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# Physical and Social Correlates of Rhythmic and Team Sports

Jeff C. Amaranto \* and Rhodalyn J. Sibayan

Nueva Ecija University of Science and Technology, Philippines

\* For correspondence: [jeffamaranto5@gmail.com](mailto:jeffamaranto5@gmail.com)

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## ABSTRACT

This study was to determine the physical and social correlates of rhythmic and team sports as measured along four domain and their attitudes toward physical education. Specifically, it sought the answer to the following specific problems: (1.) How may the student's performance in Physical Education be described? (2) How may the students' conception of the role of Physical Education in the development of physical fitness be described along the following domain: a) Physical activity and fitness, b) Individual development, c) Motor skills development, and d) Social skills development? (3) What is the attitude of students toward physical fitness? (4) Does sex contribute to differences in the students' performance in physical education? (5) Is there a significant relationship between performance in physical education and their; a) Conceptions about the role of physical education the development of physical fitness and b) Attitude toward physical fitness. The researcher made use of the descriptive method of research to accomplish the study. The questionnaire was used as the major source of the data. It was administered to 395 students of Nueva Ecija University of Science and Technology, Cabanatuan City, Nueva Ecija, Philippines, enrolled in PE 2 (Rhythmic Activities) and PE 4(Team sports) 2<sup>nd</sup> semester S.Y. 2008-2009.

*Keywords:* Physical education, performance, development, fitness, skills

## 1. INTRODUCTION

Physical Education provides knowledge, skills, and behaviors to enable to achieve a degree of autonomy in developing and maintaining physical activity in the lives of individuals [1]. It is unique for having the potential to impact on the physical, social, emotional, and mental health of the students. It promotes the potential for lifelong participation in physical activities through the

development of motor skills and movement competence, health related physical fitness and sport education.

Whiteman (2008) wrote that regular activity, fitness and exercise, are critical for the health and well-being of people of all ages [2]. Research shows that everyone, young or old can benefit from regular exercise, either vigorous or moderate. Even very old adults can improve

mobility and function through physical activity. It should be a priority for everyone. Exercise reduces the risk of heart disease, diabetes, colon cancer, and high blood pressure [3]. People who are active outlive those who are inactive. Lack of exercise can also result in additional medical visits, hospital stays, and medication usage for a range of ailments. Almost everyone benefits from exercise and physical activity, including older folks [4]. You can benefit greatly from exercise regardless of your physical condition or limitations. In reality, studies demonstrate that “taking it easy” is dangerous. Often, inactivity is more to blame than age when older persons lose the ability to perform activities on their own [5].

Exercise helps emotional and mental health in addition to your physical health, according to research. Exercise with a friend to benefit from emotional support as well [6]. So, try to get up and start moving the next time you're feeling sad, apprehensive, or upset.

## 2. METHOD AND MATERIALS

### *Research design*

The questionnaires focus on the development of physical fitness and attitude towards physical education of the respondents. They were researcher-made questionnaires developed based on the literature and study on physical education and health.

The physical fitness development questionnaire has four sections, each with nine (9) questions. The questionnaire is divided into four sections: physical activity and fitness, personal growth, motor skill development, and social skill development. Ten items make up the attitude toward physical fitness questionnaire.

### *Data instrument*

The questionnaire used the 5point Likert scale and the respondents were asked to choose using the scale below.

Strongly disagree	1
Disagree	2
Not sure	3
Agree	4
Strongly Agree	5

To establish the validity of the questionnaire, the researcher consulted some colleagues who have an expertise in making judgment about the focus of the study. The solicited answer is used in modifying and refining the instrument. It was tried out on a small sample, a class of 40 students who were not involved in the study. The results of the trial sample questionnaire were interpreted and analyzed by the researcher, the result was valid and reliable.

## 3. RESULT AND DISCUSSION

Table 1 shows the academic performance of physical education students as they were clustered Two (2) students, or 0.51 percent, received excellent grades in PE; 84 students, or 21.27 percent, received above-average grades; 275 students, or 69.62 percent, received average grades; and 34 students, or 8.61 percent, received fair grades. No student received a grade below 3.0.

