International Journal of Health Sciences and Research
[Indexed, Peer-Reviewed Journal]
Volume 15; Issue: 4; April 2025
Website: www.ijhsr.org
Original Research Article *ISSN: 2249-9571*

Sedentary Lifestyle and Body Awareness in Young Individuals: A Cross-Sectional Study

Dr. Khyati Maloo[1], Dr. Nidhi Suthar[2]

[1]MPT Student, [2]Assistant Professor,
JG College Of Physiotherapy, Gujarat University, Ahmedabad, India.

Corresponding Author: Khyati Maloo

DOI: https://doi.org/10.52403/ijhsr.20250434

ABSTRACT

BACKGROUND: Sedentary lifestyle is common among young adults due to increased screen time, academic pressures, and limited physical activity, raise concerns about health, particularly body awareness and posture. Body awareness, which refers to the perception of body position and alignment, is vital for good posture and preventing musculoskeletal issues. Prolonged inactivity can impair proprioception, weaken muscles, and lead to postural imbalances.
AIMS AND OBJECTIVES: To observe if sedentary behavior impacts individuals' awareness of their body posture and overall physical activity levels.
METHODOLOGY
Study Design: Observational study
Sample Size: 127
Study Setting: Ahmedabad City
Inclusion Criteria: Aged 18 to 25 years
Exclusion Criteria: Pregnant Individuals, Cognitive Impairment
Outcome Measure: Questionnaire on body awareness of postural habits in young people, Godin Leisure-Time Exercise Questionnaire.
METHOD: 127 young adults, aged 18 to 25, participated by completing both the Q-BAPHYP to evaluate their body awareness and postural habits, and the GSLTPAQ to calculate the sedentary lifestyle behavior and body awareness.
RESULTS: 60.5% sit with their back well supported on the backrest. 30.6% stand with more support on one leg.37.9% bend their back to pick up an object from the floor. 14.63% are leading a sedentary lifestyle.
CONCLUSIONS: According to the findings, a large number of young adults exhibit bad posture practices, such as bending their backs when lifting objects or standing with the majority of their weight on one leg. The fact that many participants have sedentary lifestyles further emphasizes the necessity for initiatives that promote increased physical activity and raise awareness of one's own posture. Young adults may avoid musculoskeletal issues as a result of this.

Keywords: Sedentary Lifestyle, Body Awareness, GLSTPAQ, Q-BAPHYP, Questionnaire on body awareness of postural habits in young people, Godin Leisure-Time Exercise Questionnaire.

INTRODUCTION

A healthy lifestyle should be promoted among all ages, but the earlier a habit is formed, the more likely it is to become rooted. Regular physical activity is one of the most effective ways of preventing premature death. The World Health Organization (WHO) recommends at least 150 min of moderate physical activity, 75 min of vigorous activity, or a combination of the two, per week. [1] Sedentary lifestyles are spreading worldwide because of a lack of available spaces for exercise, increased occupational sedentary behaviors such as office work, and the increased penetration of television and video devices. Consequently, the associated health problems are on the rise.

A sedentary lifestyle affects the human body through various mechanisms. Sedentary behaviors reduce lipoprotein lipase activity, muscle glucose, protein transporter activities, impair lipid metabolism, and diminish carbohydrate metabolism. Furthermore, it decreases cardiac output and systemic blood flow while activating the sympathetic nervous system, ultimately reducing insulin sensitivity and vascular function. It also alters the insulin-like growth factor axis and the circulation levels of sex hormones, which elevates the incidence of hormone-related cancers.

Increased sedentary time impairs the gravitostat, the body's weight homeostat, and weight gain, adiposity, and elevated chronic inflammation caused by sedentary behavior are risk factors for cancer. Approximately 31% of the global population aged ≥15 years engages in insufficient physical activity, and it is known to contribute to the death of approximately 3.2 million people every year. In addition to physical inactivity, sedentary behavior is also a serious problem, and a substantial number of people engage in it for prolonged periods. [2]

Body awareness, as we define it here, is the subjective, phenomenological aspect of proprioception and interoception that enters conscious awareness, and is modifiable by noted mental activities.

Body awareness is hypothesized as the product of an interactive and dynamic, emergent process that a) reflects complex afferent, efferent, forward and back-projecting neural activities, b) includes cognitive appraisal and unconscious gating, and c) is shaped by the person's attitudes, beliefs, experience and learning in a social and cultural context. [3]

In this conceptualization of body awareness, the number of perceived and presumed potentially distressing body sensations has been widely used as a marker for hypochondriasis, anxiety and somatization. [4]

Yet another perspective on body awareness comes from academic disciplines outside of medical and behavioral sciences: contemporary philosophers [5-7] anthropologists [8], and linguists [9] dedicate a growing body of literature to the theme of 'embodiment'. Embodiment is understood as the felt sense of being localized within one's physical body [10] and references the lived immediate experience of one's own body [11] [12].

