

EMOTIONAL TOLLS OF PHYSICAL EDUCATION TEACHER EDUCATION STUDENTS (PETE) TOWARD PHYSICAL EDUCATION: AN EXTENSIVE ANALYSIS

PORTAGENS EMOCIONAIS DOS ESTUDANTES DE EDUCAÇÃO DE PROFESSORES DE EDUCAÇÃO FÍSICA (PETE) PARA A EDUCAÇÃO FÍSICA: UMA ANÁLISE AMPLA

Teejay D. Panganiban¹, Michael H. San Miguel¹, Davidsol M. Mendoza¹, Joeven E. Santos¹, Francisco V. Aguirre¹, and Joseph Lobo²

¹ Batangas State University, Batangas, Philippines.

² Bulacan State University, Bulacan, Philippines.

RESUMO

Esta pesquisa investiga as experiências emocionais de estudantes de formação de professores no contexto da educação física na Batangas State University, TNEU JPLPC-Malvar. O estudo visa discernir o cenário emocional examinando a influência de vários fatores, como sexo, ano, desempenho acadêmico e status socioeconômico nas dimensões subjetivas, fisiológicas e comportamentais dessas experiências. Participaram do estudo uma coorte de cinquenta e seis (56) alunos do 2º, 3º e 4º anos do curso de Bacharelado em Educação Física. Os dados foram coletados por meio de um questionário desenvolvido pelo pesquisador, e análises estatísticas, incluindo avaliações médias e testes de qui-quadrado, foram empregadas para avaliar experiências emocionais e explorar relações com variáveis pessoais. As descobertas revelaram uma população estudantil predominantemente feminina, do segundo ano, com alto desempenho acadêmico e origem de renda média. Os participantes relataram experiências subjetivas e reações comportamentais extremamente positivas, acompanhadas de respostas fisiológicas favoráveis. O estudo identificou relações significativas entre as variáveis pessoais dos participantes e as suas experiências emocionais, exceto no nível do ano. As implicações destas descobertas sublinham a importância de empregar estratégias para melhorar as experiências emocionais, concentrando-se particularmente nas reações subjetivas e comportamentais, para contribuir para um ambiente de aprendizagem mais positivo e eficaz para os alunos da formação de professores de educação física.

Palavras-chave: resposta comportamental, experiência emocional, educação física, experiência subjetiva, resposta fisiológica.

ABSTRACT

This research investigates the emotional tolls of teacher education students in the context of physical education at Batangas State University, TNEU JPLPC-Malvar. The study aims to discern the emotional landscape by examining the influence of various factors such as sex, year level, academic performance, and socioeconomic status on the subjective, physiological, and behavioral dimensions of these experiences. A cohort of fifty-six (56) students from the 2nd, 3rd, and 4th years in the Bachelor of Physical Education program participated in the study. Data were collected using a researcher-developed questionnaire, and statistical analyses, including mean assessments and chi-square tests, were employed to evaluate emotional tolls and explore relationships with personal variables. The findings revealed a predominantly female, second-year student population with high academic achievements and a middle-income background. Participants reported overwhelmingly positive subjective experiences and behavioral reactions, accompanied by favorable physiological responses. The study identified significant relationships between the participants' personal variables and their emotional tolls, except for year level. The implications of these findings underscore the importance of employing strategies to enhance tolls, particularly focusing on subjective and behavioral reactions, to contribute to a more positive and effective learning environment for teacher education students in physical education.

Keywords: behavioral response, emotional tolls, physical education, subjective experience, physiological response.

Introduction

Emotional tolls are central to academic contexts as they influence nearly every aspect of cognition. Students regularly encounter emotions such as irritation, worry, and boredom, which are linked to exams, assignments, and deadlines. Emotional factors play a pivotal role in shaping student engagement, motivation, and academic performance across various educational settings globally. In educational environments, emotional stimuli often demand greater attentional resources, significantly impacting cognitive processes like memory retention and

recall¹. Moreover, the interaction between emotion and cognition is crucial in educational settings, where positive emotional tolls can enhance learning, while negative emotions may hinder academic success. Several studies have shown that emotions play a pivotal role in students' engagement, motivation, and academic performance across diverse educational settings globally². Emotional factors needed to be carefully considered in educational course design in order to optimize student engagement and increase learning and long-term retention of content.

