

PHYSICAL ACTIVITY ENGAGEMENT AND BENEFITS OF THE TEACHING PERSONNEL

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Abstract

The study examined the physical activity engagements and benefits obtained by the teaching personnel in a private Catholic Institution in Bacolod City, and the relationships between different variables using the correlational research design. It aimed to understand their current physical activity engagement, explore potential benefits of increased activity, address research gaps in physical, and inform the development of interventions to promote physical activity for the well-being of teaching personnel. A total of 140 qualified personnel were eligible to participate, and 103 completed the self-made survey questionnaire, and stratified proportionate sampling was employed to ensure representativeness of the sample. Data were analyzed using the mean score and standard deviation, t-test for independent samples, One-way ANOVA, Post Hoc Games Howell, and Spearman's rho. The study found no significant differences in physical activity engagement when grouped according to sex and department. However, there was a significant difference in engagement based on age. Similarly, significant differences obtained benefits were found when grouped according to sex, but not by age and department for emotional and mental benefits. The study revealed a significant positive correlation between the physical activity engagement and the extent of benefits experienced by teaching personnel. This suggests a strong association between physical activity engagement and perceived benefits among teaching personnel.

Keywords: Physical Activity, Physical Activity Engagement, Physical Activity Benefits, Teaching Personnel.

Introduction

Engaging in physical activities (PA) and promoting physical engagement are crucial for overall well-being and provide essential health benefits. In enhancing PA engagement globally, it is important to understand the factors influencing individual roles, community involvement, and human growth and development (Malm et al., 2019). However, participation levels among individuals are often low, and the risks present can vary depending on the environment. PA engagement also significantly promotes mental health and well-being (Castro et al., 2023). In 1978, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) adopted the International Charter of Physical Education and Sport (ICPES), emphasizing the importance of physical activity as a transformative practice for all individuals and an essential component of the educational system (Dizon & Tolentino, 2022). However, there is a need to examine the implementation of the ICPES and its impact on promoting physical activity globally (Xu et al., 2019). Additionally, there is limited research on the global trends in insufficient physical activity among adolescents and the potential strategies to address this issue (Guthold et al., 2018). The researcher aimed to fill the research gaps identified in the international and Philippine contexts by providing insights and recommendations that could inform policymaking and intervention development.

Statement of the Problem

This study aimed to determine the physical activity engagement and benefits of the teaching personnel in one of the Catholic private schools in Bacolod City for the school year 2022-2023.

Specifically, the study sought answers to the following questions:

1. What is the extent of physical activity engagement of the teaching personnel in terms of day-to-day physical activity and recreational activity when taken as a whole and grouped according to;
 - a. sex,
 - b. age, and
 - c. department?
2. What is the extent of physical activity benefits obtained by teaching personnel from engaging in physical activities along physical, emotional, mental, and social when taken as a whole and

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grouped according to the aforementioned variables?

3. Is there a significant difference in the extent of physical activity engagement of the teaching personnel in terms of day-to-day physical activity and recreational activity when grouped according to sex, age, and department?
4. When grouped according to the aforementioned variables, is there a significant difference in the extent of physical activity benefits obtained by teaching personnel from engaging in physical activities along with physical, emotional, mental, and social benefits?
5. Is there a significant relationship between the physical activity engagement and physical activity benefits of the teaching personnel?

Hypotheses

Based on the aforementioned problems, the hypotheses below were advanced;

1. There is no significant difference in the extent of physical activity engagement of the teaching personnel in terms of day-to-day physical activity and recreational activity when grouped according to sex, age, and department.
2. There is no significant difference in the extent of physical activity benefits obtained by teaching personnel from engaging in physical activities along with physical, emotional, mental, and social benefits when grouped according to the aforementioned variables.
3. There is no significant relationship between physical activity engagement and physical activity benefits for the teaching personnel.

Methods/Theory/Calculation

A correlational research design was the method employed in this study to determine the physical activity engagement and benefits of the teaching personnel, utilizing a survey questionnaire. This research adopted a correlational design focused on uncovering potential relationships between

variables without actively influencing their values (Lau, 2017).