Students strongly agreed with the following items: increases the knowledge held by an individual on the benefits of regular participation in physical activities (wm = 4.63); maintains level of physical fitness with health benefits (wm = 4.56); helps physical development (wm = 4.52); develops component of health-related fitness (wm = 4.47); maintains a level of physical fitness consistent with health benefits (wm = 4.47); promotes regular physical activity habits (wm = 4.45); develops health benefits in regular participation in physical activity (wm = 4.43); improves level of

**Table 1.** Level of Performance in Physical Education

Level	Limits	F	Percentage%
Excellent	1.0-1.25	2	0.51
Above average	1.5-1.75	84	21.27
Average	2.0-2.25	275	69.62
Poor	Below 3.0	34	8.61
Total		395	100.00

**Table 2.** Level of Performance in Physical Education

Items	WM	Verbal Description
Increases the knowledge held by an individual on benefits of regular participation in physical activities	4.63	Strongly Agree
Maintains level of physical fitness with health benefits	4.56	Strongly Agree
Helps physical development	4.52	Strongly Agree
Helps physical development	4.52	Strongly Agree
Develops components of health-related fitness	4.47	Strongly Agree
Develops health benefits from regular participation in physical activity	4.22	Strongly Agree
Improves level of health and fitness in students	4.43	Strongly Agree
Promotes level of physical fitness consistent with health benefits	4.30	Strongly Agree
Provides large amount activity time for participation in activities leading to the development of physical fitness of students	4.22	Strongly Agree
<b>Average Weighted Mean</b>	<b>4.45</b>	<b>Strongly Agree</b>

**Note: Legend**

Strongly disagree	1.00-1.79
Disagree	1.80-2.59
Not sure	2.60-3.39
Agree	3.40-4.19
Strongly Agree	4.20-5.00

health and fitness in students (wm = 4.30); promotes level of physical fitness consistent with health benefits and (wm = 4.22); provides large amount of activity time for participation in activities leading to the development of physical fitness of students.

Students strongly agreed with the following items: Increases the knowledge held by an individual on the benefits of regular participation in physical activities (wm=4.63); maintains level of physical fitness with health benefits (wm=4.56); helps physical development (wm=4.52); Develops component of health-related fitness (wm=4.47); maintains a level of physical fitness consistent with health benefits (wm=4.47); promotes levels of physical fitness for health benefits (wm=4.47; promotes regular physical activity habits (wm=4.45); develops health benefits from regular participation in

physical activity (wm=4.43; and provides large amount of activity time (wm=4.22).

PE classes provide activities which students can apply in their daily life to keep themselves physically fit. This conforms to the finding that in physical education classes, students learn how to stay fit, and how their body works [7].

*3.1. Individual Development*

Table 3 shows the weighted mean and verbal description of responses of the participants to the items on the individual development.

Students strongly agreed that PE promotes increased self-esteem of students (wm=4.33); helps in mental development (e.g. understanding, thinking skills)

**Table 3. Conceptions on Individual Development**

<i>Items</i>	<i>WM</i>	<i>Verbal Description</i>
Promotes increased self-esteem in students	4.33	Strongly Agree
Helps in mental development (e.g., understanding thinking skills)	4.27	Strongly Agree
Develops personal growth (e.g., increased self-concept)	4.26	Strongly Agree
Promotes personal growth	4.26	Strongly Agree
Gains confidence in their movement abilities	4.22	Strongly Agree
Develop increased self-confidence or self-efficacy in students	4.12	Agree
Improves the emotional release opportunities and a reduction anxiety levels for individuals	4.11	Agree
Improves the attitude of an individual toward physical activities	4.03	Agree
<b>Average weighted mean</b>	<b>4.20</b>	<b>Strongly Agree</b>

**Note: Legend**

Strongly disagree	1.00-1.79
Disagree	1.80-2.59
Not sure	2.60-3.39
Agree	3.40-4.19
Strongly Agree	4.20-5.00

**Table 4. Conceptions on Motor skills Development**

<i>Items</i>	<i>WM</i>	<i>Verbal Description</i>
Performs at an optimal physical level during sport performance	4.38	Strongly Agree
Provides large amount of activity time for students to practice motor skills	4.36	Strongly Agree
Develops motor skill that can be used to participate in a variety of sports and activities	4.27	Strongly Agree
Develops motor skill proficiency	4.13	Agree
Uses a traditional physical education approach to the curriculum including games, sports, gymnastics, and dance	4.12	Agree
Promotes the development of motor skill for participation in variety of sports and activities	4.11	Agree
Improves motor skill performance needed for participation in a variety of sports and activities	4.09	Agree
Enhances objects handling development	4.06	Agree
Improves the motor skills an individual possesses for sports participation	3.87	Agree
<b>Average weighted mean</b>	<b>4.15</b>	<b>Agree</b>

**Note: Legend**

Strongly disagree	1.00-1.79
Disagree	1.80-2.59
Not sure	2.60-3.39
Agree	3.40-4.19
Strongly Agree	4.20-5.00

(wm=4.27); develops personal growth (e.g. increased self-concept) (wm=4.26); promotes personal growth (wm=4.26); and gains confidence in their movement abilities (wm=4.22).