Emotions were shown to impact a variety of human cognitive functions, including attention, learning, and memory¹. These issues were crucial in educational settings because when students confronted such challenges, it contradicted the goal of education and could render it useless. Moreover, emotional stimuli are often processed with greater attentional resources, significantly influencing cognitive processes like recall and memory retention³. Above all, emotional stimuli appeared to take up more attentional resources than non-emotional stimuli. The attentional and motivational components of emotion were linked to better learning and memory⁴. As a result, emotional tolls or stimuli were recalled vividly and accurately throughout time, with a high level of resiliency. Individuals with various upbringings, social relationships, and cultures displayed emotions in different ways⁵. Also, while emotion and emotional responses could be beneficial, they could also be harmful.

Students' attitudes about physical education were linked to a variety of internal and external factors. According to certain research, internal factors included the fact that female students had more positive perceptions regarding PE than male students⁶. Conversely, others concluded the opposite, and some found that PE attitudes were similar between the sexes. The influence of gender on PE attitudes has been explored globally, with mixed results. Also, gender was found to play a significant role in shaping attitudes towards physical activity, particularly in countries like Turkey and the United States³. Meanwhile, research examining the relationship between grade level and PE attitude found that as students' grades improved, their positive attitudes about PE decreased. Additionally, extracurricular sports involvement affected students' PE attitudes, with students who participated in sports displaying more positive views than those who did not⁶.

Students' views about PE were proven to be influenced by external variables such as PE curriculum, classroom environment, and instructor actions. Curriculum content that promoted a fun and enjoyable environment influenced the development of positive attitudes among students. However, curriculum content could also influence the formation of negative attitudes toward PE, particularly when it included long runs or repetitive and boring PE activities⁶. When individuals had unfavorable thoughts and attitudes toward physical education classes, it directly impacted their self-esteem and confidence, leading to exercise avoidance.

In the Philippines, empirical results on students' attitudes about physical education were practically non-existent. However, the global issue of declining student engagement in physical activities has been well-documented. Research from the World Health Organization indicates a global rise in physical inactivity, particularly among adolescents, with significant implications for both mental and physical health⁷⁻⁸. Filipino teenagers had the second-highest incidence of inadequate physical activity among school-aged adolescents globally⁸. Therefore, extending the scientific setting to this country appeared important as identifying Filipino students' physical education attitudes and associated factors could provide valuable insights specifically for Filipino stakeholders working on the development of improved policies and curricula that promote physical education as a positive academic subject. This knowledge could benefit Filipino students by helping them achieve better results in athletics and other extracurricular activities, thus reducing their risk of future health problems. The Philippines currently has a historic mental health law that protects the rights of people with mental illnesses, provides

mental health services, and promotes mental health education in schools, barangays, and businesses.

Furthermore, students' unfavorable views regarding physical education were found to be strongly influenced by teachers' behaviors, particularly their evaluation and decision-making techniques. Educators were expected to compartmentalize their emotional, physical, and mental sides and deal with their difficulties at the appropriate time and place, gaining perspective on how to address their issues afterward. Teachers, after all, were presented with an emotional scenario in the classroom as they dealt with students with a variety of personalities and behaviors⁹.

It was still unclear whether there were any unknown aspects of students' emotional tolls that could reveal information about how to help them feel better. To identify emotional tolls and triggers from the perspective of a student, a qualitative method was employed. This knowledge could assist teachers in understanding students' emotional tolls and creating an environment where all students could experience positive emotions in physical education. Therefore, this study aimed to determine the emotional tolls in physical education by examining students' subjective experiences, physiological responses, and behavioral responses. This would be a huge assistance to educators in terms of applying and performing in their subjects and courses, as well as raising awareness among other stakeholders.

By building upon global studies and situating this research within the Philippine context, this study aims to contribute valuable insights into the role of emotional tolls in shaping students' attitudes towards physical education. The scarcity of local research on this topic underscores the importance of filling this gap, which could potentially inform the development of targeted interventions and policies designed to enhance student engagement and well-being in PE classes.

Methods

Research Design

The study employed a descriptive-correlational method, which aims to accurately and systematically describe a population, situation, or phenomena¹⁰. In addition, a correlational research design was utilized to examine the relationship between two variables without requiring the researcher to control one of them. Furthermore, the researchers determined that this design was the most suitable for investigating the relationship between the respondents' personal variables and their emotional tolls in physical education. By utilizing the descriptive nature of this research design, quantitative data on the students' personal variables could be collected through surveys and paired with the levels of emotional tolls in physical education using appropriate correlational techniques. This statistical analysis aimed to clarify how the students' personal profiles influenced their emotional tolls in physical education.