A study review found that the concept of body awareness is widely used; it also revealed important limitations to the current approaches in understanding the meaning of measures of body awareness. [3]

The current life style, with its increased use of modern technologies, has determined modifications in people's behavior, making individuals more and more sedentary and with inappropriate body habits. [13][14]

A study carried out in Portugal verified that the sedentary time period tends to increase with age up to 16 to 17 years of age, at which point teenage boys maintain this behavior 70% of the day and teenage girls 71%, then decreasing to approximately 66% of the day for adults[15]. Due to these sedentary activities, young people have passed the greater part of their time sitting down, since they combine long periods in this position during classes with the time spent at home in front of the computer

playing video games and watching TV[13][14][16]

This study seeks to explore the relationship between sedentary behavior and body awareness among young individuals through a cross-sectional design. Past studies have observed that a prolonged sedentary lifestyle leads to poor health outcomes irrespective of physical activity. A sedentary lifestyle was independently correlated with mortality and was not compensated for by physical activity. Understanding these relationships could provide valuable insights into effective interventions that encourage healthier lifestyles and better body awareness, ultimately improving overall health outcomes for young people.

This cross-sectional study is essential in determining how lifestyle choices impact body awareness, which in turn, can inform future health education programs, physical activity initiatives, and preventive strategies to combat the growing concerns of a sedentary lifestyle among youth.

MATERIALS & METHODS

The study was designed as an observational study and was conducted in Ahmedabad City, focusing on a sample size of 127 participants. The participants were young adults aged between 18 and 25 years, as this age group is most likely to engage in sedentary behaviors and experience issues related to body awareness and posture.

Individuals who were pregnant or had cognitive impairments were excluded from the study to ensure that the results accurately reflected the target population. To assess the outcomes, the study used two key measures: a questionnaire designed to evaluate body awareness, specifically focusing on postural habits among young people, and the Godin Leisure-Time Exercise Questionnaire, which was used to measure the participants levels of physical activity and engagement in exercise during leisure time.

The Questionnaire on Body Awareness of Postural Habits in Young People (Q-BAPHYP) is a self-assessment tool developed to evaluate postural habits among aged 18 to 25 years old. The questionnaire also exhibited good internal consistency, with a Cronbach's alpha of 0.80. The Godin Leisure-Time Exercise Questionnaire (GLTEQ) is a widely used self-report tool designed to assess an individual's weekly physical activity levels based on the frequency and intensity of exercise. It categorizes exercise into mild, moderate, and strenuous activities and calculates a total activity score to determine overall physical activity engagement. The Intraclass Correlation Coefficient (ICC) for the GLTEQ ranges from 0.74 to 0.94, indicating high test-retest reliability across different populations.

These tools allowed for a comprehensive understanding of the participants postural habits and physical activity levels, providing valuable data on the relationship between body awareness and sedentary behavior in this age group.

RESULT

The analysis of body awareness and sedentary lifestyle behaviours in young individuals reveals several key findings. The dataset includes scores from various domains such as Classroom, Home and Carrying scores with the Mean Score representing overall body awareness. The total sum values for each category indicate that the highest accumulated score is observed in Home Activities, followed by Classroom Activities and Carrying Activities.

Components of the scale (Q-BAPHYP)	**With respect to your body posture in the CLASSROOM**	**With respect to your body posture at HOME**	**With respect to your body posture in CARRYING OBJECTS**
SD	10.56	11.75	2.83
Mean	31.32	47.82	11.84

Further analysis shows that the mean values for Classroom, Home, and Carrying activities are 31.32, 47.82, and 11.84, respectively. This suggests that the highest engagement occurs in home activities, followed by classroom activities, with carrying activities being the least frequent. The average total score per participant is 90.99, reflecting a variation in lifestyle patterns.

The standard deviations (10.56 for Classroom, 11.75 for Home, and 2.83 for Carrying) indicate variability in engagement levels across individuals. The relatively low standard deviation for carrying activities suggests that most participants exhibit similar levels of engagement in this domain, whereas home and classroom activities show more variability.

Based on the Godin Leisure-Time Exercise Questionnaire (GLTEQ), the physical activity distribution among young adults indicates that 56% engage in mild exercise, 31.2% participate in moderate exercise, and only 12% perform strenuous exercise. This suggests that a majority of young individuals prefer light physical activities, which may include walking or stretching, rather than engaging in more intense forms of exercise. The relatively lower percentage of strenuous exercise indicates that fewer individuals participate in activities that significantly elevate heart rate, such as running or high-intensity sports. Given that moderate to vigorous physical activity is strongly associated with improved cardiovascular health, muscular strength, and overall fitness, these findings highlight a potential need for increased encouragement of more intensive exercise habits among young adults to promote better long-term health outcomes.

