parents should model good sleep habits and encourage their children to create a relaxing sleep environment, free from distractions and bright lights (Kadra, 2023).

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p- ISSN 2549-7065 e- ISSN 2549-7073

3.9. School and Parent Interventions

Schools can play a significant role by incorporating sleep education into their curricula, teaching adolescents about the importance of sleep hygiene and how to manage sleep disorders (Kadra, 2023). Parents should set clear boundaries around bedtime, create a calm atmosphere at night, and ensure that adolescents avoid stimulating activities before bed (Kadra, 2023). Furthermore, limiting caffeine, alcohol, and nicotine intake in the evening can help adolescents maintain healthier sleep patterns (UCLA Health, 2023).

Bedtime procrastination is a common issue among adolescents that can have far-reaching emotional, social, and health consequences. By implementing healthy sleep habits and addressing the root causes of procrastination, such as poor time management and social influences, adolescents can significantly improve their sleep quality and overall well-being. As highlighted by Kadra (2023), interventions that promote good sleep hygiene and emotional regulation are crucial to reversing the negative effects of sleep procrastination.

3.10. Theoretical Approaches to Sleep Procrastination

Cognitive Behavioral Therapy (CBT) is widely used to address sleep difficulties, including sleep procrastination (the act of delaying or avoiding going to sleep despite knowing it will result in negative consequences). Sleep procrastination is an act of delaying or avoiding going to sleep despite the negative consequences, has become an increasing issue in modern society (Kroese et al., 2014). This behavior can lead to reduced sleep quality, impairing cognitive and emotional functioning. In Nigeria, the unique socio-cultural and economic pressures provide a context where sleep procrastination is often exacerbated.

CBT, a psychological approach grounded in the interconnection between thoughts, emotions, and behaviors, offers effective solutions to address the issue of sleep procrastination. While CBT's applicability to sleep-related concerns is well-documented (Morin et al., 2006), its specific adaptation to the Nigerian context warrants closer exploration, particularly in light of the country's work culture, communal lifestyle, and the growing influence of digital technology. Sleep procrastination is often the result of maladaptive thought patterns. Adolescents may harbour cognitive distortions such as perceiving sleep as unnecessary or believing that they can function optimally with little sleep. These beliefs contribute to procrastination behaviours, reinforcing the cycle of insufficient sleep (Kato, 2021). Additionally, adolescents may engage in avoidance behaviours, such as delaying sleep to avoid negative emotions associated with facing their responsibilities or worries (Chen & Bonetti, 2022).

While the specific context of sleep procrastination in Nigeria may not have been extensively researched, there are several CBT principles that can be applied to understand and address this issue. An overview of CBT-based findings that could support sleep procrastination, with a focus on potential cultural and contextual influences in Nigeria include:

CBT and Sleep Procrastination: CBT is built on the premise that negative thought patterns contribute to undesirable behaviors and emotional states. In the case of sleep procrastination, individuals often experience cognitive distortions that hinder their ability to rest. These include catastrophizing, where people believe that sleeping early will result in missing out on important activities; all-or-nothing thinking, where individuals feel, they cannot go to bed until a task is completed to perfection; and overgeneralization, where past

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p- ISSN 2549-7065 e- ISSN 2549-7073

difficulties falling asleep lead to the belief that sleep problems will always persist (Harvey, 2002). These distorted thinking patterns often play a significant role in sleep procrastination, particularly in Nigeria, where societal values around hard work and social obligations reinforce late-night wakefulness (Ogunjimi et al., 2018). For example, individuals may feel that sleeping early would mean failing to meet work deadlines or participating in social events, which are often viewed as equally important to personal well-being.

Behavioral Conditioning and Cultural Reinforcement: CBT also emphasizes the role of learned behaviors in maintaining sleep difficulties. People who procrastinate their sleep often engage in activities such as watching TV, browsing the internet, or socializing, which reinforce their wakefulness. This is particularly pronounced in Nigeria, where digital engagement is ubiquitous, especially through platforms like WhatsApp, Instagram, and TikTok, which provide late-night entertainment or social interaction (Statista, 2023). As a result, individuals are often further conditioned to remain awake, which makes it harder to establish a consistent sleep routine.

