INDIVIDUAL INTEREST OF STUDENTS IN PHYSICAL EDUCATION AND SCHOOL ENGAGEMENT IN FOSTERING PHYSICAL CULTURE INSIDE THE CAMPUS: THE CASE OF TWO PROMINENT LOCAL COLLEGES IN PAMPANGA, PHILIPPINES

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ABSTRACT

Interest has been globally established as a powerful predictor that triggers engagement, especially in fostering physical culture among students. Scholarly works in PE have already shown that situational interest triggers individual interest, which can lead to highly engaged students. However, little is known about the impact of individual interest alone on students' school engagement. In this regard, this study is focused on determining the significant difference between the sex and institution of students concerning individual interest and school engagement. Moreover, it aimed to assess the relationship and direct influence of individual interest on school engagement. After obtaining data from 1659 samples of undergraduate students from the most prominent local colleges in Pampanga, it was revealed that there is no significant difference concerning individual interest and school engagement between sex and institution. Fascinatingly, a significant association between students' individual interests and school engagement was observed. Lastly, individual interest, along with its three factors, predicts school engagement. It can be concluded that individual interest has a direct positive influence on school engagement. Recommendations for future research direction and PE teachers to fully translate physical culture to students to improve their overall well-being are hereby presented.

KEYWORDS

Individual interest, local colleges, physical culture, physical education, school engagement

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Highlights

- *The level of individual interest and school engagement has no significant difference with respect to sex and institution/college in the case of the two local colleges.*
- *There is a significant relationship and direct influence of individual interest on school engagement in Physical Education to foster Physical culture among students.*
- *Individual interest and school engagement are two important variables to foster Physical culture inside the campus.*

INTRODUCTION

Promoting Physical Culture inside the campus

Instilling physical culture inside the campus and in students will only be possible with the promotion and conservation of the culture through Physical Education (PE) and those significant people behind it, the teachers (Gądek, 2020; Madejski, Jaros and Madejski, 2019). In this regard, to fully translate physical culture, students' interest in the content and engagement are vital and need to be considered. Furthermore, to boost the participation of the students to be physically active, the course content and exercises should

be carefully and adequately selected to provide satisfaction and meet their expectations (Teixeira et al., 2012). For a more in-depth explanation, Physical Culture studies various domains pertaining to human movements, such as physical education through various physical activities (Brown, 2019). It provides an avenue for the students to improve and strengthen their bodies, and prevent such illnesses and conditions (Dróżdż et al., 2022; Iqboljon, 2021; Kokoulina et al., 2021; Lutkovskaya et al., 2021). Indeed, fostering physical culture inside the campus through physical education is equally important as other academic courses as it plays a significant role in students' overall growth (Zhang, 2021). Ergo, fostering physical culture develops physical fitness such as improving motor skills and abilities, sports achievement, ethics, esthetic, and cognitive development (Fang, Teng and Wang, 2021; Sierra-Díaz et al., 2019; Tainio, 2019; Yalgashevich, Shermamatovich and Zayniddinovich, 2021).

Fascinatingly, many positive findings were discovered based on previous studies concerning students' attitudes toward physical education, leading to activated interest and engagement. According to Viva and Limbo (2021) and Li et al. (2014), undergraduate students from the University of Eastern Philippines and four Chinese universities reported a moderate to positive attitude toward Physical Education. The result is harmonized with the hard work of teachers in presenting the course properly and efficiently to students. Additionally, Mohamed and Kamil (2020) unraveled that there is a positive and high level of attitude toward implementing Physical Education among secondary school students. The data displayed that respondents are comfortable teaching today's subject. Furthermore, it was found that the professional qualification of teachers is associated with students' attitudes toward the subject (Carcamo-Oyarzun et al., 2022; Sucuoglu and Atamturk, 2020; Zalech, 2021). On the other hand, the findings differ from what most people expected after examining other published scholarly papers. Based on the study of Solomonko et al. (2022), it was revealed that traditional physical culture is not highly important to be considered based on the survey conducted on college students taking a law degree. The findings of Mutlu et al. (2021) also displayed a negative attitude toward Physical Education among third-graders from the Menteşe district of Muğla province in Turkey. A study by Iconomescu et al. (2018) also uncovered a negative attitude from Romanian students toward the subject because of poor communication with teachers. In line with the aforementioned findings, studies have confirmed that teacher factors may also affect student attitudes toward Physical Education (González-Peño, Franco and Coterón, 2021; Malinauskas, Emeljanovas and Valantine, 2018; Scrabis-Fletcher and Silvermanv, 2010). Additionally, physical and sports activities were also identified as predictors of students' attitudes (Lobo, Dimalanta and Bautista, 2022; Sağın, 2022; Tagare and Villaluz, 2021). Hence, it can be concluded that physical education teachers are the people behind solidifying students' interest and engagement in the subject through carefully selected activities promoting physical culture.