The subjects were teaching personnel, both probationary and tenured, with a full-time load. This study randomly selected the tenured and probationary teaching personnel from the school's roster. The respondents were invited to complete a survey on physical activity engagement and benefits. The researchers used the self-made questionnaire consisted of three parts. The first part of the self-made survey questionnaire is the demographic profile of teachers such as their age, sex, and assigned department. Next part of the self-made questionnaire is the physical activity engagement of the teaching personnel in the two major areas, which include Day-to-day Physical Activities and Recreational Activities. The last part of the self-made survey questionnaire is the benefits of physical activity engagements in the four major areas, which include physical benefits, mental benefits, emotional benefits, and social benefits. For ethical consideration on the confidentiality of the subjects' information, the researchers conducted an orientation

Statistical Treatment

The respondent's profile was analyzed using a frequency distribution. The mean score and standard deviation were calculated to analyze problems 1 and 2, which focused on the extent of physical activity engagement and its benefits among teaching personnel. Investigating potential differences based on sex and department (problems 3 and 4), an independent T-test was used to determine any statistically significant variations in these factors. One-way ANOVA was used for the age group. Post Hoc Games and Howell's test were employed to further analyze the results. For research question 5, which examined the relationship between physical activity engagement and benefits, Spearman's Rho correlation coefficient was used to quantify the strength and direction of this association.

Results and Findings

Table 1: Extent of Physical Activity Engagement of the Teaching Personnel in Terms of Day-To-Day Physical Activity, and Recreational Activity When Taken as a Whole and Grouped According Variables

Variables	Day-to-Day Physical Activity			Recreational Activity		
	<i>M</i>	Verbal Interpretation	<i>SD</i>	<i>M</i>	Verbal Interpretation	<i>SD</i>
A. As a whole	2.5	High	0.3	2.2	Low	0.6
B. Sex						
Male	2.5	High	0.3	2.2	Low	0.6
Female	2.5	High	0.3	2.2	Low	0.6
C. Age						
22–34 yo	2.5	High	0.3	2.4	Low	0.6
35–49 yo	2.3	Low	0.3	2.0	Low	0.5
50–65 yo	2.5	High	0.2	1.9	Low	0.4
D. Department						
Basic Education	2.5	High	0.3	2.3	Low	0.6

College/ Tertiary 2.4 Low 0.3 2.1 Low 0.5
Note: Very High (VH) 3.50 – 4.00; High (H) 2.50 – 3.49; Low (LO) 1.50 – 2.49; Very Low (VL) 1.00 – 1.49

Table 1 summarizes teaching personnel's overall physical activity engagements across day-to-day and recreational activities. The findings revealed that teaching personnel exhibit High physical activity engagement ($M = 2.5$, $SD = 0.30$) in their day-to-day physical activity and ($M = 2.2$, $SD = 0.6$) for recreational activity. Examining physical activity engagement by sex, Table 2 reveals that the physical activity engagement of the male and female teaching personnel is High, ($M = 2.5$, $SD = 0.3$) in day-to-day physical activity. However, both male and female ($M = 2.2$, $SD = 0.6$) teaching personnel exhibited Low Engagement in recreational activities. When grouped according to age, those teaching personnel whose ages are from 22-34 ($M = 2.5$, $SD = 0.3$) and 50-65 age group ($M = 2.5$, $SD = 0.2$) exhibited High Engagement, while the age group of 35-49 ($M = 2.3$, $SD = 0.3$) showed a Low engagement in day-to-day physical activities. However, it shows that all age

groups from 22 to 65 years old have Low Engagement in recreational activities, with mean scores ranging from 1.92 to 2.4 with a standard deviation ranging from 0.4 to 0.6. Comparing physical activity engagement by department, Table 1 reveals that teaching personnel in basic education departments

($M = 2.5$, $SD = 0.3$) have Higher Engagement in day-to-day activities than teaching personnel in college/tertiary departments ($M = 2.4$, $SD = 0.3$) were Low engaged. However, both groups exhibited low Engagement in recreational activities, with mean scores ranging from 2.1 to 2.3 and standard deviation ranging from 0.5 to 0.6. In line with this, Porsanger (2021) found that teachers who engage in regular physical activity report lower stress and higher job satisfaction.