Stimulus control therapy, a key CBT technique, suggests creating a sleep environment that is free from distractions. However, in Nigeria, this can be particularly challenging due to factors like communal living, high noise levels, and unreliable electricity, which can disrupt efforts to create a quiet and consistent sleep setting (Ebigbo & Izuora, 1981). For example, many Nigerians live in shared spaces, making it difficult to establish boundaries for sleep. Additionally, power outages often hinder the use of sleep aids, such as air conditioning or soothing music, making it more difficult to wind down.

Sleep Hygiene in the Nigerian Context: Good sleep hygiene which includes establishing a regular sleep schedule, avoiding caffeine late in the day, and engaging in relaxing pre-sleep activities has been shown to significantly improve sleep quality (Irish et al., 2015). However, cultural factors in Nigeria often conflict with these practices. For instance, late-night socializing, religious activities, and work commitments often extend into the night, delaying sleep. Additionally, consuming stimulants like coffee, tea, or kola nuts is common before bedtime, further impeding the ability to fall asleep (Ajayi et al., 2017). CBT can help by encouraging individuals to set more consistent bedtime routines, reduce caffeine consumption, and incorporate culturally relevant relaxation techniques. For example, using traditional music or prayer before sleep can help individuals in Nigeria unwind and prepare for rest, aligning with their cultural practices while adhering to CBT principles.

Emotional Regulation and Stress in Nigeria: High stress levels, often related to financial concerns, family responsibilities, and job uncertainty, are a significant contributor to sleep procrastination (Suh et al., 2018). In Nigeria, where economic pressures are intense, individuals may delay sleep to avoid confronting stressors or simply to use nighttime as a form of escape. CBT addresses these emotional regulation challenges by helping individuals identify negative thoughts that fuel anxiety and replace them with healthier, more adaptive cognitions. For instance, individuals may be encouraged to track their thoughts through thought records to identify patterns that lead to procrastination, such as the belief that they must finish all tasks before sleeping. Cognitive restructuring techniques can help reframe these thoughts to more balanced alternatives, such as: “I can complete this tomorrow if I sleep well tonight” (Harvey, 2002). This shift in mindset not only promotes healthier sleep

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behaviors but also encourages better emotional coping mechanisms for dealing with daily stressors.

Cultural Influences on Sleep Behaviour: The importance of family, social networks, and communal living in Nigerian culture often delays personal sleep time. In some communities, late-night socializing or communal gatherings are the norm, which makes it more difficult for individuals to prioritize sleep. Additionally, work culture in Nigeria places significant pressure on people to work long hours, sometimes driven by job insecurity or the need for multiple income streams to sustain family livelihoods (Ajayi et al., 2017). This "hustle culture" further entrenches sleep procrastination, as people may prioritize productivity over rest. Moreover, the shift to digital workspaces and evening virtual meetings adds to the pressure to stay awake later.

Given these cultural dynamics, CBT interventions can be tailored to align with societal values. For example, culturally sensitive CBT could incorporate communal or religious activities as part of relaxation routines, such as group prayer or evening devotionals, to create a sense of calm and readiness for sleep (Onyeama et al., 2022). In this way, CBT can be adapted to support culturally relevant coping strategies while promoting healthy sleep habits.

Technology and Sleep Delay: The rise of smartphones and social media in Nigeria has contributed to a marked increase in screen time, particularly late at night. Research has shown that excessive screen time, especially on emotionally engaging platforms, can disrupt sleep (Exelmans & Van den Bulck, 2016). In Nigeria, where mobile phone penetration is high, late-night digital engagement has become a common culprit in sleep procrastination (NCC, 2023). CBT can address this issue by encouraging individuals to set digital curfews, using app blockers to limit late-night screen use, and creating designated "sleep zones" where phones are not allowed.

