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Sedentary Lifestyle and Mental Health: A Phenomenological Study of Non-Sports College Students

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Abstract

This study aims to deeply understand the relationship between a sedentary lifestyle and mental health among non-sports students in Indonesia post-pandemic. Using a descriptive qualitative method with a phenomenological approach, 63 students from various non-sports study programs at the Indonesian University of Education were selected through purposive sampling, ultimately selecting 10 students. Data were collected using the ASAQ and DASS-21 questionnaires, semi-structured interviews, observations, and document reviews, then analyzed inductively following the Miles and Huberman model. The results showed that the majority of participants spent more than eight hours per day in passive activities such as sitting, lying down, and using devices, with low awareness of the long-term impacts. Symptoms included stress, anxiety, sleep disturbances, emotional exhaustion, and psychosomatic complaints. Sedentary patterns were formed through academic pressure, limited mobility, minimal social support, and the misperception of rest and laziness. These findings underscore the need for campus-based multidimensional interventions that integrate physical activity promotion and mental health enhancement. This study contributes to the literature by exploring students' subjective perspectives, providing a basis for relevant health prevention and promotion strategies in the digital age.

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INTRODUCTION

The development of digital technology in the Society 4.0 era has fundamentally changed human interaction patterns, learning habits, and lifestyles. This transformation has brought ease of access to information, entertainment, and communication, but has also given rise to new health challenges, one of which is the increasing prevalence of a sedentary lifestyle among students, particularly those not required to engage in physical activity in their college curriculum (Lage et al., 2021)The shift from face-to-face interactions to digital spaces has led to increasingly limited daily physical activity, while the duration of electronic device use has increased significantly.

The phenomenon of a sedentary lifestyle has become a global health issue with multidimensional impacts, encompassing physical, psychological, and social aspects. Recent research shows that sedentary behavior is closely linked to obesity, cardiovascular disease, metabolic disorders, and even a reduced quality of life (Sanchez et al., 2022; Sinuraya & Barus, 2020). In addition, the impact on mental health, such as an increased risk of depression, anxiety, and stress, is receiving increasing attention from researchers, especially among students who are facing high academic pressure (Rahayu & others, 2024).

Non-sports students are a group vulnerable to a sedentary lifestyle because their academic activities are dominated by prolonged sitting in front of a screen, whether for lectures, assignments, or accessing digital entertainment. This condition is exacerbated by a lack of awareness of the importance of physical activity as a protective factor for mental health. According to (Keliat & others, 2024), students with low levels of physical activity tend to have poorer psychological well-being than those who are physically active.

The novelty of this research lies in its in-depth exploration of the relationship between a sedentary lifestyle and mental health from a phenomenological perspective among non-sports students in post-pandemic Indonesia. Previous studies have primarily highlighted the quantitative relationship between physical activity and mental health, but few have explored students› subjective experiences contextually within the current digital landscape of education (Kohls & others, 2023; Xu & Wang, 2023).

The use of digital technology, while beneficial for supporting learning, is often misused, triggering digital addiction, disrupting sleep patterns, and reducing face-to-face social interaction. These factors, as revealed by (Firmansyah & others, 2020) And (Nayla, 2024). can worsen students› psychological conditions and reduce their ability to cope with academic stress. Therefore, a more holistic understanding is needed to design effective intervention strategies.

In addition to academic pressure, social environmental factors also play a significant role in shaping students› lifestyles. A lack of affordable sports facilities, environmental designs that discourage physical activity, and social norms that tend to downplay the importance of active movement are structural barriers that reinforce sedentary behavior (Naya, 2023; Sulaiman, 2022). In this context, behavioral change requires systemic support, not just individual awareness.

The close relationship between physical activity and mental health has been supported by numerous international and national studies. Regular physical activity has been shown to increase endorphins, serotonin, and dopamine, which play a role in mood regulation, while also reducing cortisol levels, the stress hormone (Abelea & others, 2024; Verywell Health, 2024). Conversely, a sedentary lifestyle reduces these positive physiological stimuli, thereby increasing vulnerability to psychological disorders.