Individual Interest in Physical Education and School Engagement

Over the past years, interest has strongly influenced in-school engagement (Chen and Wang, 2017). It has been intellectualized as a motivational process that bolsters learning and is crucial to students' academic success (Harackiewicz, Smith and Priniski, 2016). A student can be identified as interested in the content if (s)he is determined to hone the skills that were just newly introduced, play sports assiduously, or engage vigorously in an activity. As Renninger and Hidi (2022) recently reiterated, interest is a motivator that triggers all human activities. Furthermore, various empirical studies were already executed focusing on the outcome of situational interest and school engagement of students in Physical Education (Allard-Latour, Rannou and Kermarrec, 2022; Roure et al., 2019; Roure and Pasco, 2018a; Wang, Shen and Bo, 2022); such as physical activities (Pasco and Roure, 2022). This is because educational researchers have argued that situational interest is far substantial in terms of its potential in motivating students when compared to individual interest, especially in a daily pedagogical setting. Moreover, Physical Education instructors can easily manipulate learning tasks targeting situational interest (Roure and Pasco, 2018b). In an in-depth elucidation, interest has been described as a multifaceted construct with three distinct features according to Roure, Lentillon-Kaestner and Pasco (2021): a mental state contrasted with a steady attribute; specific on the content; and a structure with multiple dimensions. In essence, situational interest is the individual's increased attention on a concept, disposing oneself to learn mixed with a constructive solicitude about it (Fastrich and Murayama, 2020; Schmidt and Rotgans, 2021; Wong et al., 2020). On the other hand, individual interest is defined as propensity to reacquaint oneself vis-à-vis to specific content over again (Hong et al., 2019; Knekta et al., 2020; Quinlan and Renninger, 2022; Shin and Kim, 2019). Moreover, interest is always intellectualized as content-specific (Kang, Keinonen and Salonen, 2021; Wild, 2022), which can be postulated an individual may have a keen interest towards Physical Education, but not with other courses or contrariwise. Last of all, interest has been contextualized as a structure with multiple dimensions which encompasses two domains: affective (e.g., excitement, positive feeling) and cognitive (e.g., perceived importance, usefulness) (Aslan et al., 2021; Rowland et al., 2019; Svenningsson et al., 2022).

Meanwhile, according to Pasco and Roure (2022), individual interest encompasses three distinct factors namely Positive affect and willingness to reengage (PAWR), Stored Utility Value (SUV) and Stored Attainment Value and Knowledge-seeking Intentions (SAVKSI). For a more in-depth explanation, PAWR refers to a student's positive state of pleasure or exhilaration when interacting with certain content, such as Physical Education. It can be posited that students will continue to reconnect themselves when they have a positive experience in the course (O'Keefe and Linnenbrink-Garcia, 2014; Renninger and Hidi, 2022). SUV is usually determined by how a specific bustle or concept can be related to the current and eminent goals of a student. To illustrate, besides from the physical benefits of Physical Education, when students perceived that it

may bring forth health and lifelong benefits, their interest may be triggered and would consider it valuable. Lastly, SAVKSI are demarcated as the significance of a content on a personal level vis-à-vis the relevant aspects to a student's concept of self and personal desire. As an emphasis, self-schema is derived from a cognitive theory which describes presumptions about one self and capacities (Hovelius et al., 2021) and is defined as multiple representations in memory of the self (Scott et al., 2022). Moreover, self-schema are classes of knowledge that echo in what manner a person expects to reflect and act in a specific setting or situation.