Sample

The study included a total of fifty-six (56) students from the 2nd, 3rd, and 4th year Bachelor of Physical Education program at the College of Teacher Education in Batangas State University JPLPC-Malvar, who were enrolled during the Academic Year 2021-2022. These students served as the respondents for the research. Moreover, to ensure the validity and reliability of the results, a sufficient representative sample and an appropriate sampling technique were employed. The total population of Bachelor of Physical Education students at Batangas State University JPLPC-Malvar Campus was sixty-five (65) students. The sample size of the respondents was determined using Slovin's formula with a five percent (5%) margin of error, which resulted in a total of fifty-six respondents. To achieve a proportional distribution of the sample size, the selection of respondents was conducted through simple random

sampling. The students were grouped according to their sections, and then the specified number of students from each section was selected using a lottery method.

Instrument

The survey instrument was divided into two dimensions: the profile of the respondents and their level of emotional tolls. The researcher gathered information about the study to formulate a questionnaire, which served as the main instrument. They used a researcher-made questionnaire to gather the necessary information. Based on readings, prior studies, technical literature, and relevant published and unpublished theses, the researcher developed a draft questionnaire consisting of two parts.

The first part aimed to reveal the profile of the respondents, including basic information such as sex, year level, scholastic performance, and socio-economic status. This section contained 4 items. The second part of the questionnaire surveyed the respondents' level of emotional tolls, focusing on three parameters: subjective experiences, physiological responses, and behavioral responses. This section comprised 15 questions in total, divided among the three parameters, for a total of 19 questions in the entire questionnaire.

The questionnaire employed a closed, Likert-type scale format, where respondents indicated their agreement or experience on a scale from 1 (strongly disagree/never) to 5 (strongly agree/always). Respondents were asked to mark their chosen answers in the corresponding columns.

The questionnaire was validated by experts in the field of physical education and psychology to ensure its content validity. The validation process involved two rounds of review, with revisions made based on expert feedback. The final content validity index (CVI) was 0.85, indicating a high level of agreement among the experts regarding the instrument's relevance and clarity.

Procedures

The questionnaire was distributed to students via a combination of email and QR codes presented during their physical education classes. The QR codes linked directly to the online survey, ensuring ease of access for the participants. Additionally, reminders were posted on social networks to encourage participation. The researcher obtained consent from both the school administration and the students prior to distribution.

Statistical analysis

To The data collected from the questionnaire were analyzed using descriptive and inferential statistics. Specifically, the weighted mean was computed to determine the level of emotional tolls for each item, and composite means were calculated for each category. To analyze differences in responses based on sex, year level, and other variables, the researcher used t-tests and ANOVA, depending on the nature of the variables involved. All statistical analyses were conducted using SPSS version 25, ensuring accurate and reliable results.

Results and Discussion

Based on the analyzed data, tables are hereby presented. The results are organized and presented relative to the specific problems posed by the researcher. In line with the statement of the problem specified in the study, the researcher first determined the respondents' profile. It included sex, year level, performance and socio-economic status which served as the groundwork of the succeeding undertakings.

Table 1 presents the respondents' profiles in terms of sex, year level, scholastic performance, and socio-economic status. The majority of the respondents were female (71%),

which may reflect females' stronger engagement in education, particularly in physical education (PE). However, despite this higher initial participation, studies suggest that female enthusiasm for PE may decline over time due to factors such as emotional tolls and discomfort in various PE activities¹¹. Additionally, the distribution of respondents by year level indicates that most (45%) were in their second year, with fewer students in the third and fourth years. This could be due to the high dropout rates in education programs¹², driven by economic pressures and a perceived lack of opportunities in the teaching profession¹³⁻¹⁴.

Furthermore, most of the respondents (75%) achieved an excellent scholastic performance (1.00–1.50 GPA), aligning with previous research that links time management and study habits to academic success¹⁵⁻¹⁶. Finally, in terms of socio-economic status, 57% of the respondents belonged to the middle-income group, while 43% were from the low-income group. This distribution reflects the economic challenges brought on by the pandemic, leading many students to pursue education at public institutions where tuition is free¹⁷.