3.11. CBT Interventions Adapted to Nigeria

To effectively address sleep procrastination in Nigeria, CBT should be tailored to the specific needs of the population. One potential solution is tele-CBT, which leverages online platforms to reach individuals in urban and rural areas, providing access to CBT-based sleep interventions (Okwaraji et al., 2020). These platforms can help educate individuals on sleep hygiene, emotional regulation, and cognitive restructuring. Additionally, universities and workplaces could offer CBT-based sleep education workshops targeting students and professionals who are particularly vulnerable to sleep procrastination. Finally, faith-based CBT interventions could incorporate religious practices such as prayer or meditation to enhance relaxation and support the therapeutic process (Onyeama et al., 2022).

In summary Cognitive Behavioral Therapy provides a flexible, evidence-based framework for addressing sleep procrastination in Nigeria. By identifying and modifying distorted thought patterns, improving sleep hygiene, and promoting emotional regulation, CBT can help individuals overcome procrastination and improve their sleep quality. When adapted to the Nigerian context, CBT can be an effective tool in supporting better mental health and well-being, particularly as societal pressures and digital distractions continue to shape daily routines.

Self-Regulation Theory: Sleep procrastination is also understood through the lens of self-regulation theory, which emphasizes the difficulty adolescents face in managing impulses and delaying gratification. Adolescents often prioritize immediate rewards, such as entertainment

DOI: https://doi.org/10.17509/jomsign.v9i1.80145
p- ISSN 2549-7065 e- ISSN 2549-7073

or social media interactions, over the long-term benefits of sleep. The inability to regulate these impulses can lead to delayed bedtimes and chronic sleep deprivation (Sirois et al., 2022). Research shows that self-regulatory deficits contribute significantly to poor sleep hygiene and procrastination behaviours (Tuck & Koul, 2023). Sleep procrastination may be seen as a failure in self-regulation. Adolescents may struggle to balance their need for sleep with other activities or distractions (e.g., screen time, and social media). The inability to delay gratification and prioritize sleep can result in a cycle of procrastination (Sirois, Yang, & van Eerde, 2022). Research shows that adolescents often lack the impulse control to avoid distractions and stick to a sleep schedule (Tuck & Koul, 2023).

Motivation Theory: Motivation theory explains sleep procrastination as the result of competing motivations. Adolescents may find engaging in academic work, socializing, or using digital devices more compelling than sleep. The pull of these activities, combined with the intrinsic motivation to stay engaged in tasks perceived as rewarding, can delay sleep onset (Custer et al., 2022). Peer influence also plays a substantial role, as adolescents often conform to social norms that encourage late-night behaviours, further exacerbating procrastination (Kuss & Griffiths, 2021). Adolescents often prioritize social interactions, academic work, or entertainment over sleep. The intrinsic motivation to engage in these activities may overpower the extrinsic motivation to sleep. Additionally, external pressures like school demands or peer expectations may lead to delayed bedtimes (Custer, Wiggins, & Lutz, 2022). Adolescents' motivation to stay connected with peers via social media or finish academic tasks often results in delayed sleep onset (Jackson et al., 2021).

Social Cognitive Theory: Social cognitive theory highlights the role of observational learning and peer influence in shaping sleep behaviours. Adolescents may procrastinate on sleep due to exposure to late-night behaviours from peers or media. Social media platforms, in particular, often glorify staying up late, fostering a cycle of delayed sleep onset in adolescents (Jackson et al., 2021). This theory suggests that adolescents learn maladaptive sleep behaviours from their social environments and may require intervention to break the cycle. Peer influence plays a significant role in sleep habits during adolescence. Adolescents may procrastinate on sleep because they are influenced by their friends or social media trends that glorify late-night behaviours. The presence of technology and social media platforms that encourage late-night activity further exacerbates procrastination (Kuss & Griffiths, 2021).

