

Research Article

Physical Activity Practices for Lifelong Well-being Among Senior High School Teachers

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Abstract

Integration of physical activity into daily life is crucial for overall well-being, with workplaces, transportation, home environments, and recreational pursuits serving as key domains. The assessment of physical activity practices for lifelong living has garnered considerable attention across the globe, however, limited studies have examined teachers' PA practices for lifelong living especially those at the senior high school level. This study, therefore employed a descriptive survey strategy to investigate senior high school teachers' physical activity practices for lifelong living. A multistage sampling technique was used to sample 278 participants who responded to a questionnaire. The quantitative data obtained was analysed using descriptive statistics (such as frequency and percentages) and an independent sample t-test. The findings of the study revealed, teachers that 65.5% of teachers possess a low level of knowledge regarding physical activity practices for lifelong living. Additionally, the study revealed that a staggering 73.7% of the teachers fell into the category of having a low level of physical activity. Subsequently, the study showed female teachers exhibit a relatively higher level of involvement in physical activities compared to their male counterparts with the statistically significant distinction between male and female, favouring the latter $t(236.452) = -2.304$, $p < .05$. The study recommended that health awareness education should be prioritised as a crucial strategy to increase teachers' participation in physical activity. Furthermore, fostering community and social support was identified as vital for encouraging and positively impacting teachers' engagement in physical activity.

Keywords

Assessment, Participation, Physical Activity, Teachers, Lifelong Living, Practices

1. Introduction

Physical activity (PA) is broadly defined as any movement involving skeletal muscles that requires energy expenditure [40]. Integrating PA into various aspects of life—workplaces, transportation, home settings, and recreational activities—is

essential for fostering overall health and well-being. [36] emphasised the significance of promoting PA in the workplace, citing strategies such as the use of standing desks and the implementation of wellness programmes that not only im-

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prove physical health but also enhance productivity and job satisfaction. The importance of active commuting was stipulated by [13], who described walking or cycling as sustainable and health-promoting modes of transport that benefit both individuals and the environment. Urban planning plays a crucial role in establishing supportive infrastructures for such activities. [31] highlighted those home-based activities, including household chores and gardening, contribute significantly to physical well-being. In addition, participation in recreational activities, whether through organised sports or casual pursuits, is vital for comprehensive physical health.

Physical activity is a cornerstone of preventing and managing numerous health conditions. The [41] and [9] indicated that regular PA participation mitigates the risk of diseases such as diabetes, coronary heart disease, and various cancers in women, among other non-communicable diseases. PA contributes significantly to the enhancement and maintenance of individual health and well-being [22, 23]. Regular participation in adequate physical activity yields extensive health benefits, including the strengthening of bones and muscles and a reduction in obesity and chronic illnesses [10, 40, 22]. Moreover, engaging in moderate to vigorous PA has been shown to lower the risk of mortality from all causes and cardiovascular diseases [42]. This highlights the importance of fostering the habit of regular PA from a young age and integrating it into everyday routines. Research has consistently shown that across age groups from children and adolescents to adults, PA positively impacts health and significantly reduces the risk of various diseases [20].

To address the need for increased physical activity globally, the World Health Organization (WHO) introduced the Global Action Plan on Physical Activity 2018–2030, urging member states to adopt policy actions aimed at improving PA levels [39]. The plan's ambitious target is to reduce the global prevalence of physical inactivity by 15% by 2030 compared to baseline levels. This call to action comes against the backdrop of a growing global public health concern regarding sedentary lifestyles [5]. Low physical activity levels are now recognized as the fourth leading risk factor for mortality worldwide, contributing to 6% of deaths and exacerbating the burden of non-communicable diseases, with significant public health implications [41]. The [39] reported that one in five Europeans engage in minimal physical activity, with particularly low PA levels in Eastern Europe. [30] that a third of the global population leads sedentary lifestyles, showing little interest in PA. In the European Union (EU), nearly two-thirds of adults fail to meet the recommended levels of PA [28]. This low engagement has profound health implications, with [28] estimating that inadequate PA results in nearly 8 million healthy life years lost annually in Europe. In Canada, [7] found that 85% of the population did not meet the minimum recommended weekly PA of 150 minutes of moderate to strenuous PA, highlighting a concerning trend with significant health implications. The impact extends to the workforce, where physically inactive employees, particularly in demanding

professions such as teaching, are at higher risk for chronic diseases and disabilities. This lifestyle may compromise their overall quality of life and exacerbate stress, tension, and fatigue [12].