Table 1. Respondents' Profile

Category	Frequency	Percentage (%)
Sex		
Male	16	29
Female	40	71
Year Level		
Second	25	45
Third	16	29
Fourth	15	26
Scholastic Performance		
Excellent (1.00 – 1.50)	42	75
Very Good (1.51 – 1.99)	14	25
Socio-economic Status		
Middle Income (10,000 – 37,000)	32	57
Low Income (9,999 and below)	24	43
Total	56	100

Note: Data were presented as frequency and percentage of group.

Source: Authors.

Emotional tolls in Physical Education

This study examined the respondents' emotional tolls in terms of subjective experience, physiological, and behavioral responses. Table 2 shows that respondents were highly positive about their experiences in PE, with an overall mean of 3.89 (SD = 0.31), indicating excitement to learn and participate in physical activity. Regular PE classes were seen to foster lifelong interest in physical activity, which supports the findings of de Jesus et al.¹⁸, who highlighted the benefits of daily PE classes for encouraging active lifestyles.

However, the lowest-rated statement, with a mean of 3.59 (SD = 0.56), related to confidence in performing traditional dances, suggesting that students' apprehension about their skills and fear of judgment may impact their enjoyment. Reyes et al.¹⁹ noted that internal factors like lack of skill can hinder students' experience with traditional dance. Overall, the emotional tolls in terms of subjective experience had an average mean of 3.76, reflecting students' ability to derive meaning and positive emotions from physical activity^{20,21}.

Table 2. Respondents' Subjective Experience in Physical Education

Indicators		Mean	Standard Deviation	Verbal Interpretation
As a teacher education student, I ...				
1.	participate in physical activities since it allows me to meet new people.	3.77	0.42	HP
2.	join in physical activities that can serve as an outlet for stress and anxiety.	3.79	0.41	HP
3.	enjoy learning and performing fundamental skills in sports.	3.79	0.41	HP
4.	perform different traditional dances.	3.59	0.56	HP
5.	learn more in PE courses to be physically active.	3.89	0.31	HP
Overall		3.76	0.43	HP

Note: * Legend: "Highly Positive (HP)" 3.51-4.00, "Positive (P)" 2.51-3.50, "Negative (N)" 1.51-2.50, "Highly Negative (NP)" 1.00-1.50.

Source: Authors.

Table 3 presents the respondents' emotional tolls in terms of physiological responses. With a mean of 3.54 (SD = 0.60), respondents reported a positive increase in heart rate during exercise, which is a typical response as the body adjusts to physical demands²². Maloney²² explained that this increased heart rate helps supply muscles with necessary oxygen and nutrients. Regular exercise also offers cardiovascular benefits, including improved circulation and reduced risk of heart disease²³.

However, the lowest mean score of 2.82 (SD = 0.92) indicated that some respondents experienced dizziness during a speed test. Although not common, dizziness can signal low blood pressure or other issues, and proper warm-up and cool-down exercises can help prevent such symptoms^{24,25}.

Overall, the physiological responses showed a positive emotional toll with a mean of 3.14 (SD = 0.80), supporting James' theory that emotions and physiological reactions are closely connected²⁶.

Table 3. Respondents' Physiological Response in Physical Education

Indicators		Mean	Standard Deviation	Verbal Interpretation
As a teacher education student, I ...				
1.	sweat when I do light exercises.	3.38	0.70	P
2.	feel that my heart rate increases while participating in physical exercises in class.	3.54	0.60	HP
3.	get nauseous when I do intensive exercise.	2.96	0.91	P
4.	get dizzy when I attempt speed test.	2.82	0.92	P
5.	feel exhausted when I perform agility test.	2.98	0.88	P
Overall		3.14	0.80	P

Note: Legend: "Highly Positive (HP)" 3.51-4.00, "Positive (P)" 2.51-3.50, "Negative (N)" 1.51-2.50, "Highly Negative (NP)" 1.00-1.50.

Source: Authors.

Table 4 presents the respondents' emotional tolls in terms of behavioral response. The highest mean score, 3.73 (SD = 0.45), indicates that respondents tended to stamp their foot when they heard upbeat music, reflecting a natural connection to music. According to researchers at the University of Oslo, this reaction supports the motor theory of perception, where the brain interprets sound by mimicking the movements involved in producing it²⁷. This connection between perception and action is further explained by Stasenko²⁸, who noted that sensory stimuli like music often elicit movement unconsciously.