Empirical Review

3.1. Prevalence and Predictors of Sleep Procrastination

Studies have shown that sleep procrastination is a common issue among adolescents. According to Kühnel et al. (2018), a substantial number of high school students delay their bedtime due to excessive use of digital devices, engagement in social media, and ineffective time management. Similarly, Kroese et al. (2014) identified self-regulation failure as a primary factor contributing to sleep procrastination, emphasizing that individuals with lower levels of self-control are more likely to postpone sleep despite being aware of its negative consequences. In a related study, Nauts et al. (2016) highlighted that sleep procrastination is not merely a time-management issue but rather a self-regulatory deficit that impairs individuals' ability to transition from wakefulness to sleep.

Psychological and Behavioural Effects of Sleep Procrastination

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p- ISSN 2549-7065 e- ISSN 2549-7073

Empirical evidence suggests that sleep procrastination negatively affects adolescent well-being. Research conducted by Kadzikowska-Wrzosek (2020) and Exelmans and Van den Bulck (2017) demonstrated that delaying sleep results in reduced sleep duration, which subsequently leads to increased stress, emotional instability, and decreased academic performance. Additionally, Becker et al. (2018) established a link between sleep procrastination and higher levels of anxiety, depression, and mood disorders.

From a behavioural standpoint, Carter et al. (2016) examined the role of digital media in exacerbating sleep procrastination. Their study found that exposure to blue light from screens suppresses melatonin production, thereby delaying the body's natural sleep cycle. Furthermore, Chen et al. (2021) revealed that procrastination at bedtime often coexists with other forms of procrastination, such as academic and social procrastination, leading to a vicious cycle of sleep deprivation and reduced efficiency.

3.2. Theoretical Perspectives on Sleep Procrastination

Various theoretical models have been applied to explain sleep procrastination. Kroese et al. (2016) used the theory of planned behaviour to illustrate that despite adolescents' intention to sleep earlier, they often fail to do so due to a depletion of self-control resources. Similarly, Sirois et al. (2019) employed the procrastination-health model to explain how chronic procrastinators engage in habitual delays, including sleep procrastination, due to difficulties in prioritizing long-term health benefits over immediate pleasures.

Sleep procrastination in Nigeria presents unique patterns when compared to other cultural contexts, reflecting the country's distinctive social structures, economic realities, and cultural traditions. This analysis examines these patterns with specific focus on Nigerian sleep behaviors.

Urban-Rural Sleep Divides in Nigeria: Sleep procrastination manifests differently across Nigeria's urban-rural divide. Urbanites in Lagos and Abuja often experience what Akanni and Thomas (2023) call "electric-light enabled delay," where irregular power supply creates unpredictable sleep patterns. When electricity becomes available in the evening, many Nigerians postpone sleep to complete tasks requiring power or engage in entertainment (Okafor et al., 2022). In rural Nigerian communities, sleep timing tends to align more closely with natural light cycles, though Nwachukwu (2021) found that mobile phone usage has begun disrupting these patterns even in areas without reliable electricity.

Socioeconomic Factors: Economic pressures significantly influence Nigerian sleep procrastination. Adebayo's (2022) revealed that many Nigerians in the informal economy work multiple jobs with irregular hours, leading to inconsistent sleep schedules rather than deliberate procrastination. “For many Nigerians, what appears as sleep procrastination is actually an adaptive response to economic necessity (Ebunoluwa, 2024). This contrasts with Western contexts where revenge bedtime procrastination often represents a conscious reclaiming of personal time.

Cultural and Social Influences: Extended family structures impact sleep timing in distinctive ways. Compared to individualistic societies, Nigerian households often accommodate multiple generations with different sleep needs and schedules. Babatunde and Johnson (2023) observed that family obligations frequently extend into late evening hours,

DOI: https://doi.org/10.17509/jomsign.v9i1.80145
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with elders' narratives and family discussions continuing well into the night. Religious practices also shape sleep patterns uniquely. Salaudeen (2021) found that Muslim Nigerians in northern regions adjust their sleep around prayer times, while Christian communities in other regions often hold evening fellowship activities that delay bedtime.