Furthermore, the method to envisage academic achievement that became a significant concept and piqued the interest of educational researchers is called School Engagement (Liu et al., 2021). Students display a degree of attention, inquisitiveness, interest, buoyancy, and desire when being imparted vis-à-vis a concept, such as various physical activities in Physical Education. Students' engagement in school extends to the impetus they have to acquire and advance in their education (Charkhabi et al., 2019). In addition, this concept has been considered to encompass various domains encompassing cognitive (e.g., investment in mastering tasks, flexible problem-solving), affective (e.g., sense of identification, positive outlook toward school) and behavioral domains (e.g., students' participation in schooling, positive practices in schooling) (Benito Mundet et al., 2021). Based from these three domains, school engagement has three distinct features: Dedication (DE), Absorption (ABS), and Vigor (VI) (Jaya and Ariyanto, 2021). Firstly, dedication refers to an individual's engrossment in various academic responsibilities with high-sense of commitment and enthusiasm (Listau, Christensen and Innstrand, 2017; Teuber, Nussbeck and Wild, 2021). It has been described by Widlund, Tuominen and Korhonen (2021) as a student with a highly constructive cognitive attitude toward school and extremely devoted to the learning procedures and outcomes. Moreover, an intensive student occupied in various academic endeavors is called absorption (Koob et al., 2021). It can be implied that possessing a very high feeling of competence toward studying the content is described by this domain. Lastly, a student pigeonholed by unmeasurable energy, resiliency, exuberance, and flexibility in the pursuit of excellence is referred to as vigor (Demirbatır, 2020; Pulido-Martos et al., 2020). In other words, amidst the difficulties students face due to various academic tasks, (s)he still displays a positive attitude toward these challenges. These three facets of school engagement are distinctly different but highly interconnected (Estévez et al., 2021). Previously conducted studies have accentuated the interrelationship of situational interest and school engagement (Hui et al., 2019; Mallari and Tayag, 2022; Park and Han, 2021; Upadyaya et al., 2021). It can be postulated that the situational interests of students indeed have a significant role in their school engagement.

Moreover, issues of inequalities regarding sex have been predominantly evident worldwide, especially when dealing with the interest of students in Physical Education activities being introduced to them (e.g., physical activities and sports events). Grounded on the findings of various scholars, higher interest and positive perception scores toward Physical Education are predominantly evident for males compared to their counterparts (Perić et al., 2020; Sofi, Waseem and Padder, 2019). Additionally, findings exposed that male students are highly more interested and engaged in organized contact sports (e.g., basketball), while female students are more on into individual sports, dancing, and exercise (Cowley et al., 2021; Cruz, 2022; Deaner, Balish and Lombardo, 2016; Pituk and Cagas, 2019; Ricardo et al., 2022). Indeed, it can be postulated that the issue has never been solved for the past years, and addressing these problems should be targeted bull's-eyes, especially fostering higher engagement and participation from female students in various activities of Physical Education in Higher Education. Additionally, no studies were not yet performed analyzing the difference on the individual interest and school engagement of students from different higher education institutions in the Philippines, and even in a global context. Surprisingly, a single study was performed by Lobo (2023) focusing on the difference in terms of individual interest of students toward Philippine Traditional Dances and school engagement, which revealed that there is no significant difference was observed in relation to the individual interest of students from Pampanga State Agricultural University, Mabalacat City College, and City College of Angeles. On the one hand, a significant variance was observed concerning students' school engagement to among these schools to which PSAU respondents are highly engaged compared to MCC and CCA. However, this particular study is not related to Physical Education. Hence, conducting a similar study in the context of Physical Education in the local colleges sector is highly recommended.

As mentioned earlier, situational interest causes the amplification of individual interest leading to higher students' school engagement (Hong et al., 2019; Palmer, 2019) and vice-versa (Kahu, Nelson and Picton, 2017; Romine et al., 2020; Rotgans and Schmidt, 2018). The aforementioned studies have claimed that students' situational interest could strengthen individual interest, leading students to engage and enjoy the content. In other words, the current environment accounts for a higher situational interest vis-à-vis their individual interest. However, more established information about how individual interest may affect engagement is needed. This paper agrees with what Roure et. al. (2021) have stated: numerous documentations were already accrued concerning situational interest and its motivational roles, but studies focusing on individual interest are still unexplored. Surprisingly, there have been few studies on these variables—for example, the study of Lobo (2023) have revealed that individual interest is highly related to school engagement in order to prepare future educators of Physical Education in the promotion of intangible cultural heritage of the Philippines. Additionally, findings reported that individual interest in Physical Education is significantly related to and triggers students' school engagement (Bautista, De Dios and Lobo, 2023). However, these studies are not on the context of local college for the promotion of physical culture inside the campus. After humungous efforts dedicated to looking for published scholarly papers concerning this present investigation, it can be beseeched that conducting a study focusing on the association and direct effect of individual interest in students' school engagement is highly needed. This

is due to the insufficiency of works conducted and published, especially in the context of Physical Education, due to its lesser importance to educational researchers.

Aims and hypotheses

This present study is focused on the following objectives:

1. Determine the significant difference between sex and institution concerning individual interest and school engagement;
2. Assess the significant association of individual interest to school engagement;
3. Evaluate the direct influence of individual interest to school engagement; and
4. Examine the direct influence of the three factors of individual interest to school engagement.

