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Contrasting Health Literacy in Physical Activities: A Study Across Various Academic Stages in Exercise and Sport Science Students

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Abstract. This research aimed to assess health literacy regarding physical activities among Exercise and Sports Science students across different academic years. Involving 194 students selected via simple random sampling from Burapha University, the study utilised a comprehensive questionnaire A pivotal instrument in this methodology was the "Health Literacy in Physical Activities for Adolescents" questionnaire, adapted from Khunkitti's 2020 work and conceptually based on Pander, Murdaugh, and Parsons (2011) work to evaluate various aspects of physical activity literacy, including knowledge, access, opinions, and engagement. The questionnaire demonstrated a reliability score of .85. Statistical methods such as ANOVA were employed for analysis. The findings indicated uniformly high levels of health literacy across all academic years in areas like knowledge and perception of physical activities, with moderate engagement in actual physical activities. No significant variances were observed between different academic years regarding understanding, accessibility, opinions, family and community involvement, and physical activity practices among students.

Key words: Physical Activity; Health Literacy; Physical Activities

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INTRODUCTION

In contemporary society, there has been a notable decline in physical activity and health literacy among adolescents and other age groups, leading to various adverse effects. Physical Activity (PA) refers to the daily bodily activities performed at home, work, multiple forms of commuting, and recreational activities, including sports and exercise. The primary objective of these activities is to induce bodily movement, resulting in the burning of energy obtained from food consumption. There is a strong correlation between physical activity and health, with physical activity being a fundamental aspect of life. Adequate physical exertion has proven benefits for fitness and overall health (Sonthaya, 2014). Health literacy, on the other hand, encompasses continuous actions throughout an individual's life by utilizing intellectual skills and relational abilities to access, understand, and evaluate health information and services acquired from various health media sources. This enables individuals to be self-motivated in making informed health decisions, managing personal health and the surrounding environment, and thus preventing diseases and maintaining optimal health for themselves, their families, and their communities (Angsana, 2017). Due to the low level of health literacy among the populace, there has been a continuous rise in the rate of non-communicable diseases. Addressing these health challenges necessitates behavioral modifications, promoting appropriate and correct health behaviors, supporting factors related to health conduct, and reducing preventable disease risks and complications (Chulaporn, 2011). The development of health-promoting behavior, according to Pender, Murdaugh, and Parsons (2011), is believed to stem from cognitive processes interpreting meanings from both internal and

external environments before deciding on promoting health behavior to enhance health further. The Institute for Population and Social Research (2014) indicated that currently, Thais spend, on average, less time on physical activities, exhibiting sedentary behavior up to 13.5 hours a day while engaging in all types of physical activities for only 2 hours a day. Furthermore, physical and sporting activities across all age groups remain low. Specifically, adolescents and young adults from high school to higher education levels spend 8-9 hours a day in front of screens. Reports highlight that Thai citizen, especially teenagers, have reduced their physical or sports activities. Recent trends indicate a concerning decline in teenagers' understanding and participation in physical health activities. This gap extends from their ability to access relevant information to comprehensive knowledge about various physical activities, and even the capacity to motivate and guide their peers. Recognizing this challenge, this research seeks to delve into the physical health knowledge held by the students of the Faculty of Sport Science at Burapha University, specifically those majoring in Exercise Science and Sports. The selected demographic ranges from 1st to 4th-year students, aged between 18-22 years, representing a critical period in adolescent development. Intriguingly, 4th-year students, having been exposed to both theoretical and practical aspects of physical activities, might possess a more profound understanding compared to their junior counterparts. This study aims to ascertain the variance in knowledge across these academic years.

METHOD

The research method involved a comprehensive analysis of health literacy in physical activities among 194 students from the Faculty of Sport Science at Burapha University. These participants, representing all four academic years and specialising in Exercise Science and Sports, were carefully selected through the Yamane formula for statistical accuracy, supplemented by simple random sampling to ensure gender balance. The study was designed to compare health literacy levels in physical activities (dependent variable) across different academic years (independent variable). The "Health Literacy in Physical Activities for Adolescents" questionnaire was pivotal in this methodology. This instrument was derived from the work of Khunkitti in 2020 and conceptually based on the frameworks proposed by Pander, Murdaugh, and Parsons in 2011. This tool, known for its comprehensive scope, evaluates diverse facets of physical activity literacy, including knowledge, access, opinions, and engagement. It is marked by a high-reliability score of .85 across 79 items. The questionnaire is constructed around nine components, delving into multiple facets of physical activity: access to information, comprehension, perception of benefits, awareness of challenges, self-efficacy, attitudes, interpersonal effects, environmental impacts, and engagement in physical activities. These segments are classified into five categories: knowledge, access, opinions, family and community involvement, and physical activity behaviors. The research leveraged one-way ANOVA for data analysis, focusing on identifying variations in health literacy across academic years. Ethical adherence was a cornerstone of the methodology, encompassing informed consent, confidentiality, and voluntary participation, thereby upholding the integrity and ethical standards of the study.

RESULT AND DISCUSSION

In a 2023 study at Burapha University's Faculty of Sports Science, 194 students aged 18-22 years, evenly split between genders, participated. The majority were in their third and fourth academic years (25.8% each), with first-year students constituting 24.7%. The most common age was 20 years (27.3%), with 19 and 21 years closely following (22.2% each). Physically, 48.45% fell within the 165-178 cm height range, and 71.65% weighed between 39-69 kg. Regarding lifestyle, over half (52.06%) reported daily physical activities of 1-2 hours, and 58.7% spent 5-8 hours seated on weekdays, highlighting a mix of active and sedentary behaviors among the participants.