Table 2: Extent of Physical Activity Benefits Obtained by Teaching Personnel from Engaging in Physical Activities along Physical, Emotional, Mental and Social

Variables	Physical			Emotional			Mental			Social		
	<i>M</i>	<i>VI</i>	<i>SD</i>	<i>M</i>	<i>VI</i>	<i>SD</i>	<i>M</i>	<i>VI</i>	<i>SD</i>	<i>M</i>	<i>VI</i>	<i>SD</i>
A. As a whole	3.8	VH	0.3	3.8	VH	0.3	3.8	VH	0.3	3.8	VH	0.3
B. Sex												
Male	3.9	VH	0.2	3.9	VH	0.2	3.9	VH	0.2	3.9	VH	0.3
Female	3.8	VH	0.4	3.8	VH	0.4	3.8	VH	0.4	3.8	VH	0.4
C. Age												
22–34 yo	3.9	VH	0.3	3.9	VH	0.3	3.9	VH	0.3	3.8	VH	0.3
35–49 yo	3.7	VH	0.5	3.7	VH	0.4	3.7	VH	0.4	3.7	VH	0.4
50–65 yo	3.9	VH	0.2	3.9	VH	0.3	3.9	VH	0.3	3.9	VH	0.2
D. Department												
Basic Ed	3.8	VH	0.4	3.8	VH	0.4	3.8	VH	0.4	3.8	VH	0.4
College	3.9	VH	0.3	3.9	VH	0.3	3.9	VH	0.3	3.8	VH	0.3

Note: Very High (VH) 3.50 – 4.00; High (H) 2.50 – 3.49; Low (LO) (1.50 – 2.49); Very Low (VL) 1.00 – 1.49

It showed that the benefits obtained by teaching personnel from engaging in physical activity along physical, emotional, mental, and social, when taken as a whole, is Very High, with a mean of 3.8 and a standard deviation of 0.3. When grouped according to sex, age, and department, the benefits obtained along physical, emotional, mental, and social are

Very High, ranging from 3.7 to 3.9. The small standard deviations ranging from 0.2 to 0.4 show homogeneity in their responses. By reducing the risk of cardiovascular disease, type 2 diabetes, and certain cancers, physical activity engagement acts as a powerful shield against chronic diseases (Piercy et al., 2018).

Table 3: t-test Results for the Difference in the Extent of Physical Activity Engagement of the Teaching Personnel in terms of Day-to-day physical activity and Recreational activity when Grouped According to Sex and Department

Area	Groupings	Variables	Mean	SD	df	<i>t</i> -ratio	<i>p</i>
		Male	3.0	0.4			
	Sex	Female	3.0	0.5	101	.017	.986

Day-to-day physical activity	Department	Basic Education	3.1	0.5			
		College	2.3	0.6	101	.929	.355
Recreational activity	Sex	Male	2.2	0.6			
		Female	2.2	0.6	101	.377	.707
	Department	Basic Education	2.3	0.6			
		College	2.1	0.5	101	1.529	.129

Table 3 showed that there was no significant difference in the extent of physical activity engagement of the teaching personnel when grouped according to sex and department in terms of day-to-day physical activity ($t(101)=.017$, $p = .986$) and recreational physical activity ($t(101)= .377$, $p = .707$). Also, it shows that there is no significant difference in the extent of physical activity engagement of the teaching personnel when grouped

according to the department in terms of day-to-day physical activity ($t(101)=.929$, $p = .355$) and recreational physical activities ($t(101) = 1.529$, $p = .129$). This finding demonstrates that transformational teaching, characterized by inspiration and motivation, is essential in positively influencing students' engagement in physical activity (Govindan et al., 2022).