Digital Connectivity: Nigerian youth demonstrate distinctive digital sleep procrastination patterns. Comparing Nigerian teenagers to American counterparts, Chukwuma (2024) found that Nigerian youth were more likely to delay sleep for educational content and income-generating online activities rather than purely entertainment purposes. WhatsApp group conversations represent a culturally specific form of sleep procrastination in Nigeria, with Ibrahim (2022) noting that evening group chats serve important community-building functions despite their impact on sleep timing.

In summary, Sleep procrastination in Nigeria reflects complex interactions between infrastructure limitations, economic necessities, and cultural values. Unlike in highly industrialized societies where individual choice often drives sleep delay, Nigerian patterns more commonly reflect structural constraints and communal obligations. Future research should further explore these uniquely Nigerian manifestations to develop culturally appropriate interventions.

3.3. Implications for Adolescent Well-Being

Cognitive and Academic Functioning: Sleep procrastination negatively impacts cognitive performance, attention, and memory, which are essential for learning and academic success. Studies have shown that adolescents who delay sleep tend to have poorer academic outcomes and lower grades (Tavernier & Willoughby, 2014). The inability to concentrate and retain information due to insufficient sleep can be detrimental to school performance and personal development (Hirshkowitz et al., 2023).

Emotional and Mental Health: Chronic sleep deprivation resulting from sleep procrastination can contribute to mood disturbances, irritability, and increased susceptibility to anxiety and depression (Germain et al., 2023). Adolescents who experience prolonged sleep deprivation are also more likely to engage in risk-taking behaviours and exhibit poor emotional regulation (Custer et al., 2022).

Physical Health Consequences: Insufficient sleep due to procrastination can weaken the immune system and impair physical health, leaving adolescents more vulnerable to illnesses (Hirshkowitz et al., 2023). Moreover, sleep procrastination has been linked to obesity, as late-night eating and reduced physical activity are common behaviours among sleep-deprived adolescents (Tuck & Koul, 2023).

3.4. Counselling Strategies and Interventions

Considering the detrimental effects of sleep procrastination, researchers have explored various counselling interventions. Mindfulness-based strategies have been found to be effective in improving self-regulation and reducing sleep procrastination by increasing present-moment awareness and impulse control (Ong et al., 2020). Additionally, cognitive-behavioural therapy for insomnia (CBT-I) has been identified as an effective approach, with Lancee et al. (2016) demonstrating that modifying maladaptive behaviours and restructuring

DOI: https://doi.org/10.17509/jomsign.v9i1.80145
p- ISSN 2549-7065 e- ISSN 2549-7073

cognitive distortions can help individuals develop healthier sleep habits. Motivational interviewing has also been proposed as a useful technique in addressing sleep procrastination, as it encourages adolescents to develop intrinsic motivation to improve their sleep hygiene (Wagner et al., 2022). Furthermore, interventions that promote digital detox strategies, such as reducing screen time before bedtime, have been shown to decrease bedtime procrastination (Gradisar et al., 2013).

Existing research suggests that sleep procrastination is a prevalent issue among adolescents, primarily influenced by self-regulation challenges, digital distractions, and behavioural tendencies. Its adverse effects on mental health, academic success, and overall well-being highlight the necessity for targeted counselling interventions. By applying theoretical insights and evidence-based strategies, Counsellors can assist adolescents in cultivating healthier sleep behaviours and mitigating the long-term impact of sleep procrastination.

3.5. Counselling Implications and Interventions

Cognitive Behavioural Interventions: Cognitive Behavioural Therapy for Insomnia (CBT-I) is effective in addressing sleep procrastination by challenging the negative thought patterns that lead to delayed bedtimes. Counsellors can help adolescents identify irrational beliefs about sleep and replace them with more realistic, positive thoughts (Germain et al., 2023). Adolescents may engage in sleep procrastination due to negative thinking patterns about sleep. They may perceive sleep as a waste of time or feel that staying awake is more rewarding. Cognitive distortions such as "I will be fine with little sleep" or "I need to finish this task before I sleep" can fuel procrastination (Kato, 2021). The tendency to overestimate the ability to function without adequate rest has also been linked to sleep procrastination (Chen & Bonetti, 2022).