The COVID-19 pandemic has reinforced sedentary lifestyle trends due to distance learning and restrictions on physical activity outside the home. Although the situation has gradually improved, many students continue to maintain a lifestyle with minimal physical activity, indicating that this behavioral change has become internalized as a new routine (Tang & others, 2024). This emphasizes the need for research that can capture this reality in depth.

Theoretically, this study fills a gap in the literature by focusing on non-sports students, a population rarely studied qualitatively in Indonesia. The phenomenological approach employed allows for the exploration of subjective meanings behind sedentary behavior, thus providing new insights into the interrelationships between psychosocial conditions, academic culture, and digital technology developments.

By comprehensively understanding student experiences, this research is expected to provide a basis for developing health promotion programs in higher education that focus not only on increasing physical activity but also on strengthening mental health. Campus-based interventions, such as integrating physical activity into the curriculum, providing inclusive sports facilities, and mental health literacy campaigns,

are strategic steps that can be taken.

Thus, this research contributes to preventive and promotive efforts in the fields of physical education and mental health, while also addressing the challenges of the digital era, which blurs the lines between technological convenience and the physiological need for human activity. This approach aligns with the global health agenda, which emphasizes the importance of integrating physical activity, mental well-being, and adapting to ongoing technological developments.

METHOD

This study employed a qualitative approach with an Interpretative Phenomenological Analysis (IPA) design to explore the meaning of the lived experiences of non-sports major students who lead sedentary lifestyles and their impact on mental health in the post-pandemic era. IPA is rooted in Heidegger's hermeneutic phenomenology, which views human experience as inseparable from its historical, social, and cultural context and inherently interpretative. This approach combines the principles of phenomenology and hermeneutics to reveal how individuals make sense of their experiences and how researchers interpret those understandings.

IPA was chosen because the aim of this research was not only to describe experiences but also to interpret their underlying meaning. In the context of non-sports major students in the post-pandemic era, sedentary lifestyle and mental health are not merely behavioral phenomena but are shaped by psychological dynamics, academic pressure, social interactions, and adaptation to technological developments. IPA allows for an in-depth exploration of these dimensions through a dialogical process between participant and researcher.

The researchers acknowledged the double hermeneutic in IPA, where participants attempt to make sense of their own experiences while the researcher interprets that sense-making. To minimize interpretative bias, epoche was practiced through reflexivity, in which preconceptions were bracketed as much as possible. The researchers maintained a reflexive journal throughout the study and engaged in regular discussions with supervisors and peers to ensure transparency in interpretation.

Participants included 63 students from the Indonesian University of Education, selected using a purposive sampling technique with the following criteria: active students from the Indonesian University of Education, from non-sports study programs, and exhibiting a tendency towards a sedentary lifestyle based on initial screening. Data collection was conducted online and offline using two main instruments: the Adolescent Sedentary Activity Questionnaire (ASAQ) to measure sedentary activity levels (Hardy et al., 2007) and the Depression Anxiety Stress Scale version 21 item (DASS-21) to assess symptoms of depression, anxiety, and stress (Damanik & Rusli, 2017; Lovibond & Lovibond, 1995). Of the 63 students, only 10 were selected to be samples.

In addition to questionnaires, data were obtained through semi-structured interviews, observations, and document reviews. Interviews were conducted both face-to-face and online, using flexible question guides to explore participants' physical routines, device use, and psychological experiences. Observations were used to record actual behavior in everyday contexts, while document reviews supplemented information from non-human sources such as notes, photographs, or personal archives.

Data analysis was carried out inductively following the model Miles & Huberman (1994). This included data reduction, data presentation, and conclusion drawing. Data validity was maintained through source triangulation, peer discussion, and member checking to ensure consistent interpretation. This approach ensured that the research findings credibly represented the reality experienced by participants, thus providing a comprehensive picture of the relationship between a sedentary lifestyle and the mental health of non-sports students.