Physical education develops increased self-confidence or self-efficacy in students (wm=4.12); improves the

emotional release opportunities and a reduction in anxiety levels for individual students (wm=4.11); improves the attitudes of an individual toward physical activities (wm=4.03).

This cognitive domain goals for PE classes include knowledge (students improve their memory),

**Table 5.** Conceptions on Social Development

<i>Items</i>	<i>WM</i>	<i>Verbal Description</i>
Improve social interactions and acceptance between students	4.32	Strongly Agree
Increases social awareness and advocacy	4.25	Strongly Agree
Provides large amount of activity time for students to work together in groups solving problems	4.25	Strongly Agree
Develop positive social interactions among students	4.22	Strongly Agree
Helps in social interactions and acceptance between students	4.18	Agree
Becomes more aware of the social, cultural political and economic conditions of an individual faces	4.17	Agree
Develops social awareness concern	4.10	Agree
Demonstrates responsible personal and social behaviour during participation in physical activities	4.04	Agree
<b>Average weighted mean</b>	<b>4.19</b>	<b>Agree</b>

**Note: Legend**

Strongly disagree	1.00-1.79
Disagree	1.80-2.59
Not sure	2.60-3.39
Agree	3.40-4.19
Strongly Agree	4.20-5.00

**Table 6.** Attitudes towards Physical Fitness

<i>Items</i>	<i>WM</i>	<i>Verbal Description</i>
Physical fitness is necessary for health	<b>4.42</b>	Strongly Agree
Physical fitness is necessary for health	<b>4.42</b>	Strongly Agree
Physical fitness is essential for growth and development	<b>4.42</b>	Strongly Agree
Maintaining physical fitness is important	<b>4.39</b>	Strongly Agree
Participating in physical activities is interesting	<b>4.37</b>	Strongly Agree
Physical fitness is necessary for gaining self-confidence	<b>4.37</b>	Strongly Agree
Physical fitness activities are enjoyable	<b>4.37</b>	Strongly Agree
Physical fitness is necessary for the development of motor skills	<b>4.32</b>	Strongly Agree
Physical fitness enhances social interaction skills	<b>4.32</b>	Strongly Agree
Physical fitness helps in the development of an individual	<b>4.32</b>	Strongly Agree
<b>Average weighted mean</b>	<b>4.37</b>	<b>Strongly Agree</b>

**Note: Legend**

Strongly disagree	1.00-1.79
Disagree	1.80-2.59
Not sure	2.60-3.39
Agree	3.40-4.19
Strongly Agree	4.20-5.00

comprehension (understanding and explaining information), application (using knowledge in real life), analytical skills (breaking down complex information into smaller facts and relating to other information), synthesis (combining elements and creating new information), and evolution (making wise decisions).

Affective development is also an objective of PE through the activities they do in PE classes. Students enhance their self-concept, self-esteem/self-efficacy, and self-confidence. PE classes also reduce anxiety levels and improve emotional release for individual students.

Self-confidence can strengthen their beliefs that they are competent, and are deserving, worthwhile

**Table 7.** Level of Attitudes towards Physical Fitness

<i>Level</i>	<i>Limits</i>	<i>f</i>	<i>%</i>
Very favorable	43-50	230	58.2
Favorable	35-42	157	39.7
Moderately favorable	26-34	7	1.8
Unfavorable	18-25	1	0.3
Very unfavorable	10-17	0	0.0
Total		395	100.00

**Table 8.** T-values of Variables across Gender

<i>Variables</i>	<i>t-value</i>	<i>Significance</i>
Performance in PE	5.59*	.02
Physical activity and fitness	7.96*	.06
Individual development	4.96**	.02
Motor skills development	0.10	.75
Social skills development	4.00*	.04
Attitude toward physical activities	8.33***	.00

**Note: Legend**

\*\*Significant at .01 level

\*Significant at .05 level

**Table 9.** Correlation Matrix

<i>Variables</i>	<i>Physical activity and fitness</i>	<i>Individual development</i>	<i>Motor skills development</i>	<i>Social skills development</i>	<i>Attitude</i>
Performance in PE	-.171**	-.196**	-.143**	-.214**	-.206**
Physical activity and fitness		.6173**	.616**	.615**	.619**
Individual development			.657**	.715**	.673**
Motor skills development				.672**	.557**
Social skills development					.715**
Attitude toward physical activities					

**Note: Legend**

\*Significant at .05 level

individuals [8]. Their belief in themselves as a person is enhanced by group activities, and sports competitions.