The lowest mean score, 3.41 (SD = 0.78), was for the response "jumping for joy," suggesting varied bodily reactions to emotional events. Researchers highlighted that emotional and physical reactions occur simultaneously, and different people express joy in different ways²⁹.

Overall, the respondents' emotional tolls in terms of behavioral response were highly positive, with a mean score of 3.61 (SD = 0.57), suggesting that respondents expressed their

emotions easily. This supports the idea that emotions are deeply connected to physiological and behavioral responses, influencing both health and emotional intelligence³⁰.

Table 4. Respondents' Behavioral Response in Physical Education

Indicators	Mean	Standard Deviation	Verbal Interpretation
As a teacher education student, I ...			
1. clap when I score a point in a game.	3.68	0.51	HP
2. scream to express my excitement in basketball, volleyball, and other sports.	3.63	0.56	HP
3. stamp my foot when I hear upbeat music.	3.73	0.45	HP
4. jump for joy when I perform great anatomical movement execution.	3.41	0.78	P
5. groove as soon as the music starts.	3.63	0.56	HP
Overall	3.61	0.57	HP

Note: Legend: "Highly Positive (HP)" 3.51-4.00, "Positive (P)" 2.51-3.50, "Negative (N)" 1.51-2.50, "Highly Negative (NP)" 1.00-1.50.

Source: Authors.

Table 5 presents a correlation between respondents' sex and their emotional tolls in physical education, revealing a significant relationship with a Chi-Square value of 15.88 and a p-value of 0.001. This finding aligns with Sawicki and Gerner³¹, who noted positive emotional states among students, though the intensity of these emotions varied by gender. Notably, this study found that girls experienced positive emotions less frequently and had a less favorable attitude towards physical education compared to boys, contradicting the results of Petiot et al.³², who reported predominantly positive emotions among male students.

The second variable, respondents' year level, showed no significant relationship with a Chi-Square value of 1.89 and a p-value of 0.93, leading to acceptance of the null hypothesis. This is supported by Cruz et al.³³, who noted that students' attitudes toward physical education remain relatively stable with age.

The third variable, scholastic performance, exhibited a significant correlation with a Chi-Square value of 17.88 and a p-value of 0, emphasizing the role of mental health in academic achievement³⁴. The Committee on Physical Activity and Physical Education in the School Environment¹⁶ stresses that physical activity can improve mental health, academic performance, and behavior.

Lastly, socio-economic status was significantly related to emotional tolls, with a Chi-Square value of 11.71 and a p-value of 0.008. Although limited studies have explored this area, it has been noted that low-income individuals face health risks due to inadequate resources, leading to increased stress and potential health problems^{35,36}.

Following this analysis, the researcher proposed activities aimed at sustaining the emotional tolls of teacher education students in physical education, detailed in Table 6.

Table 5. Relationship between Profile and Emotional tolls in Physical Education

Variables	Computed χ^2	p-value	Decision (H ₀)	Interpretation
Sex and Emotional tolls in Physical Education	15.881	0.001	Reject	Significant
Year Level and Emotional tolls in Physical Education	1.892	0.929	Fail to Reject	Not significant
Scholastic Performance and Emotional tolls in Physical Education	17.877	0.000	Reject	Significant
Socio-economic Status and Emotional tolls in Physical Education	11.706	0.008	Reject	Significant

Source: Authors.

Suggested Activities to Sustain the Emotional tolls in Physical Education Courses of Teacher Education Students

1. Movement and Expression Workshops

Description: It allows them to develop a personal connection to the dance and express its emotional essence.

Purpose: Conduct workshops that focus on enhancing body awareness, movement expression, and emotional connection. These workshops can include various techniques such as guided imagery, improvisation exercises, and somatic practices that help teacher education students explore their own emotions and translate them into movement.

2. Reflection and Journaling

Description: To determine the depth of student understanding.

Purpose: Provide time to reflect on their experiences, emotions, and personal connections to the traditional dance. Encourage them to keep a journal where they can write about their thoughts, feelings, and any insights gained through their exploration. Reflective writing can deepen their understanding of their emotional journey and help them refine their performance.

3. Peer Sharing and Feedback

Description: It helps students to pause and reflect on their learning, as well as create connections to personal experiences.