Physical Activity practices for lifelong health have gained global attention, as evidenced by research from various regions. For example, [12] found that senior high school (SHS) teachers in India were generally unaware of the long-term benefits of PA for lifelong health, a knowledge gap that may hinder their ability to model and promote healthy lifestyle habits. Similarly, [14] highlighted the limited PA knowledge among Finnish teachers, leading to a culture of inactivity that exacerbates challenges such as obesity, fatigue, and stress. Teachers are integral not only to academic instruction but also to shaping health-conscious behaviours, which indicates the need for better PA awareness among teachers. Similar findings have emerged in Denmark, where [19] reported that teachers exhibited limited understanding of PA practices, impacting their ability to participate in and promote PA. This lack of engagement has repercussions that extend beyond individual health, influencing productivity and the school environment. Jones emphasised that without adequate knowledge, teachers may contribute to a culture of inactivity among students, a concern echoed by [33] in Finland, who noted insufficient teacher awareness of PA's long-term benefits. This deficiency implies that teachers may face challenges in delivering accurate health messages to students, further perpetuating limited PA engagement in schools.

In Africa, the situation is equally concerning. Studies have highlighted the low awareness and limited PA participation among adults, including teachers. [27] reported that a significant portion of the population lacked knowledge about PA's recommended duration and intensity for health benefits. [4] found similar trends among South African teachers, where limited PA awareness impacted their well-being and raised questions about their ability to effectively teach the importance of PA to students. This trend can perpetuate a cycle of inactivity within educational settings [4]. [35] noted that many university staff members in southeast Nigeria had low PA engagement levels, suggesting a sedentary lifestyle that could adversely affect health. [4] further observed that insufficient PA impacts not only personal health but also workplace productivity and job satisfaction. [6] discovered a link between moderate PA levels among educators and successful teaching outcomes, underscoring the importance of PA for professional effectiveness.

The association between teachers' knowledge, PA practices, and professional outcomes has been established in multiple studies. [12, 30, 33] have connected low awareness of PA among teachers to increased fatigue, stress, and physical inactivity. [12] recommended further research focusing on SHS teachers' PA knowledge to draw comparative insights. [21] study in New Zealand found that primary school teachers demonstrated moderate PA levels mixed with sedentary behavior, signaling the need for more targeted research to im-

prove workplace PA and productivity. [17] revealed that Spanish teachers' low PA participation impacted teaching effectiveness, suggesting that further studies in African contexts would provide valuable insights. [5] reported that most primary school teachers in Ghana led sedentary lives, participating in minimal PA.

Physical activity plays a crucial role in fostering long-term health benefits, SHS teachers are uniquely positioned to model and advocate for healthy PA practices that can shape students' lifelong habits. [33] found that Finnish SHS teachers generally acknowledged the importance of PA but lacked comprehensive knowledge of its long-term health benefits. Similarly, [12] reported that only a fraction of teachers could identify the recommended PA duration for adolescents, highlighting a significant knowledge gap that impedes effective advocacy for lifelong health practices. [19] found that Scottish teachers' PA knowledge was often superficial, limiting their capacity to incorporate PA into daily school routines and necessitating broader research to examine PA engagement among SHS teachers. Studies also indicate that low PA knowledge affects teachers' ability to integrate PA into teaching. [18] noted that educators with limited understanding of PA benefits struggled to incorporate PA effectively into their curricula. Their study in Denmark found that many high school teachers were unaware of PA's impact on various health aspects, suggesting that future research should explore teachers' PA knowledge and engagement in lifelong health contexts.