These findings suggest that young individuals may have relatively balanced body awareness, but differences in sedentary behavior across various settings (home, classroom, and carrying activities) could influence their overall awareness. Further statistical analysis, such as correlation and regression, may be required to explore relationships between sedentary behavior and body awareness in greater depth.

DISCUSSION

The findings from this study provide valuable insights into the relationship between body awareness and sedentary behaviors in young individuals. The mean scores for different settings suggest that individuals demonstrate the highest postural awareness at home (47.82), followed by the classroom (31.32) and carrying objects (11.84). This pattern indicates that young individuals are more conscious of their posture in static environments like home and classroom settings, whereas awareness significantly decreases in dynamic activities like carrying objects. The standard deviation values further reinforce this observation, as posture awareness in carrying activities is more consistent among participants, whereas home and classroom settings show greater variability.

Additionally, exercise patterns based on the Godin Leisure-Time Exercise Questionnaire provide insight into the lifestyle habits of the participants. The fact that 56% engage primarily in mild exercise, 31.2% in moderate exercise, and only 12% in strenuous exercise suggests that the majority of individuals prefer low-intensity physical activities. This trend is concerning, as higher-intensity exercises play a crucial role in developing core strength, stability, and overall postural control. The lower engagement in moderate and strenuous exercises may contribute to weaker musculoskeletal support, which can negatively impact postural awareness and lead to poor ergonomic habits in sedentary environments.

These findings highlight a possible connection between sedentary lifestyles, low physical activity levels, and postural awareness. Given the increasing prevalence of prolonged sitting in educational and home settings, a lack of adequate physical activity could further contribute to postural imbalances, musculoskeletal discomfort,

and long-term health concerns such as back pain or poor spinal alignment. Encouraging young individuals to engage in a balanced exercise regimen incorporating moderate-to-strenuous activities could help in enhancing postural awareness and preventing postural deviations.

The findings of this study reveal a concerning trend among young adults, where a significant proportion of individuals display poor posture practices, such as improper bending of the back when lifting objects or standing with the majority of their weight distributed unevenly on one leg. These habits not only reflect a lack of body awareness but are also indicative of the potential long-term consequences of a sedentary lifestyle. The pervasive nature of sedentary behaviors among young adults—exacerbated by extensive screen time and limited physical movement—appears to contribute to these detrimental posture practices.

The relationship between sedentary living and poor posture is undeniable, as individuals who engage in prolonged periods of inactivity may have limited opportunities to develop and maintain optimal body alignment and posture. With physical activity playing a crucial role in strengthening muscles, enhancing flexibility, and improving overall body awareness, a sedentary lifestyle can significantly hinder the body's ability to adopt healthy movement patterns and correct posture.

By addressing these concerns, young adults can be empowered to make more conscious choices regarding their posture and activity levels, potentially mitigating the risk of developing musculoskeletal disorders, chronic pain, or other physical complications in the future. In turn, such interventions would contribute to healthier, more active lifestyles and enhance overall well-being. Ultimately, promoting a balanced approach to physical activity and body awareness will not only improve posture but also support long-term musculoskeletal health and reduce the burden of preventable physical ailments among young individuals.

CONCLUSION

The findings suggest a significant variation in body awareness across different settings—home, classroom, and carrying activities. The highest engagement was observed in home activities (Mean: 47.82), followed by classroom activities (Mean: 31.32), with the lowest engagement in carrying activities (Mean: 11.84).

Higher engagement in home activities suggests that body awareness is most frequently considered in a personal or relaxed setting. Moderate awareness in classrooms may reflect structured seating arrangements and habitual posture adjustments. Low engagement in carrying activities suggests that individuals may not focus much on posture when lifting or moving objects, potentially leading to posture-related issues. The potential implications interpretations is **s**ince home activities show the highest engagement, interventions aimed at improving body awareness could benefit from incorporating home-based strategies. The variability in classroom and home settings suggests that environmental and behavioral factors may influence postural awareness. The lower engagement in carrying objects highlights a potential risk area that may require postural education on lifting techniques to prevent musculoskeletal issues.

Based on the Godin Leisure-Time Exercise Questionnaire (GLTEQ), the exercise distribution among young individuals indicates that 56% engage in mild exercise, 31.2% in moderate exercise, and only 12% in strenuous exercise.

This suggests that the majority of participants prefer low-intensity physical activities, which may contribute to overall movement but may not be sufficient to significantly improve cardiovascular fitness or muscular strength. Moderate exercise, performed by nearly one-third of the group, provides some health benefits, such as improved endurance and strength, but may

still fall short of recommended activity levels for optimal health.