Table 1. Average Age, Height, Weight, Physical Activity & Sitting Time (n=194)

Data	Mean	S.D.
Age	19.97	1.26
Height	168.64	7.97
Weight	63.68	14.64
Physical activity time	115.93 (1.55 hrs/day)	95.64
Sitting time	7.07	2.53

Table 1 concisely summarizes the characteristics of 194 students: they average 19.97 years of age, with a typical height of 168.64 cm and a weight of 63.68 kg. Their daily routines include an average of 1.55 hours of physical activity and 7.07 hours of sitting, indicating a balance of active and passive behaviors.

Table 2. Comparative Analysis of Average Health Literacy in Physical Activities Across Academic Years

Health Literacy in Physical Activities	Year 1		Year 2		Year 3		Year 4	
	Mean (S.D.)	level	Mean (S.D.)	level	Mean (S.D.)	level	Mean (S.D.)	level
Knowledge about physical activities	5.19 (1.08)	high	5.24 (1.06)	high	5.40 (0.93)	high	5.04 (1.03)	high
Perception on accessing physical activities	3.23 (0.40)	high	3.25 (0.44)	high	3.22 (0.38)	high	3.26 (0.49)	high
Opinion on physical activities	3.80 (0.24)	high	3.85 (0.27)	high	3.89 (0.22)	high	3.93 (0.23)	high
The role of family and community in physical activities	3.99 (0.42)	high	4.12 (0.50)	high	3.91 (0.44)	high	3.96 (0.55)	high
Practicing physical activities	2.82 (0.50)	moderate	2.88 (0.67)	moderate	2.77 (0.51)	moderate	2.71 (0.69)	moderate

Table 2 reveals a consistent trend across all academic years in students' understanding of health literacy in physical activities at a university. Each year, knowledge about physical activities ranks highest, with means ranging from 5.04 to 5.40, indicating a robust theoretical grasp. This is followed by knowledge of family and community involvement in physical activities, with slightly lower means (3.91 to 4.12). Students' opinions about physical activities and their awareness of access to them also show good understanding but with lower means (3.80 to 3.93, and 3.22 to 3.26, respectively). Notably, the actual practice of physical activities consistently scores the lowest across all years (2.71 to 2.88), suggesting a gap between theoretical knowledge and practical engagement. These patterns indicate a need to bridge the divide between understanding and implementing physical activities among the students.

Table 3. Comparison of Health Literacy in Physical Activities Among Students Across Four Academic Years

Health Literacy in Physical Activities		SS	df	MS	F	Sig
Knowledge about physical activities	Between groups	.05	3	.02	.09	.97
	Within groups	.97	190	.18		
	Total	35.02	193			
Perception on accessing physical activities	Between groups	3.31	3	1.10	1.05	.37
	Within groups	199.60	190	1.05		
	Total	202.91	193			
Opinion on physical activities	Between groups	.30	3	.10	1.72	.17
	Within groups	11	190	.06		
	Total	11.28	193			
The role of family and community in physical activities	Between groups	1.10	3	.37	1.59	.19
	Within groups	43.77	190	.23		
	Total	44.87	193			
Practicing physical activities	Between groups	.81	3	.27	.76	.52

Health Literacy in Physical Activities		SS	df	MS	F	Sig
	Within groups	67.52	190	.36		
	Total	68.33	193			

Table 3 shows that while specific aspects of health literacy in physical activities (like knowledge, access awareness, attitudes, family/community influence, and practice) are consistent across four academic years, the overall health knowledge related to physical activities varies significantly among these years.

The research on Health Literacy in Physical Activities among university students, contributing to the evolving discourse on health education's role in shaping behaviors, echoes the sentiments found in the works of Kunkitti (2020) and is informed by the educational theories proposed by Pander, Murdaudh, and Parsons (2011). This study addresses a critical challenge in health promotion: effectively converting theoretical health knowledge into practical behaviors. A striking revelation of this research is the gap between the high levels of health literacy bolstered by digital advancements and comprehensive educational structures and the actual participation in physical activities. This disparity underscores a vital issue in health education, as highlighted in the Department of Health, Ministry of Public Health (2009) findings: knowledge alone is not enough to drive behavioral change. The study suggests that while students are well-versed in health concepts, this knowledge doesn't necessarily lead to increased physical activity, raising questions about the current health education methodologies' capacity to foster real-life application of theoretical knowledge. Furthermore, the research points to the contradiction between positive attitudes towards physical activities and their actual practice, a phenomenon discussed by Pender et al. (2011) and Manthira Thongnopakun (2016). This indicates a need for educational strategies beyond conventional knowledge transfer, integrating experiential learning and practical applications to effectively shape health behaviors. The limited influence of family and community on physical activity practices necessitates a more holistic approach to health education, as also suggested by Wanida Senasutthiphan and Apha Wan Nuekong (2558). This approach should encompass knowledge acquisition, skill development, and creating supportive environments for physical activity.

CONCLUSION

In conclusion, aligning with contemporary health research, this study advocates for a shift in health education strategies. It emphasizes the need for more dynamic and application-oriented approaches that convey knowledge and actively support and enable the implementation of this knowledge in daily life, bridging the gap between theoretical understanding and actual health-promoting behaviors among students.

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