The literature consistently points to knowledge gaps among SHS teachers concerning PA practices, despite the significant role PA plays in long-term health. Research from Finland, India, and Scotland [33, 12, 19] confirms that teachers recognize PA's importance but often lack the necessary depth of understanding to promote lifelong healthy habits effectively. These findings indicate the need for further research to evaluate and enhance teachers' PA knowledge and participation, thereby empowering them to better support student health and education. Expanding research to include diverse regions can provide a comprehensive assessment of these knowledge gaps and inform targeted interventions. It is against this backdrop, that provided the researchers with the motivation to carry out an empirical study to bridge the information gap regarding the evaluation of PA practices among SHS teachers for lifelong living in Ghana. To help achieve the purpose of this study, the following research questions and hypothesis guided the study:

Research Questions/ Hypothesis

1. What is the knowledge level of Senior High School teachers for physical activity practices for lifelong living?
2. What are the levels of physical activity participation among Senior High School teachers?

H_{A1} : There is a statistically significant difference in the level of PA participation based on the gender of Senior High School teachers.

2. Methodology

The study adopted a descriptive survey design to analyze physical activity (PA) practices among senior high school (SHS) teachers. Although descriptive surveys limit participants from expressing subjective feelings [11], this method facilitated quantitative assessment. The cross-sectional approach used allowed for examining PA practices in real-time, without altering variables [26].

The target population comprised all permanent public SHS teachers within zone one of the Central Region, totalling 1,200 teachers. Teachers within this zone were considered to participate in this study because they have similar characteristics as other teachers in other fifteen regions in Ghana.

The multi-stage sampling technique was employed for this study. The Central Region of Ghana is divided into six zones. Firstly, selecting zone one is purposively due to the researcher's knowledge of the area and familiarity with employee wellness concerns [25]. Also, Proportional sampling ensured representative teacher selection across schools, followed by random sampling, ultimately selecting 278 participants.

Data collection employed a questionnaire adapted from the International Physical Activity Questionnaire [16, 34, 24]. The instruments were divided into three sections, the questionnaire captured demographics (Section A), PA knowledge (Section B), and PA engagement levels (Section C), with responses rated on a five-point Likert scale. Section C further focused on self-reported PA levels, validated by [8] as effective for assessing activity across age groups.

To ensure validity, the instrument was reviewed by experts and underwent pilot testing in zone three with 42 participants to assess reliability. Cronbach's alpha measured the reliability of subscales, showing initial values of .782 for knowledge and .734 for PA levels, with an overall alpha of .75. The primary data collection yielded an improved alpha of .824, demonstrating strong reliability [29].

Data collection followed ethical approval from the University of Education, Winneba, with official letters sent to SHS headmasters in Zone One. After explaining the study's purpose to school heads, the researchers briefed participants, assuring confidentiality, and obtained informed consent from participants. The survey was conducted from June to August 2023, during which 300 questionnaires were distributed. The study achieved an impressive response rate of 92.7%, which is considered exceptional according to the standards outlined by [32] and [37].

In analyzing the data, completed questionnaires were checked, coded, and entered into SPSS version 22. Descriptive statistics was used to summarise the demographics, and responses for knowledge level were combined into a single variable and categorized into "Low," "Moderate," and "High" levels to capture variations in PA understanding [3]. Data from research question two was analyzed using frequency counts and percentages. The hypothesis was analyzed

using an independent sample t-test to compare mean scores, an approach recommended by [2] for assessing differences across groups.

3. Results

Knowledge Level of SHS Teachers for PA Practices for Lifelong Well-being

The first research question sought to examine the knowledge level of SHS teachers for PA practices for lifelong living. To address the research question, teachers were asked to respond to some statements on the knowledge of PA practices for lifelong 'Knowledge level of physical activity' variable was categorized into three distinct levels: "Low," "Moderate," and "High" [3] and analysed using frequency counts and percentages. The results obtained are summarized in Table 1.