RESULTS AND DISCUSSION

The Interpretative Phenomenological Analysis revealed four overarching themes that represent the meaning of non-sports major students' lived experiences regarding sedentary lifestyles and mental health in the post-pandemic era. These themes are interconnected, forming a holistic picture of how participants perceive and sustain their daily routines.

Theme 1 Passive Activities as an Entrapping Comfort Most participants described engaging in passive activities such as sitting for extended periods in front of a laptop, lying down while using a smartphone, or watching digital content as a major part of their daily routine. These activities were perceived as relaxation and a way to relieve academic stress, yet paradoxically reinforced sedentary patterns.

"I wake up and immediately check my phone,

scroll through TikTok, sometimes go straight to online classes. After that, I usually just lie down while watching something." (LR)

"If I count, I can sit from 9 a.m. until night. Sometimes I only change position, from the chair to the bed." (AG)

The researcher's interpretation suggests that the short-term physical comfort provided by these activities creates a "comfort zone" that traps participants, leading them to maintain such habits despite awareness of their negative consequences.

Theme 2 Academic Pressure and Social Isolation as Triggers Participants reported high academic workload, minimal face-to-face interaction, and limited communication with lecturers and peers, contributing to feelings of isolation. These conditions encouraged avoidance coping strategies, where sedentary activities became a way to escape stress.

"During online learning, I felt it was harder to connect with friends. It felt like being alone, losing motivation." (AG)

"Sometimes it just feels empty. I don't feel like doing anything, but just sitting still also makes me anxious." (NR)

The interpretation indicates that limited social support and academic pressure not only foster sedentary behavior but also reinforce a cycle of isolation that negatively impacts mental health.

Theme 3 Psychological and Physical Symptoms as Ignored Bodily Signals Most participants reported stress, anxiety, emotional exhaustion, sleep disturbances, and physical complaints such as headaches or digestive issues. Sleep problems were often linked to nighttime gadget use, reducing rest quality.

"I often stay up late, not for assignments, but just scrolling my phone until 3 a.m. The next day I can't focus in class." (KL) "I once tried a social media detox, but after two days I was back again. It feels empty without opening Instagram." (NR)

The researcher interprets these symptoms as bodily signals that participants tend to normalize as part of student life, which delays behavioral change.

Theme 4 Intentions to Change Hindered by Internal and Environmental Factors Some participants expressed a desire to improve their lifestyle, such as starting to exercise or reducing social media use. However, these efforts rarely lasted due to low internal motivation and minimal social support.

"I once planned to exercise every morning, but the next day I already stopped. Just felt too lazy." (TQ) "It feels like there's no one to invite, so we just stay alone in the dorm." (AG)

This interpretation highlights that sustainable behavioral change requires a combination of personal motivation and external support from peers or community.

Summary of Findings These four themes illustrate that a sedentary lifestyle among non-sports major students is shaped by the interaction of physical comfort, academic demands, social isolation, psychological symptoms, and barriers to change. In the IPA framework, this phenomenon is understood as a coping strategy that offers temporary comfort but poses long-term risks to well-being.

The findings of this study indicate that a sedentary lifestyle has become an internalized part of the daily lives of non-athletic students. Passive activities such as prolonged sitting, lying down, and using gadgets dominate more than eight hours of participants' daily time. This condition aligns with reports World Health Organization (2023) which classifies sitting duration exceeding six hours per day as a high risk for physical and mental health.(Kandola et al., 2020)Studies have also shown that individuals with high levels of sedentary activity are 25–30% more likely to experience psychological disorders such as anxiety and depression. In the student context, this pattern is often socially justified as part of the academic "rhythm," making it difficult to break even when the impact is recognized.