Aside from determining the significant difference of sex and institution/college relating to individual interest and school engagement, this investigation is highly focused on the association of the two variables and the effect of the independent variable/s (individual interest-PAWR, SUV, SAVKSI) on the dependent variable (SE). Since the topic is relatively new and there were only few studies that were known to be conducted concerning these two variables, therefore, this present study tested the following hypotheses (Figures 1 and 2 illustrates the conceptual framework for the study):

H_1 II has no significant relationship to SE
H_2 II has a no direct influence to SE
H_3 PAWR has no significant impact to SE
H_4 SUV has no significant effect to SE
H_5 SAVKSI has no significant influence to SE

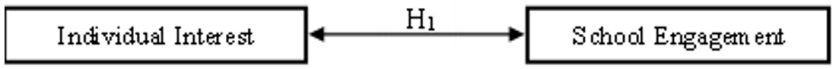

Figure 1: Conceptual Framework for correlation analysis

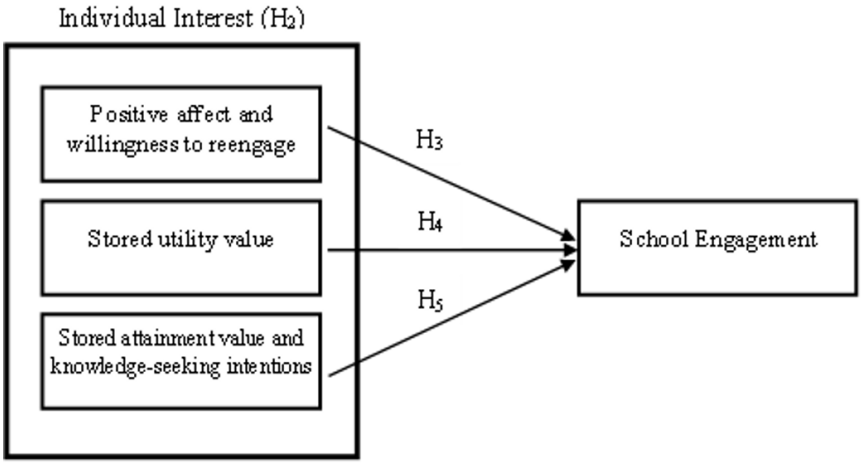

Figure 2: Conceptual Framework for multiple regression analysis

METHODS AND MATERIALS

Participants and Sampling Technique

Participating respondents comprise of first- and second-year undergraduate students currently taking two minor Physical Education courses (Physical Education 1 [PATH-Fit1] and Physical Education 3 [PATH-Fit3]) during the first semester, A.Y. 2022-2023 from the two prominent local colleges in Pampanga, City College of Angeles and Mabalacat City College. These local colleges are under the governance of two different local government units (LGU), which are situated in the City of Angeles and Mabalacat, respectively. Both local colleges' overall student population ranges from approximately 5,000-6,000 across various degree programs. Furthermore, two (2) sampling procedures were performed to identify the respondents for the investigation. The *Purposive Sampling Technique* was performed first due to the specificity of respondents needed for the study. It is a non-parametric technique that allows researchers to identify participants based on the qualities needed for the investigation; and for this study, undergraduate students enrolled in PE1 and PE3. After identifying the needed respondents, the *Convenience Sampling Technique* was also employed. It is a procedure where gathering of data from the respondents is based on their own convenience (Frey, 2018). Specifically, obtainability of data is vis-à-vis the topographical propinquity that may also include other variants of accessibility. The respondents for the study are highly suitable for this type of research because minor courses in physical education are only offered during the first- and second-year level for both colleges. Hence, promoting physical culture through these courses can be made possible. The demographic characteristics of the respondents are displayed in Table 1. Overall, 1659 undergraduate students volunteered to answer the online survey and accepted for scrutiny. The findings which are shown in Table 1 illustrates that most students who answered are females (N = 1036), in lieu of 62.4% of the overall sample population, while males (N = 623) are 37.6%. Lastly, most of the respondents are from CCA (N = 1072) denoting 64.6%, while MCC (N = 587) is 35.4%.

Item		*f*	Percentage
Sex	Male	623	37.6%
	Female	1036	62.4%
College/Institution	City College of Angeles (CCA)	1072	64.6%
	Mabalacat City College (MCC)	587	35.4%
	Total	1659	100.0%

Table 1: Demographic profile

Instruments and data gathering

Obtaining of data was performed via online survey through the use of Google Forms. Surveying online has a great potential to amass massive amount of data efficiently, cost-effective, and within relatively short time frames (Li, Shamsuddin and Braga, 2021; Regmi et al., 2017). There are two instruments adopted and utilized to gather data from the respondents. The *Students' Individual Interest in Physical Education questionnaire* newly developed by Roure et al. (2021), a 14-item multidimensional questionnaire that measures students' individual interest based on three (3) domains namely: positive affect and willingness to reengage [PAWR], stored utility value [SUV], and stored attainment value and knowledge-seeking intentions [SAVKSI]. It is a 5-point Likert Scale where responses are recorded as 1- "strongly disagree" to 5- "strongly agree." the reliability value (Cronbach's Alpha) is .95 for the overall scale, and for its subscales is between .87 and .94. Lastly, the *Utrecht Work Engagement Scale for Students* (UWES-9S) adapted by Carmona-Halty et al. (2019) is a 5-point Likert Scale was used to measure students' overall engagement in school. This particular instrument is segmented into three parts: vigor [VI], dedication (DE) and absorption (ABS). Responses are encoded from 1- "never" to 5- "always." the reliability value (Cronbach's Alpha) of the scale is .93, ranging from .79 to .90 for its subscales.