Table 1. Knowledge Level of SHS Teachers with Respect to PA Practices for Lifelong Living.

Knowledge Level of PA	Freq	Percent
Low	182	65.5
Moderate	60	21.6
High	36	12.9
Total	278	100

Source: Field survey, 2023.

The data in Table 1 revealed a worrisome pattern in the knowledge levels of SHS teachers in Zone One of the Central Region, with a significant majority (N=182, 65.5%,) displaying low knowledge level regarding physical activity practices. This reveals a potential deficiency in their comprehension of the importance and underlying principles of physical activity practices. Again, 60(21.6%) study participants exhibit a moderate knowledge level of PA practices, indicating a foundational understanding of physical activity practices. Moreover, the table indicates that only 36(12.9%) participants out of the total 278 possess a high level of knowledge regarding physical

activity practices for lifelong Living.

Level of Physical Activity Participation among Senior High School Teachers

To determine the level of physical activity (PA) participation among the Senior High School teachers, The teachers were asked to consider all PA on campus, at home and during leisure time. The MET at each Physical activity level was converted to the median and categorised into low, moderate and High [38] thus calculated in frequency and percentages.

Table 2. Level of Physical Activity Participation.

Knowledge Level of PA	Freq	Percent
Low	205	73.7
Moderate	64	23.0
High	9	3.2
Total	278	100

N= 278

The data displayed in Table 2, provides insights into the physical activity (PA) participation levels among Zone One SHS (Senior High School) teachers in the Central Region. Among the 278 teachers who participated in the study, only a strikingly small percentage, 9(3.2%), were identified as meeting the criteria for a high level of physical activity participation. An additional 64(23.0%) teachers engaged in a moderate level of physical activity. However, the most alarming revelation is that a substantial majority, accounting for 205(73.7%) teachers, exhibit low level of physical activity participation.

Differences in Levels of PA Among Male and Female SHS Teachers

One-research hypothesis was set which sought to ascertain the significant difference in the level of PA engagement among male and female SHS teachers in Zone One of the Central Region of Ghana. The dependent variable was the level of PA, while gender was the explanatory variable. With a significance threshold of 0.05, an independent sample t-test was used to analyze the data in order to assess this study's hypothesis. The results obtained are presented in Table 3.

Table 3. Differences in Levels of PA among Male and Female SHS Teachers.

	Sex	No.	M	SD	T	Df	P
Level of PA	Male	153	1.228	.465	-2.304	236.452	.022
	Female	125	1.376	.57731			

*p < .05

Upon a careful examination of the data presented in Table 3, a conspicuous divergence emerges in the mean values associated with the engagement in physical activity (PA) between male and female Senior High School (SHS) teachers. This discrepancy is manifestly evident, with female teachers demonstrating notably higher levels of PA participation, as indicated by their average score ($M=1.376$), compared to their male counterparts, who exhibit a relatively lower mean score ($M=1.228$). Moreover, it is imperative to reveal that the disparities observed in the levels of PA participation among male and female SHS teachers are not mere coincidences or random fluctuations; instead, they are underpinned by robust statistical significance. The rigorous statistical analysis conducted, as denoted by the t-test statistics $t(236.452) = -2.304$, accompanied by a significance level $p < .05$ (two-tailed), provides unequivocal evidence that these differences are not the result of chance. Rather, they are reflective of genuine distinctions in the extent of PA participation between these two groups. This empirical evidence above compels the researcher to firmly reject the null hypothesis that posited no significant differences between male and female SHS teachers in terms of their PA engagement within Zone One of the Central Region. Instead, the findings of this study unambiguously substantiate the presence of a statistically significant difference in the degree to which male and female teachers in this region participate in physical activities.