Limited awareness of the risks of a sedentary lifestyle among participants shows that their understanding is still at the precontemplation or contemplation stage in the behavior change model (Prochaska & Di Clemente, 1983). They consider passive activities as a form of rest or a coping mechanism, without realizing that excessive duration can actually worsen physical and mental health (Utami et al., 2023) found that students tend to justify risky behavior if it is considered common in their environment. From a phenomenological perspective, this suggests that their subjective experiences are shaped by social constructs that normalize sedentary behavior.

Psychological symptoms identified in this study including stress, anxiety, sleep disturbance,

and emotional exhaustion are consistent with the findings Hallgren et al. (2020) which suggests a causal relationship between lack of physical activity and decreased emotional regulation and impaired sleep quality. The sleep disturbances experienced by participants, such as staying up late to surf social media, can be explained by the mechanism of blue light exposure suppressing melatonin production (Chang et al., 2015), thus disrupting the sleep cycle. In addition, some participants reported psychosomatic symptoms, which strengthens the concept of the body–mind connection in health psychology (Fogel, 2022), where chronic mental stress can trigger negative physiological responses.

Academic pressure and social isolation are significant triggers for a sedentary lifestyle in college students. Within the framework of the Transactional Model of Stress and Coping (Lazarus & Folkman, 1984). This condition can be understood as an interaction between external demands (coursework, group conflict, limited communication) and internal perceptions of the ability to cope. When demands are perceived as exceeding capacity, students tend to choose avoidance coping strategies, which manifest themselves in passive activities Priyanto & Wulandari (2021) found that students experiencing high levels of social stress were more likely to withdraw from interactions and spend time in sedentary activities. This phenomenon is even more relevant in the post-pandemic era, when online learning changes interaction patterns and reduces exposure to physical activity (Zhang et al., 2022). The barriers to behavior change experienced by participants, such as failure to maintain an exercise routine or reduce social media use, indicate a gap between intention and action (intention–behavior gap). According to (Sheeran & Webb, 2016),This gap is often influenced by weak self-regulation and a lack of social support. In the context of this research, the lack of campus support and the absence of a community that facilitates healthy activities exacerbate the inability to sustain change. This condition aligns with the findings (Madjid, 2024) which states that internal conflict between values and actual behavior can create a cycle of procrastination and guilt, thus reinforcing old patterns.

The novelty of this research lies in its focus on non-athletic students in Indonesia, using a post-pandemic phenomenological approach. Most previous studies on students' sedentary lifestyles have focused more on physical aspects and the quantification of sitting duration.(Tremblay et al., 2017)This study, meanwhile, uncovers the subjective meaning of this behavior, including interrelated psychosocial, academic, and emotional factors. These results suggest that interventions to reduce sedentary lifestyles should not only prioritize physical education but also consider the emotional and social contexts that shape student behavior.

Thus, these findings imply the need for a holistic intervention approach on campus, for example through peer support programs, the provision of accessible sports facilities, and the integration of physical activity into non-sports curricula. Community-based interventions can help address the psychological and environmental barriers students face, while breaking the internalized cycle of passivity. This approach aligns with recommendations (World Health Organization, 2023) which emphasizes the need for collaboration between educational institutions and the health sector to reduce the prevalence of sedentary lifestyles among students.

CONCLUSION

This study shows that a sedentary lifestyle in non-sports students is the result of complex psychosocial stressors, characterized by prolonged sitting, minimal physical activity, and excessive device use. This condition impacts not only physical health but also triggers mental health problems such as anxiety, stress, sleep disturbances, and psychosomatic symptoms. Sedentary patterns are formed through the internalization of habits reinforced by academic pressure, limited mobility, minimal social support, and the ambiguity between rest and laziness. Through a phenomenological approach, this behavior is understood as an indicator of imbalances in emotional regulation, time management, and social interactions, thus requiring multidimensional interventions involving individual awareness and structural support from the campus environment. Students need to increase awareness of the importance of physical activity and reduce excessive device use, while universities are expected to provide support and facilities that encourage an active lifestyle.

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