PE provides them the avenue to relieve emotions and to learn coping skills so that they can face problems and cope with it rather than avoid it. Students who cope rather than avoid are likely to face problems realistically, honestly, and non-defensively. They produce favorable thoughts about themselves that raises self-esteem [9].

### 3.2. Motor Skill Development

Students strongly agreed PE enables them to perform at an optimal physical level during sport performance (wm=4.38) and provide large amount of activity time for students to practice motor skills, (wm=4.36) and Develops motor skill that can be used to participate in a variety of sports and activities (wm=4.09).

They agreed with the following statements about PE: develops motor skill proficiency (wm=4.13); Promotes the development of motor skill for participation in a variety of sports and activities (wm=4.11); Uses a traditional physical education approach to the curriculum including games, sports, gymnastics, and dance (wm=4.12); Improves motor skill performance needed for participation in a variety of sports and activities (wm=4.09); Enhances objects handling development (wm=4.06); and Improves the motor skills an individual possesses for sports participation (wm=3.87).

Students strongly believe that PE develops their motor skill proficiency. Their participation in various activities like sports, games, dance, and gymnastics develop their physical agility that allows them to perform well. Playing volleyball or basketball, for example, develops their ability to handle balls, and how to play it with their teammates. Winning or losing a game or competition also teaches them to develop into mature individuals.

They practice basic motor skills such as running, hopping, jumping, skipping, catching, throwing, kicking, rolling, balancing, twisting and turning and are introduced to a more complex movements such as leaping, catching, dribbling, and striking balls.

### 3.3. Social Development

The students strongly agreed that PE improves social interactions and acceptance between students (wm=4.32); Increases social awareness and advocacy (wm=4.25); Provides large amount of activity time for students to work together in groups solving problems (wm=4.25) and develop positive social interactions among students (wm=4.22).

They agreed that PE develops social awareness and concern (wm=4.13); Promotes concern over gender equity and equal opportunities for all students to

participate (wm=4.17); Helps in social interactions and acceptance between students (wm=4.18); Becomes more aware of the social, cultural political and economic conditions of an individual faces (wm=4.17); Demonstrates responsible personal and social behavior during participation in physical activities (wm=4.04);

Students speak highly of the role of PE in their social development. One of the objectives of PE, which is part of the general curriculum in the tertiary level, is to develop the students' interpersonal relationships. Student's ability to interact with other people is honed through their participation.

They realize that in our highly interconnected and interdependent world, they must build positive social relationships, to work and learn in teams, and to manage and resolve conflicts.

### 3.4. Attitudes toward physical fitness

The weighted mean and verbal description of responses to the items on attitude toward physical fitness are shown in Table 6.

Students strongly agreed to all the 10 items about PE to wit: Physical fitness enhances self-esteem (wm=4.42); Physical fitness is necessary for health (wm=4.42); Physical fitness is essential for growth and development (wm=4.42); Maintaining physical fitness is important (wm=4.39); Participating in physical activities is interesting (wm=4.37); Physical fitness activities are enjoyable (wm=4.37); Physical fitness is necessary for gaining self-confidence (wm=4.37); Physical fitness is necessary for the development of motor skills (wm=4.32); Physical fitness enhances social interaction skills (wm=4.32) and Physical fitness helps in the development of an individual (wm=4.32).

Attitudes toward physical fitness closely indicate the role of physical education in their development. This

finding concerns with the results obtained in their conception about physical education as measured along the four domains- physical activity and fitness, individual development, motor skills development, and social development.

It is also noteworthy that the students consider physical fitness as necessary for developing their self-esteem, self-confidence, and social interaction skills. Participating in activities that develop their physical fitness means joining games, sports, dancing, and other activities that includes competition and interaction with others enhances personal attributes like team spirit, cooperativeness, self-esteem, self-efficacy, and self-confidence. The objectives of PE are successfully attained based on the students' attributes toward physical fitness and their conceptions about the role of PE in the development of physical fitness.