4. Discussions

The study's first objective was to assess the knowledge levels of Senior High School (SHS) teachers regarding physical activity (PA) practices for lifelong living. The results indicated that these teachers possess a low level of knowledge, with significant implications. This knowledge deficiency among teachers could lead to insufficient guidance for students, resulting in a generation with limited PA awareness and engagement, potentially causing long-term health issues. Additionally, the lack of knowledge perpetuates misinformation and inactivity in schools, undermining efforts to promote wellness and exacerbating health problems like obesity. The low knowledge level also threatens the teachers' well-being, increasing risks of stress, burnout, and health issues, affecting their role as community role models. These findings align with other studies, such as [33] in Finland and [12] in India, which highlighted a similar lack of understanding among SHS teachers about PA practices. The global and cross-cultural nature of this issue indicates a widespread need for targeted educational interventions [19].

The second objective examined the PA participation levels among SHS teachers, revealing that 73.7% fell into a low PA category. This suggests that many teachers do not engage in regular physical activity, possibly due to the demands of their profession, such as long hours and extensive responsibilities. This sedentary lifestyle raises concerns about the health and

productivity of teachers, who are at increased risk of conditions like obesity and cardiovascular disease. Their low PA levels may also diminish their effectiveness as teachers, further impacting students' learning and development. The study findings are consistent with similar research in Brazil [15] and southeastern Nigeria [35], where adult and university staff PA levels were low. The shared methodology, including the use of the IPAQ short-form, facilitated comparisons across studies. However, these findings contrasted with [6] in Ibadan, Nigeria, where teachers displayed moderate PA levels, likely due to demographic and sampling differences.

The study further revealed a significant gender difference in PA participation, with female teachers being more active than males. This may be attributed to cultural norms, where physical activity is part of women's daily routines through tasks like fetching water and household chores, fostering higher PA levels. Additionally, health awareness among women drives them to maintain active lifestyles for better quality of life. Social and community support networks also play a role, motivating female teachers to sustain regular PA. These findings challenge previous research by [15] and [1], which reported no significant gender differences in PA participation, indicating the importance of considering contextual factors.

5. Conclusions

In conclusion, the study revealed that SHS teachers in zone one possess low knowledge and participation levels in PA practices, with potential negative impacts on their health and ability to serve as role models. Female teachers were more active than their male counterparts, influenced by cultural and social factors. This research highlights the need for targeted interventions to enhance PA knowledge and practices among teachers, addressing identified gaps and supporting lifelong health.

6. Recommendations

Schools in zone one should implement knowledge enhancement programs to improve teachers' understanding of physical activity for lifelong living. These programs can include workshops, seminars, and resources to raise awareness. The goal is to equip teachers with the knowledge needed to adopt and promote active lifestyles.

To address low engagement in physical activity, schools in zone one should introduce a tailored wellness program for SHS teachers. The program should offer regular physical activity sessions, wellness workshops, and stress management techniques. Schools should also encourage physical activity during breaks and provide fitness resources on campus. This initiative will foster a culture of health and well-being among teachers.

To leverage the higher physical activity levels among fe-

male teachers in zone one, schools are encouraged to establish a mentorship or peer support program. Pairing male teachers with their more active female colleagues can help motivate them to adopt a more active lifestyle. Through this program, male teachers can gain insights and practical tips for integrating physical activity into their routines. This initiative aims to foster camaraderie and close the gender gap in physical activity participation among SHS teachers.

Abbreviations

IPAQ	International Physical Activity Questionnaire
PA	Physical Activity
PE	Physical Education
SHS	Senior High School
HPERS	Health Physical Education, Recreation and Sports

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Author Contributions

Razak Adamu: Conceptualization, Writing – original draft
Richmond Stephen Sorkpor: Funding acquisition, Supervision, Writing – review & editing

Regina Akuffo Darko: Supervision, Writing – review & editing

Seibu Munkaila: Supervision, Writing – review & editing

George Kpor: Formal Analysis, Software

Conflicts of Interest

The authors declare no conflicts of interest.

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