Behavioural Modification: Behavioural interventions such as sleep scheduling, reinforcement strategies, and sleep restriction can help adolescents adopt healthier sleep routines. Setting clear bedtime goals and using rewards for achieving them can help reinforce positive sleep behaviours (Hirshkowitz et al., 2023). Additionally, sleep tracking apps can provide adolescents with real-time feedback on their sleep patterns, promoting awareness and behaviour change. Using reinforcement strategies, Counsellors can help adolescents build a consistent sleep routine. This may involve rewarding positive sleep behaviours (e.g., going to bed at a certain time) and setting realistic bedtime goals (Hirshkowitz et al., 2023). Behavioural modification techniques, such as sleep restriction, can also be effective in promoting healthier sleep habits.

Mindfulness and Relaxation Strategies: Mindfulness and relaxation techniques can be particularly beneficial for adolescents struggling with anxiety or stress-related sleep procrastination. Relaxation exercises like deep breathing, progressive muscle relaxation, and guided meditation can help calm the mind before bed, facilitating easier sleep onset (Gais & Born, 2022). Adolescents can be taught mindfulness or relaxation exercises to help them unwind before bedtime. Techniques such as deep breathing, progressive muscle relaxation, or guided imagery can promote relaxation and reduce the urge to procrastinate on sleep (Gais & Born, 2022). These methods are particularly effective in addressing sleep-related anxiety and racing thoughts, which are common in adolescents.

DOI: https://doi.org/10.17509/jomsign.v9i1.80145
p- ISSN 2549-7065 e- ISSN 2549-7073

Education and Awareness Programs: Sleep hygiene education is crucial for promoting healthy sleep habits among adolescents. Counsellors and educators can work together to raise awareness about the importance of consistent sleep schedules, limiting screen time before bed, and creating a conducive sleep environment (Lo et al., 2022). Parental involvement in these programs can also provide the necessary support to ensure adherence to good sleep practices.

Peer Support and Social Environment Adjustments: Given the strong influence of peers on adolescent behaviour, fostering a supportive social environment can help reduce sleep procrastination. Encouraging adolescents to engage in positive peer activities, such as group study sessions that end at a reasonable hour, may reduce the temptation to stay up late (Kuss & Griffiths, 2021).

Sleep Hygiene Education: Counsellors can educate adolescents about good sleep hygiene, including avoiding caffeine and screen time before bed, creating a comfortable sleep environment, and maintaining a consistent sleep schedule (Lo et al., 2022). Educational interventions have been shown to improve sleep patterns and reduce sleep procrastination in adolescents.

Cognitive Behavioural Therapy for Insomnia (CBT-I): CBT-I helps adolescents identify and modify the cognitive distortions and behaviours that contribute to sleep procrastination. This includes challenging unrealistic beliefs about sleep and establishing healthier sleep habits (Germain et al., 2023). Adolescents can learn to adopt more adaptive thinking about the importance of sleep and how it contributes to overall well-being.

Parental Involvement: Engaging parents in the counselling process can help create a supportive home environment that encourages healthy sleep habits. Parents can set bedtime routines and enforce limits on screen time, contributing to better sleep behaviour (Higgins et al., 2024).

By combining these theories and counselling approaches, professionals can help adolescents understand the underlying reasons for their sleep procrastination and work with them to develop healthier sleep practices.

4. CONCLUSION

Sleep procrastination in adolescents is a complex behaviour influenced by various theoretical factors, including cognitive distortions, self-regulation deficits, motivational factors, and social influences. Addressing this issue through targeted counselling interventions and educational strategies can have significant benefits for adolescent well-being. By fostering healthier sleep habits, adolescents can improve their cognitive, emotional, and physical health, ultimately leading to better overall development.

5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

DOI: https://doi.org/10.17509/jomsign.v9i1.80145
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