Data analysis

A test of normality, reliability test, and bivariate correlation for inter-variable relationship were performed. Table 2 typifies the results from the normality test across various subscales. Based on the findings, the skewness and kurtosis values did not obtain the threshold value [-2, 2] across all subscales (Romano et al., 2021). Hence, it can be construed that the distribution of data is non-normal. In relation to this, a distribution-free test is applicable to examine the variance between groups concerning individual interest and school engagement, and the interrelatedness of the two constructs. Moreover, the table explicates the results from the reliability test of each subscale of personal interest and school engagement. Grounded on the findings, it can be postulated that all subscales are highly reliable with Cronbach's Alpha value between .79 to .94. Lastly, the bivariate correlations for each subscale are also exhibited in the table which displayed a significant relationship across all variables ($p < .01$).

Moreover, Mann-Whitney *U* Test was presumed that can be used examine the variance between groups (i.e., sex and institution/college) concerning individual interest and school engagement. This specific non-parametric test is focused on comparing the means of the two independent groups with the assumption that the distribution of data are non-normal (Sundjaja, Shrestha and Krishan, 2022). To further determine if the specified statistical analysis may be used, a non-parametric version of the Levene's test of Homogeneity of Variances was performed, and *p*-values should be >.05 to test the assumption of Mann-Whitney *U*. Based on the findings shown in Table 3, only the Individual Interest [institution/college] ($p > .05$) did not violate the assumption. Therefore, the Mann Whitney *U* test can be used for this specific variable. On the other hand, Individual interest ($p < .05$) and both School engagement [sex] ($p < .05$) [college] ($p < .05$); therefore, significant; indicating that the assumption was violated. Instead, the *Independent Samples T-Test* may be used, since the sample size for this study is significantly large.

Furthermore, to examine the correlation of individual interest to school engagement, Spearman's *Rho* (r_s) assessment was used. It is a non-parametric measure of correlation using ranks (Akoglu, 2018). In this specific assessment, the study focused on determining the association of the two variables regardless of their latent constructs. Hence, obtaining a global score through computing for their composted score was used. Lastly, Multiple Regression analysis was utilized predicting the association and direct influence of individual interest to school engagement. This specific modeling technique can be performed assessing two or more variables predicting one dependent variable (Kang and Zhao, 2020). For this specific analysis, the three factors or latent constructs will be used as a whole model to predict its direct influence to school engagement, and to which these latent constructs will be analyzed individually (as an independent variable) right after.

	M ± SD	Skewness	Kurtosis	1	2	3	4	5	6
PAWR	3.58 ±.85	-3.67	-1.33	(.91)					
SUV	3.65 ±.85	-4.21	-2.23	.74**	(.87)				
SAVKSI	4.08 ±.86	-16.57	-7.40	.68**	70**	(.94)			
VI	3.59 ±.77	-1.37	-0.3	.57**	63**	.61**	(.79)		
DE	3.87 ±.82	-9.7	0.61	.53**	.57**	.81**	.81**	(.84)	
AB	3.61 ±.83	-0.89	-2.01	.48**	54**	.74**	.77**	.77**	(.89)

** Statistically significant at p < .05.*

*** Statistically significant at p < .01.*

Table 2: Descriptive statistics, normality estimates, internal consistency coefficients, and bivariate correlations

	Levene Statistic	df1	df2	Sig.
Individual Interest (sex)	18.950	1	1647.166	.000
School Engagement (sex)	14.622	1	1636.415	.000
Individual Interest (institution/college)	1.839	1	1643.387	.175
School Engagement (institution/college)	9.960	1	1640.986	.002

Table 3: Non-parametric version of Levene's test of Homogeneity of Variances results

Ethical Considerations

The respondents were required to provide their consent by agreeing to the statement attached in the Google Forms. Additionally, respondents were advised about the objectives of the study, its instruments, and the variables being measured for the study. Minor risks answering the online survey were also enumerated. Respondents are free to withdraw or to ask for debriefing anytime.