Purpose: Provide time to reflect on their experiences, emotions, and personal connections to the traditional dance. Encourage them to keep a journal where they can write about their thoughts, feelings, and any insights gained through their exploration. Reflective writing can deepen their understanding of their emotional journey and help them refine their performance.

Based on the aforementioned findings, the researchers determined the implications of the results for emotional tolls. The suggested activities included movement and expression workshops, reflection and journaling, peer sharing and feedback, warm-up and cool-down routines, mind-body connection and visualizations, and mood setting. Engaging teacher education students in activities that enhance their emotional tolls greatly contributed to their ability to perform and value physical education.

Conclusion

Based The study aimed to examine the relationship between students' emotional tolls in physical education and their sex, scholastic performance, and socio-economic status, as well as to determine whether there were differences in emotional tolls when grouped according to year level. The results confirmed the hypotheses that there is a significant relationship between the respondents' emotional tolls and their sex, scholastic performance, and socio-economic status. However, no significant difference was found in emotional tolls when respondents were grouped according to their year level.

This finding underscores the importance of considering gender and socio-economic factors in understanding how students emotionally engage with physical education classes. In particular, females reported lower levels of enjoyment and higher levels of self-consciousness, which aligns with the existing literature on gender differences in physical education emotional tolls.

In relation to the practical applications, the study suggests strategies for improving students' emotional tolls, especially in subjective and behavioral responses. These strategies

may include implementing more gender-sensitive approaches to physical education, as well as providing psychological and emotional support to students from lower socio-economic backgrounds. This can help foster greater engagement and well-being in physical education classes.

The study does have limitations that should be acknowledged. First, the sample was primarily composed of female students, which may have influenced the findings on gender differences. Additionally, the research was limited to a specific geographic area and educational level, which restricts the generalizability of the results. Future research should aim to include a more balanced gender representation and expand the study across different regions and educational levels.

Future investigations could also explore how specific interventions, such as tailored physical education programs or emotional support systems, affect students' emotional tolls over time. Additionally, it would be beneficial to examine how these emotional tolls impact long-term physical activity habits and overall well-being, extending beyond the educational setting.

In summary, this study highlights the complex nature of students' emotional tolls in physical education and the need for a multifaceted approach to enhance engagement and well-being, with particular attention to gender and socio-economic differences.

References

1. Um E, Plass JL, Hayward EO, Homer BD. Emotional design in multimedia learning. *J Educ Psychol*. 2012 May;104(2):485–98. DOI: <https://doi.org/10.1037/a0026609>
2. Pekrun R, Goetz T, Titz W, Perry RP. Academic emotions in students' self-regulated learning and achievement: a program of qualitative and quantitative research. *Educ Psychol*. 2002;37(2):91–105. DOI: https://doi.org/10.1207/S15326985EP3702_4
3. Yiend J. The effects of emotion on attention: a review of attentional processing of emotional information. *Cogn Emot*. 2010;24(1):3–47. DOI: <https://doi.org/10.1080/02699930903205698>
4. Seli P, Wammes JD, Risko EF, Smilek D. On the relation between motivation and retention in educational contexts: The role of intentional and unintentional mind wandering. *Psychon Bull Rev*. 2016 Aug 19;23(4):1280–7. DOI: <https://doi.org/10.3758/s13423-015-0979-0>
5. Tyng CM, Amin HU, Saad MNM, Malik AS. The influences of emotion on learning and memory. *Front Psychol*. 2017 Aug 24;8. DOI: <https://doi.org/10.3389/fpsyg.2017.01454>
6. Cruz AB, Kim M, Kim HD. Physical education attitude of adolescent students in the Philippines: Importance of curriculum and teacher sex and behaviors. *Front Psychol*. 2021 Mar 29;12. DOI: <https://doi.org/10.3389/fpsyg.2021.658599>
7. Koca C, Aşçi FH, Demirhan G. Attitudes toward physical education and class preferences of Turkish adolescents in terms of school gender composition. *Adolescence*. 2005;40(158):365–75.
8. WHO. Insufficient physical activity [Internet]. World Health Organization. 2019 [cited 2024 Jul 6]. Available from: <https://www.who.int/data/gho/data/themes/topics/indicator-groups/indicator-group-details/GHO/insufficient-physical-activity>
9. Zaretsky R, Katz YJ. The relationship between teachers' perceptions of emotional labor and teacher burnout and teachers' educational level. *Athens J Educ*. 2019 Jan 25;6(2):127–44. DOI: <https://doi.org/10.30958/aje.6-2-3>
10. Curtis EA, Comiskey C, Dempsey O. Importance and use of correlational research. *Nurse Res*. 2016 Jul 18;23(6):20–5. DOI: <https://doi.org/10.7748/nr.2016.e1382>
11. Guerrero MA, Guerrero Puerta L. Advancing gender equality in schools through inclusive physical education and teaching training: A systematic review. *Societies*. 2023 Mar 9;13(3):64. DOI: <https://doi.org/10.3390/soc13030064>
12. Lodewyk KR, Muir A. High school females' emotions, self-efficacy, and attributions during soccer and fitness testing in physical education. *Phys Educator*. 2017;74(2):269–95. DOI: <https://doi.org/10.18666/TPE-2017-V74-I2-7136>
13. UNESCO Institute for Statistics. The world needs almost 69 million new teachers to reach the 2030 education goals [Internet]. 2016 [cited 2024 Jul 6]. Available from: <https://unesdoc.unesco.org/ark:/48223/pf0000246124>
14. Pokhrel S, Chhetri R. A literature review on impact of COVID-19 pandemic on teaching and learning. *High Educ Futur*. 2021 Jan 19;8(1):133–41. DOI: <https://doi.org/10.1177/2347631120983481>