The relatively low percentage of strenuous exercise engagement (12%) highlights a potential gap in high-intensity physical activity, which is crucial for developing cardiovascular resilience and muscular power. Given that the GLTEQ emphasizes the importance of a balanced mix of exercise intensities, the current trends suggest a need to promote higher engagement in moderate-to-strenuous activities to enhance overall fitness and reduce sedentary-related risks. Encouraging structured exercise routines and educating individuals on the long-term benefits of varied-intensity workouts could help shift the balance toward a healthier lifestyle.

Future Considerations:

Further statistical tests such as correlation analysis can help determine the relationship between sedentary behavior and body awareness. Additionally, a regression analysis could assess if specific lifestyle factors (e.g., time spent in sedentary activities) significantly impact postural awareness.

Additionally, educational programs promoting correct posture and incorporating strength and mobility exercises may be beneficial in reducing sedentary risks and improving overall postural health.

Declaration by Authors

Ethical Approval: Approved

Acknowledgement: None

Source of Funding: None

Conflict of Interest: The authors declare no conflict of interest.

REFERENCES

1. Romero-Blanco C, Rodríguez-Almagro J, Onieva-Zafra MD, Parra-Fernández ML, Prado-Laguna MD, Hernández-Martínez A. Physical activity and sedentary lifestyle in university students: changes during confinement due to the COVID-19 pandemic. International journal of environmental research and public health. 2020 Sep;17(18):6567.
2. Park JH, Moon JH, Kim HJ, Kong MH, Oh YH. Sedentary Lifestyle: Overview of Updated Evidence of Potential Health Risks. Korean J Fam Med. 2020 Nov;41(6):365-373. doi: 10.4082/kjfm.20.0165. Epub 2020 Nov 19. PMID: 33242381; PMCID: PMC7700832.
3. Mehling WE, Gopisetty V, Daubenmier J, Price CJ, Hecht FM, Stewart A. Body awareness: construct and self-report measures. PLoS One. 2009;4(5):e5614. doi: 10.1371/journal.pone.0005614. Epub 2009 May 19. PMID: 19440300; PMCID: PMC2680990.
4. Cioffi D. Beyond attentional strategies: cognitive-perceptual model of somatic interpretation. Psychol Bull. 1991; 109:25–41. doi: 10.1037/0033-2909.109.1.25.
5. Bermudez J, Marcel A, Eilan Ne. The body and the self. Cambridge MA, London GB: The MIT Press; 1995. [Google Scholar]
6. Gallagher S. How the body shapes the mind. New York NY: Oxford University Press; 2005. [Google Scholar]
7. Carruthers G. Types of body representation and the sense of embodiment. Conscious Cogn. 2008; 17:1302–1316. doi: 10.1016/j.concog.2008.02.001. [DOI] [PubMed] [Google Scholar]
8. Young K. Presence in the flesh. The body in medicine. Cambridge MA, London GB: Harvard University Press; 1997. [Google Scholar]
9. Lakoff G, Johnson M. Philosophy in the flesh. The embodied mind and its challenge to the Western mind. New York NY: Basic Books; 1999. [Google Scholar]
10. Arzy S, Thut G, Mohr C, Michel CM, Blanke O. Neural basis of embodiment: distinct contributions of temporoparietal junction and extrastriate body area. J Neurosci. 2006;26:8074–8081. doi: 10.1523/JNEUROSCI.0745-06.2006. [DOI] [PMC free article] [PubMed] [Google Scholar]
11. Rohrer T. The body in space: embodiment, experientalism and linguistic conceptualization. In: Zlatev J, Ziemke T, Frank Roz, Dirven R, editors. Body, Language and Mind. Berlin: Mouton de Gruyter; forthcoming 2007. http://zakros.ucsd.edu/~trohrer/thebodyinspace.pdf; accesses 11/29/07. [Google Scholar]

12. Edelman GM. wider than the sky. The phenomenal gift of consciousness. New Haven, London: Yale University Press; 2004. [Google Scholar]
13. Ng SW, Popkin BM. Time use and physical activity: a shift away from movement across the globe. Obes Rev. 2012;13(8):659-80.
14. Owen N. Ambulatory monitoring and sedentary behaviour: a population-health perspective. Physiol Meas. 2012;33(11):1801-10.
15. Baptista F, Santos DA, Silva AM, Mota J, Santos R, Vale S, et al. Prevalence of the Portuguese population attaining sufficient physical activity. Med Sci Sports Exerc. 2012;44(3):466-73.
16. American Academy of Pediatrics Council on Communications and Media. "Policy Statement: Children, Adolescents, and the Media. Pediatrics. 2013;132(5):958-61

How to cite this article: Khyati Maloo, Nidhi Suthar. Sedentary lifestyle and body awareness in young individuals: a cross-sectional study. *Int J Health Sci Res.* 2025; 15(4):239-245. DOI: *https://doi.org/10.52403/ijhsr.20250434*

******