*Table 7* gives the distribution of students as to level of attitude towards Physical Fitness.

There were 230 or 58.2 percent of students with very favorable attitudes toward physical fitness; 157 or 39.7 percent had favorable attitude; 7 or 1.8 percent had moderately favorable attitude, and one or 0.3 percent had an unfavorable attitude. A great majority of the students have favorable attitudes toward physical fitness. Almost all agree that physical fitness is important and necessary for health, development of self-esteem, self-confidence and social skills.

PE teachers are successful in their goal to impress in their students the value of physical fitness in their development as an individual.

### *3.5. Comparison of PE performance across Gender*

The study also compared the performance in Physical Education, conceptions and attitude towards physical fitness across gender. Results of the t-test are shown in

The t-value obtained for the test of differences for performance in PE across gender was 5.59 which is significant at .05 level. The alternative hypothesis was accepted that there was significant difference in the students' performance in PE. The mean grade of 2.15 in PE of the female respondents was found to be significantly lower than the grades of the male which is 2.06. This finding suggests gender influences students in students, performance in PE.

The alternative hypothesis that students' conception about the role of PE in the development of physical fitness as measured along the physical activity and fitness dimension as to sex was accepted. The t-value obtained was 7.96 which was significant. This result implies that male and female varied in their beliefs about the role of PE in the development of physical fitness.

The t-value for individual development as to gender was 4.96 which is significant. The alternative hypothesis was that there exist differences in the conception of male and female students about the role of PE in their personal growth, development of their self-esteem, self-confidence, self-efficacy and emotional maturity.

Motor skills development domain, the t-values obtained was .75 which is not significant. The alternative hypothesis that the students differ in their conceptions about the role of PE in the motor skills development of students as to gender was rejected. The students regardless of gender have the same conceptions about the role of PE plays in their motor skills development.

There was a significant difference established in the students' conception on the role of PE in their social skills development across gender. The observed t-value was 4.004 which is significant. The alternative hypothesis was accepted. Male and female students varied in their beliefs about what PE can do to develop their social skills. Participating in activities like dancing,



rhythmic exercise, game, and sports help improve the student's skills, but belief on its role in the development of interpersonal skills differed among males and females.

The t-value for the hypothesis that male and female students differ in their attitude toward physical fitness was 8.33 which is significant. The alternative hypothesis was accepted. Gender contributes to differences in students' attitude about the importance of physical fitness.

Both male and female students had favorable attitudes toward physical fitness, but they varied in their level of attitude, wherein the female tend to have higher attitude rating than male.

### *3.6. Relationships between Performance in PE and Conceptions on Development and Attitude of Physical Fitness*

The study also tried to establish correlation among the variables and academic performance in PE. Table 9 shows the correlation matrix.

The coefficients of correlations behavior performance in PE and the students' conception about the role of PE in the development of physical fitness in terms of physical activity and fitness ( $r=-.171$ ), individual development ( $r=-.196$ ), and motor skills development ( $r=-.214$ ), are all significant. The alternative hypothesis was accepted.

The findings revealed negative significant relationship between grade in PE and the four domains of physical fitness. This suggests that the students who believe that PE has a significant role in the development of their physical fitness along the four domains performed better in PE. It should be noted that the lower numerical value of grades in NEUST means better academic performance.

The correlation coefficient between grade in PE and attitude towards physical fitness is  $-.206$ . The alternative hypothesis was accepted. There exists a negative significant correlation between the two variables, students with higher grade in PE tend to have more favorable attitude toward physical fitness

## **4. CONCLUSION**

Results of interviews of students who obtained excellent and above average grades resulted that they are motivated to perform well in PE not only to get good grades but because they are aware of the benefits they can get from PE. Through the activities provided in PE classes, students learn that physical fitness has health benefits. Students acquire knowledge, skills and behavior that enable them to maintain a good health, a healthy lifestyle, and active engagement in physical activities. PE provides them the avenue to relieve emotions and to learn coping skills so that they can face problems and cope with it rather than avoid it. Students who cope rather than avoid are likely to face problems realistically, honestly, and non-defensively. PE teachers are successful in their goal to impress in their students the value of physical fitness in their development as an individual.

## **5. ACKNOWLEDGEMENT**

NA

## **6. CONFLICT OF INTEREST**

The authors have declared that there is no conflict of interest.

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NA

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