RESULTS AND DISCUSSION

Table 4 displays the results from the *Independent Samples T-Test* analysis between individual interest and school engagement being independent of gender and school engagement being independent of institution/college. According to Levene's test for equality of variances, the Sig. Value of individual interest (sex) and both school engagement (sex and institution) is < .05, which means that the assumption of equal variances has not been violated. Based on the findings, no observation of a significant difference concerning individual interest (sex) for both male (3.78 ± .83) and female (3.79 ± .72) students [$t(1657) = -.412$, $p = .681$]. Also, there is a significant difference concerning school engagement (sex) for both male (3.66 ± .80) and female (3.70 ± .70) students [$t(1657) = -1.206$, $p = .228$]. The findings posited that regardless of gender, undergraduate students have a higher individual interest in Physical Education and school engagement. Lastly, no observation of a significant difference concerning school engagement (institution/college) between City College of Angeles (3.68 ± .78) and Mabalacat City College (3.70 ± .69), [$t(1657) = -.218$, $p = .827$]. Therefore, the results can be postulated that regardless of institution/college, all undergraduate students from these two local colleges are highly engaged in their schooling. Lastly, after performing the Mann-Whitney *U* Test, there is no observation of a significant difference concerning individual interest between college/institution [City College of Angeles (*Mdn* = 3.86) and Mabalacat City College (*Mdn* = 3.86), $U(N_{\text{City College of Angeles}} = 1072, N_{\text{Mabalacat City College}} = 587) = 313987.000$, $z = -.069$ $p = .945$, $r = -0.002$)]. The findings can be construed that regardless of college/institution, all undergraduate students are highly interested in Physical Education.

Based on the findings, it can be postulated that there is no significant variance in the level of individual interest of students in Physical Education and their school engagement in terms of gender and institution. Regardless of sex and institution, male and female undergraduate students from City College of Angeles and Mabalacat City College are all interested in Physical Education and highly engaged in their schooling. These present findings are dissimilar from previous studies from other scholars, which uncovered that male students are highly interested in Physical Education, give more importance to the content, and have a more positive attitude towards the subject compared to females (Perić et al., 2020; Sofi et al., 2019). Contrastingly, based on other published scholarly papers, it was found that conceptual knowledge in Physical Education is higher for female students compared to males (Thomas and Ti, 2021). However, these findings are not relatively specific on either situational or individual interest, but in general. Furthermore, it was found that male students are highly engaged in school concerning Physical Education compared to their counterparts (Hands and Parker, 2016), especially concerning Physical activities and sports participation (Delextrat et al., 2020; Lauderdale et al., 2015). It has been prevalent across studies in Physical Education worldwide concerning the difference in terms of interest and engagement when sex is being taken into consideration. In terms of physical activities and sports (Hsu et al., 2022), male students are more interested and highly engaged to contact sports, while female are more into individual sports, dancing or exercising to music (Frömel et al., 2022; Peral-Suárez et al., 2020; Resaland et al., 2019). The findings in terms of significant variance concerning school engagement was supported by the study of Lobo (2023), to which PSAU students are more engaged compared to MCC and CCA students. However, this study is not related to Physical Education and in a local college

context. In line with this, performing a similar comparative study is highly advised to examine if individual interest and school engagement in Physical Education varies from school to school.

	N	M ± SD	SE	df	*t*-test	Sig.	Decision
Individual Interest (sex)							
Male	623	3.78 ±.83	.033	1657	-.412	.681	Not significant
Female	1036	3.79 ±.72	.022				
School Engagement (sex)							
Male	623	3.66 ±.80	.032	1657	-1.206	.228	Not significant
Female	1036	3.70 ±.70	.021				
School Engagement (institution)							
City College of Angeles	1072	3.68 ±.78	.024	1657	-.218	.827	Not significant
Mabalacat City College	587	3.70 ±.69	.028				

Table 4: Independent Samples T-Test results

Table 5 unravels the findings after performing Spearman's *rho* (r_s) analysis. The results exhibited a positive association between overall individual interest and school engagement [$r(1657) = .67$, $p < .05$)]. The findings posited that as the personal interest of students in Physical Education increases, their engagement in school is also amplified. As what other scholars have stated, the more a student is highly interested in the content, the more a student will engage to school (Harackiewicz et al., 2016; Murayama, 2022; Rotgans and Schmidt, 2017). Based on the result of the correlational analysis, H_1 has been rejected. As mentioned earlier, there were only few studies conducted concerning the association between the two variables (Bautista et al., 2023; Lobo, 2023). Hence, this further suggests conducting a similar study to deepen the linkage between the two variables, or refute the findings.