Table 4: One-Way ANOVA Results for the Significant Difference in the Extent of Physical Activity Engagement of the Teaching Personnel in terms of Day-to-day Physical Activity and Recreational Physical Activity When Grouped According to Age

Area	Grouping	Mean	SD	df	F-ratio	p
Day-to-Day Physical Activity	22 – 34 years old	3.1	0.5		3.842*	
	35 – 49 years old	2.8	0.6	(2,100)		.025
	50 – 65 years old	3.1	0.3			
Recreational Activity	22 – 34 years old	2.4	0.6		8.605**	
	35 – 49 years old	2.0	0.5	(2, 53.645)		.001
	50 – 65 years old	1.9	0.4			

* $p < .05$, ** $p < .01$

Table 4 shows that there is a significant difference in the extent of physical activity engagement in terms of day-to-day physical activities of the teaching personnel for those belonging in the age range of 35 – 49 years old ($F(2,10) = 3.842$, $p = .025$)

and recreational physical activities ($F(2,53) = 8.605$, $p = .001$). Since there are significant differences, there is a need to conduct a Post Hoc analysis to know where the significant differences lie.

Table 5: Post Hoc Games Howell Results of the Significant Difference in the Extent of Physical Activity Engagements of the Teaching Personnel in terms of Day-to-day and Recreational Physical Activities When Grouped According to Age

Areas	Variable	Age (I)	Age (J)	Mean Difference	p
Day-to-day Physical Activities	Age	22 – 34 years old	35 – 49 years old	.296*	.022
			50 – 65 years old	.024	.981
		35 – 49 years old	50 – 65 years old	-.271	.136
	Age		35 – 49 years old	.366*	.013
		22 – 34 years old	50 – 65 years old	.464**	.001

Recreational Physical Activities 35 – 49 years old 50 – 65 years old .098 .725

* $p < .05$, ** $p < .01$

Table 6 shows the Post Hoc results on the significant difference in the extent of physical activity engagement of the teaching personnel in terms of day-to-day physical activities when grouped according to age. Since the homogeneity of variances was violated, as assessed by Levene's test of Homogeneity of Variance ($p = .042$), a Games-Howell post hoc test was conducted. It was found that there is a significant difference in the extent of physical activity engagement of the teaching personnel in terms of day-to-day physical activity

when those ages 22 – 34 years old ($MD = .296$, $p = .022$). It was also found that there is a significant difference in the extent of physical activity engagement of the teaching personnel in terms of recreational physical activity for those ages 22 – 34 years old as compared to 35 – 49 years old ($MD = .366$, $p = .013$) and to 50 – 65 years old ($MD = .464$, $p = .001$) respectively. This finding suggests that young people should participate in at least one hour of moderate-intensity physical activity daily (Tringali & Aldridge, 2021)

Table 6: t-test Results for the Difference in the Extent of Physical Activity Benefits by the Teaching Personnel in terms of Physical, Mental, Emotional, and Social Benefits when grouped according to Sex and Department

Areas	Groupings	Variables	Mean	SD	df	<i>t-ratio</i>	<i>p</i>
Physical Benefits	Sex	Male	3.9	0.0	96.58	1.905*	.032
		Female	3.8	0.1			
	Department	Basic Education	3.81	0.4	101	-.765	.446
		College	3.9	0.3			
Mental Benefits	Sex	Male	3.9	0.4	96.03	1.710	.091
		Female	3.8	0.1			
	Department	Basic Education	3.8	0.4	101	-1.039	.301
		College	3.9	0.3			
Emotional Benefits	Sex	Male	3.9	0.0	97.60	1.732	.086
		Female	3.8	0.1			
	Department	Basic Education	3.8	0.6	101	-1.099	.275
		College	3.9	0.3			
Social Benefits	Sex	Male	3.9	0.0	100.92	1.514	.133
		Female	3.8	0.1			
	Department	Basic Education	3.8	0.4	101	-.371	.711
		College	9.8	0.3			

* $p < .05$

Table 6 shows the differences in the extent of physical activity benefits by the teaching personnel regarding physical, mental, emotional, and social benefits when grouped according to sex. It was found that there is a significant difference in the extent of physical activity benefits obtained by teaching personnel, both male and female, in terms of physical benefits ($t(96.58) = 1.905$, $p = .032$). On the difference in the extent of physical activity benefits by teaching personnel in terms of physical, mental, emotional, and social benefits when grouped according to department, it shows that there is no significant difference in the extent of physical

activity benefits by the teaching personnel in terms physical benefits

($t(101) = -.765$, $p = .446$), mental benefits ($t(101) = -1.039$, $p = .301$), emotional benefits ($t(101) = -1.099$, $p = .275$) and ($t(101) = -.371$, $p = .711$). The findings underscored the importance of understanding how teachers' beliefs and perceptions can influence their preferences for teaching physical education in single-sex or coeducational settings (Daly-Smith & Morris, 2021).