15. Sakirudeen O, Sanni B. Study habits and academic performance of secondary school students in mathematics: A case study of selected secondary schools in Uyo local education council. *Res Pedagogy*. 2017;7(2):283–97. DOI: <https://doi.org/10.17810/2015.65>
16. Committee on Physical Activity and Physical Education in the School Environment. Educating the student body: taking physical activity and physical education to school [Internet]. Kohl HI, Cook H, editors. Washington (DC): National Academies Press (US); 2013 [cited 2024 Jul 6]. Available from: <https://pubmed.ncbi.nlm.nih.gov/24851299/>
17. International Labour Organization. COVID-19 labour market impact in the Philippines: assessment and national policy responses [Internet]. 2020 [cited 2024 Jul 6]. Available from: https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@asia/@ro-bangkok/@ilo-manila/documents/publication/wcms_762209.pdf
18. de Jesus GM, de Oliveira Araujo RH, Dias LA, Barros AKC, dos Santos Araujo LDM, de Assis MAA. Attendance in physical education classes, sedentary behavior, and different forms of physical activity among schoolchildren: a cross-sectional study. *BMC Public Health*. 2022 Dec 1;22(1):1461. DOI: <https://doi.org/10.1186/s12889-022-13864-9>
19. Reyes VM, Laguatan RNC, Ordillas JS. Students' personal experiences and interest in Philippine folk dance: Basis for dance program intervention. *J Educ Hum Resour* [Internet]. 2020 [cited 2024 Jul 6];1(2):69–87. Available from: <https://ejournal.upi.edu/index.php/JEHR/article/view/23377>
20. Leisterer S, Jekauc D. Students' emotional experience in physical education—a qualitative study for new theoretical insights. *Sports*. 2019 Jan 3;7(1):10. DOI: <https://doi.org/10.3390/sports7010010>
21. Stults-Kolehmainen MA, Sinha R. The effects of stress on physical activity and exercise. *Sports Med*. 2014 Jan 13;44(1):81–121. DOI: <https://doi.org/10.1007/s40279-013-0090-5>
22. Maloney L. Why does exercise increase the heart rate? [Internet]. LIVESTRONG.com. 2022 [cited 2024 Jul 6]. Available from: <https://www.livestrong.com/article/357641-why-does-exercise-increase-the-pulse-rate/>
23. MedlinePlus. Benefits of exercise [Internet]. 2017 [cited 2024 Jul 6]. Available from: <https://medlineplus.gov/benefitsofexercise.html>
24. Is it okay to feel lightheaded and dizzy after physical activity? | Go Ask Alice! [Internet]. [cited 2024 Jul 6]. Available from: <https://goaskalice.columbia.edu/answered-questions/it-okay-feel-lightheaded-and-dizzy-after-physical-activity>
25. Byzak A. Why warming up and cooling down is important - Tri-City Medical Center [Internet]. Tri-City Medical Center. 2018 [cited 2024 Jul 6]. Available from: <https://www.tricitymed.org/2016/12/warming-cooling-important/#:~:text=A%20warm%20Dup%20and%20a,helps%20with%20recovery%20from%20exercise.important/#:~:text=A%20warm%20Dup%20and%20a,helps%20with%20recovery%20from%20exercise>
26. Kassam KS, Mendes WB. The effects of measuring emotion: physiological reactions to emotional situations depend on whether someone is asking. *PLoS One*. 2013 Jun 5;8(6):e64959. DOI: <https://doi.org/10.1371/journal.pone.0064959>
27. Brown D. Negative experiences in physical education class and avoidance of exercise [Internet]. Master's Theses. 2014;55. Available from: <https://scholars.fhsu.edu/cgi/viewcontent.cgi?article=1054&context=theses>
28. Stassenko A, Garcea FE, Mahon BZ. What happens to the motor theory of perception when the motor system is damaged? *Lang Cogn*. 2013 Sep 11;5(2–3):225–38. DOI: <https://doi.org/10.1515/langcog-2013-0016>
29. Cespedes-Guevara J, Eerola T. Music communicates affects, not basic emotions – a constructionist account of attribution of emotional meanings to music. *Front Psychol*. 2018 Feb 28;9. DOI: <https://doi.org/10.3389/fpsyg.2018.00215>
30. UWA Online. The science of emotion: exploring the basics of emotional psychology [Internet]. Psychology and Counseling News. 2019 [cited 2024 Jul 6]. Available from: <https://online.uwa.edu/news/emotional-psychology/>
31. Sawicki Z, Görner K. Emotional states of German high school students during physical education classes—gender and age comparison. *J Phys Educ Sport*. 2018;18(4):2338–49. DOI: <https://doi.org/10.7752/jpes.2018.04353>
32. Petiot O, Desbiens JF. Emotional experience of boys and girls and their perception of teacher's interpersonal behaviors: a sociocognitive perspective in physical education context. *J Phys Educ Sport*. 2022;22(1):67–74. DOI: <https://doi.org/10.7752/jpes.2022.01008>
33. Cruz AB, Kim M, Kim HD. Physical education attitude of adolescent students in the Philippines: importance of curriculum and teacher sex and behaviors. *Front Psychol*. 2021 Mar 29;12. DOI: <https://doi.org/10.3389/fpsyg.2021.658599>