			Personal Interest	School Engagement
Spearman's rho	Personal Interest	Correlation Coefficient	1.000	.664**
		Sig. (2-tailed)	.	< .001
		N	1659	1659
	School Engagement	Correlation Coefficient	.664**	1.000
		Sig. (2-tailed)	< .001	.
		N	1659	1659

*** Correlation is significant at the 0.01 level (2-tailed).*

Table 5: Spearman's Rho (r_s) test results

The next step, the dependent variable was regressed on the latent constructs that represent students' overall individual interest. After performing the analysis, it was discovered that the three independent variables predict school engagement [F (3, 1655) = 501.015, $p < .001$], which uncovered that the three factors have a significant impact to students' overall school engagement. Additionally, the $R_2 = .476$ displayed that the model explains 47.6% of the variance in school engagement. The result can be postulated that individual interest itself has a direct impact to students' school engagement which reverberated the previous findings of other scholars (Bautista et al., 2023; Lobo, 2023). Studies pertaining to individual interest and its relationship to school engagement in Physical Education are still inadequate, therefore, conducting a thorough investigation of these variables is highly suggested. Based from the findings above, H_2 has been rejected.

Also, coefficients were further examined to ascertain the influence of each of the individual factors on the dependent variable. The third hypothesis evaluated the impact of positive affect and willingness to reengage (PAWR) to school engagement (SE). The result yielded that PAWR predicts SE, which can be posited that PAWR has a significant impact to SE ($\beta = .097$, $t = 3.984$, $p < .001$). PAWR has been referred to as a student's attached pleasure to specific content, such as Physical Education. Based on the findings, students may reengage themselves continuously towards Physical Education as long as they perceive the content as fun and exciting. Parallel to other scholars' findings, it was unraveled that enjoyment and excitement were feelings that had the highest predictive

power in the engagement of students (Fierro-Suero et al., 2022; Leisterer & Jekauc, 2019; Powell & Ceaser-White, 2017). It can be postulated that positive emotional experiences in Physical Education may undoubtedly lead to a higher level of school engagement (Jaakkola et al., 2015; Roure, Méard, et al., 2019; Wang et al., 2010). In summary, H_3 has been rejected.

Furthermore, the fourth hypothesis evaluated the impact of stored utility value (SUV) to school engagement (SE). It was discovered that SUV predicts SE, which indicated that SUV has a significant effect to SE (β = .246, t = 9.713, p < .001). As defined earlier, SUV is how a specific content, such as Physical Education, relates to the student's present and future goals. In line with the results, it was found that SUV directly impacts school engagement. It can be construed that when students perceive that Physical Education is highly beneficial for their present and future attainments, their school engagement is bolstered. For example, the students with a higher individual interest significantly perceive the positive benefits of the content; there is a higher possibility of school engagement, which may also result in healthy activity engagement outside of school. Synonymous with what various scholars have mentioned, students' approval on physical activities throughout the process bolsters engagement, adherence to healthy régime habits in the future and to carry on with the routine outside the four walls of the campus (Curran and Standage, 2017; Polet et al., 2019; Rojo-Ramos et al., 2022). The items for this particular factor are highly related to the intention for future participation of students to various physical activities as mentioned to other studies (Gao and Xiang, 2008; Yli-Piipari et al., 2013). In this, H_4 has been rejected.

Lastly, the fifth hypothesis evaluated the impact of stored attainment value and knowledge-seeking attentions (SAVKSI) on school engagement (SE). The findings displayed that SAVKSI predicts SE, which can be postulated that SAVKSI has a substantial impact on SE (β = .319, t = 13.887, p < .001), hypothesizing that H_5 has been rejected. As mentioned earlier, SAVKSI refers to a student's perceived importance of content, such as Physical Education, on a personal level which may likely result in deepening of knowledge on a specific content that is highly relevant to their perception of self-schema and their core personal goals. Based on the findings, it can be deliberated that as long as students see Physical Education reflects their perception of self-schema and central personal goals can upsurge higher engagement. Tantamount to other published scholarly works, attainment value based on the expectancy-value theory (EVT) predicts motivation (Ding, Sun and Chen, 2013; Wang and Xue, 2022), which further leads to students' rendezvous in Physical Education (Shang, Moss and Chen, 2022; Zhu and Chen, 2013). In conclusion, the findings speculated that individual interest (II) has a direct and significant influence on school engagement (SE), and all the latent constructs of individual interest (II) are accountable for the concerned relationship. Results are illustrated in Table 6.