Table 7: One-Way ANOVA Results for the Difference in the Extent of Physical Activity Benefits by the Teaching Personnel in terms of Physical, Mental, Emotional, and Social Benefits When Grouped According to Age

Area	Grouping	Mean	SD	df	<i>F-ratio</i>	<i>p</i>
Physical Benefits	19 – 34 years old	3.9	0.3	(2, 52.029)	3.002	.058
	35 – 49 years old	3.7	0.5			
	50 – 65 years old	3.9	0.2			
Mental Benefits	19 – 34 years old	3.9	0.3	(2, 41.046)	1.566	.221
	35 – 49 years old	3.7	0.4			
	50 – 65 years old	3.9	0.3			
Emotional Benefits	19 – 34 years old	3.9	0.3	(2, 42.061)	1.804	.177
	35 – 49 years old	3.7	0.4			
	50 – 65 years old	3.9	0.3			
Social Benefits	19 – 34 years old	3.8	0.3	(2, 49.600)	1.598	.213
	35 – 49 years old	3.7	0.4			
	50 – 65 years old	3.9	0.2			

Table 7 shows the differences in the extent of physical activity benefits by the teaching personnel regarding physical, mental, emotional, and social benefits when grouped according to age. It was found that there is no significant difference in the extent of physical activity benefits obtained by teaching personnel in terms of physical benefits ($F(2,52) = 3.002$, $p = .058$) and mental benefits ($F(2,41) = 1.566$, $p = .221$), emotional benefits ($F(2,42) = 1.804$, $p = .177$), and social benefits ($F(2,49) = 1.598$, $p = .213$). This finding suggests that there are no significant differences in the physical, mental, emotional, and social benefits of physical activity engagement among teachers across different age groups (22-34, 35-49, and 50-65). This aligns with the substantial evidence supporting the numerous benefits of regular physical activity engagement from a young age (Marques et al., 2023).

Table 8: Relationship Results between the Physical Activity Engagement and Benefits of the Teaching Personnel

Variable	<i>r-ratio</i>	<i>p</i>
Physical Activity Engagement and Benefits	0.677*	.024

* $p < .05$

Table 8 shows the relationship between the extent of physical activity engagement and the benefits of the teaching personnel. It was found that there is a significant relationship between the physical activity engagement and benefits of the teaching personnel with a positively strong direct correlation, ($r(103) = .677$, $p = .024$). The multifaceted relationship between physical activity engagement and the benefits experienced by teaching personnel is crucial for the educational landscape (Porsanger, 2021).

Discussion

The extent of physical activity engagement of teaching personnel was assessed in terms of day-to-day physical activity and recreational activity. When analyzed as a whole, the data showed a High in physical activity engagement among teaching personnel. However, when grouped according to sex, age, and department, variations were observed. Both male and female teaching personnel demonstrated High Engagement in day-to-day physical activity. However, male and female teaching personnel exhibit Low Engagement in recreational physical activity. Age-wise, the teaching personnel ages 22-34 and 50-65 exhibited High Engagement, while the age group of 35-49 showed low Engagement in day-to-day physical