34. Grøtan K, Sund ER, Bjerkeset O. Mental health, academic self-efficacy and study progress among college students – The SHoT study, Norway. *Front Psychol*. 2019 Jan 24;10. DOI: <https://doi.org/10.3389/fpsyg.2019.00045>
35. Fedewa AL, Ahn S. The effects of physical activity and physical fitness on children's achievement and cognitive outcomes. *Res Q Exerc Sport*. 2011 Sep;82(3):521–35. DOI: <https://doi.org/10.1080/02701367.2011.10599785>
36. Cunningham PJ. Why even healthy low-income people have greater health risks than higher-income people [Internet]. The Commonwealth Fund. 2018 [cited 2024 Jul 6]. Available from: <https://www.commonwealthfund.org/blog/2018/healthy-low-income-people-greater-health-risks#:~:text=The%20health%20of%20people%20with,developing%20or%20worsening%20over%20time>

CRedit author statement

Teejay D. Panganiban: Conceptualization, Methodology
Michael H. San Miguel :Validation, Visualization
Davidsol M. Mendoza: Investigation
Joeven E. Santos: Project Administration
Francisco V. Aguirre: Supervision
Joseph Lobo: Writing original draft, Writing review and editing.

ORCID:

Teejay D. Panganiban: <https://orcid.org/0009-0008-0229-0458>
Michael H. San Miguel: <https://orcid.org/0009-0005-9071-8773>
Davidsol M. Mendoza: <https://orcid.org/0009-0002-5818-6488>
Joeven E. Santos: <https://orcid.org/0009-0001-8677-233X>
Francisco V. Aguirre: <https://orcid.org/0009-0005-0237-959X>
Joseph Lobo: <https://orcid.org/0000-0002-2553-467X>

Editor: Carlos Herold Junior.
Received on July 06, 2024.
Reviewed on Oct 05, 2024.
Accepted on Nov 11, 2024.

Corresponding author: Teejay D. Panganiban.E-mail: teejaypanganiban18@gmail.com