Based on the findings, this study further proposes conducting a comprehensive examination of the direct influence of individual interest on school engagement by taking each feature of school engagement separately. This is in line with what Widlund et al. (2021) and Salmela-Aro and Upadyaya (2017) have suggested, the three domains of school engagement may be best described as a global construct highly applicable for younger pupils in the primary and basic education; however, for young adults such as college students, these constructs may seem become separated. Concerning the three unique features of both variables being studied, the role of physical educators should be emphasized. This study accentuates that inculcating the real "value" of physical education to students is highly desirable as this will help students to understand the significance of the content in a deeper and personal level. Although teachers may not directly address the underlying external barriers to students' engagement, developing teachers' instructional techniques and self-competence may assist them maintaining a strong, positive, learning-focused and relevant school or classroom climate (Powell and Ceaser-White, 2017).

Hypothesis	Regression weights	Beta Coefficient	R^2	F	t	p	Decision
H_2	II → SE	.661	.476	501.015	-	< .001	Rejected
H_3	PAWR → SE	.097	-	-	3.984	< .001	Rejected
H_4	SUV → SE	.246	-	-	9.713	< .001	Rejected
H_5	SAVKSI → SE	.319	-	-	13.887	< .001	Rejected
R^2	.476						
F (3, 1655)	501.015						

**Sig. value p <.05. II- Individual Interest, SE- School Engagement, PAWR- Positive affect and willingness to reengage, SUV- Stored utility value, SAVKSI- Stored attainment value and knowledge-seeking attentions.*

Table 6: Multiple regression results and Hypotheses testing

CONCLUSION

New insights have been drawn from the results, which indicated that individual interest alone plays a significant role in students' school engagement without controlling the environment to amplify situational interest. To fully translate physical culture efficiently inside the campus, examining students' individual interest in Physical Education through various physical activities that lead to active and engaged learners is imperative. Moreover, this will provide a complete picture of how these constructs may strengthen active involvement in various physical movements separate from the four walls of the campus, which is well-known to be highly beneficial for their well-being

while elevating the quality of their lives. This study suggests the following proposals based on the three distinct features of individual interest. First, Physical Education teachers should consider selecting various physical activities that are highly perceived by students as enjoyable and exciting to be learned, which applies to both sexes. As mentioned in the discussion earlier, the emotional experience provided by the content can lead to a higher level of student engagement. Lastly, Physical Education teachers must consider inculcating world-related values in all the physical activities imparted to increase students' level of appreciation, which they can consider beneficial for their current and future aims. In line with the following proposals, from a professional development standpoint, this study recommends that the higher administration consider providing in-depth and extensive training to all teachers to address the needs and boost individual interest to increase school engagement. Policymakers and practitioners should provide such activities but are not limited to: coming up with an educated decision on the various physical activities that will be taught to students that are highly enjoyable, exciting, valuable, and related to the personal lives of students; and pieces of training that are highly concerned to various practical teaching strategies and techniques that are highly effective which may pique the interest of students toward Physical Education, foster life-long learning, and inculcate physical culture in the most efficient yet enjoyable way possible. Additionally, teachers' engagement with students may develop their interest and engagement in physical education over time. The following proposals align with the derived conclusion based on the earlier findings.

Furthermore, adding other exogenous and predicting variables not included in the study may be tested to deepen the understanding of what other features, aside from situational interest, may affect students' individual interests and school engagement. Also, this study suggests that future investigations may consider adopting a multi-informant approach by combining data from physical education teachers, as they may deliver much scholarly information concerning the individual interest of students and their engagement which may provide additional information on the vital role of teachers, deepening the relationship between the two variables and filling-in up the scarcity of investigations related to these. Most importantly, gathering essential data from the teachers will help develop a specific intervention that can improve the promotion and preservation of physical culture on campuses.

This present study is restricted to some limitations that are highly important to take into consideration. First of all, the respondents are controlled samples of undergraduate students from the CCA and MCC, both under the sector of local colleges and universities (LCUs). Consequently, the findings of this investigation cannot take a broad view of the entire studentry, specifically those belonging to other Higher Education Institutions (HEIs) such as institutes from the State Universities and Colleges (SUCs) and even Private Higher Education Institutions (PHEIs) in the Philippines or even from other international academies. In line with this, future scholars may find inquisitiveness in conducting a similar study by amassing reports from the HEIs as mentioned above and examining if the outcomes may support or repudiate the findings of this investigation. Finally, as mentioned by the authors from their original paper behind the newly developed and validated instrument used for this study (Students' Individual Interest in Physical Education questionnaire), the tool is suggested to be used to examine further the relationship and direct effect of students' individual interest to school engagement, which was performed by this present study. However, this study would suggest further examining the instrument by performing factor analyses and scrutinizing its convergent and discriminant validity from other sets of populations to determine if the tool may be used for further investigations.

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Conflict of Interest

The contributors hereby certify that there are no conflicts of interest.

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Data and Materials

Access to materials and data will be provided exclusively upon request.

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