activities. However, it shows that all age groups from 22-65 years old have low Engagement in recreational activities. Comparing physical activity engagement by the departments, teaching personnel in basic education have higher Engagement in day-to-day activities than teaching personnel in college or tertiary departments were Low engaged. However, both basic education and tertiary/college departments exhibit Low Engagement in recreational activities. For the extent of physical activity benefits obtained by teaching personnel from engaging in physical activities was evaluated across physical, emotional, mental, and social domains. Overall, teaching personnel reported experiencing very high benefits obtained in each domain from engaging in physical activities when grouped according to age, sex, and department. The results revealed no significant difference in the extent of physical activity engagement among teaching personnel when grouped according to sex and department. However, there is a significant difference in physical activity engagement when grouped according to age. The analysis explored whether there is a significant difference in the extent of physical activity benefits obtained by teaching personnel when grouped according to sex but no significant difference in emotional and mental benefits by age and department. The research examined the relationship between physical activity engagement and physical activity benefits among teaching personnel. The results showed a significant positive relationship between the level of physical activity engagement and the extent of benefits experienced by teaching personnel.

Conclusion

1. Teaching personnel are finding ways to incorporate physical activity into their daily routines, even without formal exercise sessions. They may incorporate movement into their daily tasks, taking active breaks, or engaging in light physical activities during their leisure time. Teaching personnel in basic education departments may have more opportunities for physical movement during their workday. In contrast, those in college or tertiary departments may spend more time sitting due to administrative tasks. Promoting regular physical activity among teachers can positively affect their health, stress levels, and job satisfaction. Interventions and strategies should be implemented to encourage and support physical activity engagement in this group.
2. Engaging in physical activity benefits the overall well-being of teaching personnel across various physical, emotional, mental, and social dimensions. Furthermore, the benefits are apparent regardless of the teaching personnel's sex, age, or department. This result highlights the importance of promoting and supporting physical activity among teaching personnel.

The perceived physical benefits of physical activity include improved cardiovascular health, increased muscle strength and endurance, and enhanced flexibility. These benefits can improve teaching personnel's health and well-being, improving job performance and satisfaction.

3. It implies that male and female teaching personnel have the same extent of physical activity engagement. Also, both the teachers teaching in Basic Education and College have the same extent of physical activity engagement.
4. It implies that male teaching personnel experienced slightly higher physical activity benefits than their female counterparts. However, both male and female teachers experience the same physical activity benefits regarding emotional, mental, and social well-being. Activities like exercise, sports, or being physically active can benefit everyone in these areas. Teaching personnel in Basic Education and College departments experience the same level of physical activity benefits in terms of physical, mental, emotional, and social well-being. Despite potential differences in work demands or environments, teachers across both basic education and college departments can benefit to the same extent from physical activity regarding their physical, mental, emotional, and social well-being.
5. The higher the physical activity engagement of the teaching personnel, the more benefits they will obtain.

Recommendations

1. The Teaching Personnel are encouraged and prioritize regular physical activity engagement among teachers by providing them with resources and support. This action may include granting them access to fitness facilities, offering fitness classes or workshops, and promoting physical activity challenges or initiatives within the school community. Creating a culture of wellness and support among teachers by promoting work-life balance and self-care practices is also crucial.
2. Department Deans, Program Heads, and Subject Area Chairs are encouraged to collaborate among colleagues to develop physical activity initiatives, integrate physical activity into professional development programs by offering workshops or training sessions highlighting the benefits of physical activity and providing strategies for incorporating movement and physical activity into teaching practices, and allocate resources and facilities that support physical activity engagement within the department, such as designated spaces and access to fitness equipment, can further enhance Engagement

3. School Administration provides guidelines for incorporating movement into the school day, and allocate resources to support physical activity initiatives. Creating professional development and training opportunities for physical activity and well-being can also be beneficial. Workshops on stress management, physical activity integration in the curriculum, and strategies for promoting a healthy work-life balance can equip teachers with the knowledge and skills to incorporate physical activity effectively.
4. Human Resource Management are encouraged to offer incentives or rewards for teachers who engage in regular physical activity, such as gym memberships or wellness-related benefits, may serve as motivation. Additionally, considering physical activity engagement as a criterion in performance evaluations or assessments can recognize its positive impact on job performance, well-being, and overall effectiveness as a teacher.
5. Future researchers are encouraged to use the results of this study as a basis for future research endeavors, serving as a cornerstone for developing diverse and effective physical activity engagement initiatives.

Conflict of Interest

There is no conflict of interest between the authors in this manuscript.

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