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Project HOPE (Health Optimizing Physical Activities and Exercises): A Basis for Fitness Program Among Bachelor of Physical Education Students of Ifugao State University-Potia Campus

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ABSTRACT

This study assessed the effectiveness of Project HOPE (Health Optimizing Physical Activities and Exercises) as a basis for a fitness program among Bachelor of Physical Education students of Ifugao State University- Potia Campus. The study employed a quasi-experimental one-group pretest-posttest design and involved 90 students through total enumeration. The participants completed structured physical activities and exercises for one hour per day, Monday to Friday, over 20 days. Fitness was assessed using an individual scorecard adapted from the Revised Physical Fitness Test Manual under DepEd Order No. 34, s. 2019. Mean, standard deviation, paired-samples t-test, and Cohen's d were used in the analysis. The findings showed statistically significant pretest-posttest differences across all reported health- and skill-related fitness measures ($p <= .014$). Moderate to very large effects were observed, with the strongest effects recorded for standing long jump power ($d = 2.63$), right-side stork balance ($d = 2.23$), and stick-drop reaction time ($d = 2.06$). Strength, flexibility, coordination, agility, speed, balance, and reaction time improved after the intervention, while body mass index remained within the normal classification. The results indicate that Project HOPE is a practical structured exercise program for improving the physical fitness of Bachelor of Physical Education students and may be sustained with greater emphasis on muscular strength and core endurance.

Keywords: *Project HOPE, physical fitness, health-related fitness, skill-related fitness, physical activity, Bachelor of Physical Education*

INTRODUCTION

Physical fitness is an essential outcome of physical education because it supports health, movement competence, and the capacity to engage in regular physical activity. Caspersen et al. (1985) distinguished physical activity from exercise and described physical fitness as a set of attributes that may be health-related or skill-related. This distinction is important in physical education programs because students require not only opportunities to move, but also systematic activities that develop cardiovascular endurance, strength, flexibility, coordination, agility, speed, power, balance, and reaction time.

The importance of physical education is also recognized in the Philippine context. Article XIV, Section 19 of the 1987 Philippine Constitution directs educational institutions to undertake regular sports activities and physical education programs. In addition, the Department of Education issued the Revised Physical Fitness Test Manual through DepEd Order No. 34, s. 2019 to support the assessment of health- and skill-related fitness

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components (Department of Education, 2019). Although the instrument was developed for basic education, its fitness components provide a practical reference for monitoring physical performance in educational settings.

Physical inactivity and inadequate fitness remain important concerns among young adults. Fitness is not limited to athletic ability; it is a marker of health and functional capacity. Ortega et al. (2008) emphasized that physical fitness in childhood and adolescence is a powerful marker of health, while Hallal et al. (2006) showed that physical activity is associated with important health outcomes among young people. These findings support the need for structured and sustained exercise experiences during formal education.

Bachelor of Physical Education students are expected to develop fitness competencies that are relevant to their future professional responsibilities. At Ifugao State University- Potia Campus, the assessment of students' fitness levels identified areas that required further improvement, particularly muscular strength and core stability. This situation provided the basis for Project HOPE, or Health Optimizing Physical Activities and Exercises, a 20-day structured fitness intervention designed to improve health- and skill-related fitness components.

The study assessed the participants' fitness levels before and after the intervention, determined whether significant changes occurred, evaluated the magnitude of the effects, and identified priority areas for an enhanced fitness program. By examining both statistical significance and effect size, the study provides a school-based basis for sustaining a more responsive fitness program for Bachelor of Physical Education students.

Literature Review

Physical Fitness and Physical Education

Physical fitness includes health-related and skill-related attributes that enable individuals to perform daily tasks and engage in physical activity effectively (Caspersen et al., 1985). Health-related fitness commonly includes body composition, cardiovascular endurance, muscular strength and endurance, and flexibility. Skill-related fitness includes coordination, agility, speed, power, balance, and reaction time. Together, these attributes provide a comprehensive view of a learner's physical capacity.

Physical education programs should provide purposeful movement experiences rather than isolated activity sessions. The value of structured programs lies in their capacity to develop fitness, improve movement skills, and support positive engagement with exercise. Demetriou and Höner (2012), in a systematic review of physical activity interventions in school settings, found that interventions can influence health and fitness, physical activity, and psychological determinants. Although the present study involved university students, the same principle applies: physical activity programs become more meaningful when they are systematic, monitored, and connected with measurable outcomes.

Structured Exercise Programs and Student Fitness

Regular participation in physical activity is necessary for maintaining and improving fitness. Kaur et al. (2020) showed that disruptions in routine can reduce exercise motivation, while home-based exercise may help individuals manage fitness-related and psychological challenges. This highlights the importance of establishing structured opportunities that make exercise consistent and manageable.

Pesce et al. (2013) found that a multi-sports physical education approach contributed to improvements in fitness and motor competence. The findings suggest that diversified movement experiences may be valuable when students need to improve several fitness components at the same time. Project HOPE followed this general direction by combining activities intended to improve both health-related and skill-related fitness components.

Affective-Reflective Theory of Physical Inactivity and Exercise

The study was anchored on the Affective-Reflective Theory (ART) of physical inactivity and exercise developed by Brand and Ekkekakis (2018). ART is a dual-process framework that explains how exercise-related cues may trigger automatic affective responses and reflective evaluations. These processes influence whether a person remains inactive or initiates exercise behavior.

ART is relevant to Project HOPE because a regular exercise schedule provides repeated opportunities for participation. Through structured daily activities, students can experience exercise as a manageable routine rather

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than as an occasional requirement. The intervention therefore supports both measurable fitness improvement and the development of a more consistent exercise pattern.

METHODS

Research Design

The study employed a quasi-experimental one-group pretest-posttest design. This design was used to determine whether participants' fitness levels changed after the implementation of Project HOPE. A pretest was administered before the intervention, followed by the 20-day program and a posttest using the same fitness measures. Quasi-experimental research is appropriate when an intervention is introduced and its effects are examined without random assignment to comparison groups (Cook & Campbell, 1979).

Research Locale

The study was conducted at Ifugao State University- Potia Campus. The campus provided the setting for the implementation of Project HOPE and the administration of the fitness assessments among students enrolled in the Bachelor of Physical Education program during Academic Year 2024-2025.

Participants and Sampling Technique

The participants were 90 Bachelor of Physical Education students. Total enumeration was used because all accessible students enrolled in the program were included in the assessment and intervention. This approach allowed the researcher to describe the fitness outcomes of the full available group.

Research Instrument

The primary instrument was an individual fitness scorecard adapted from the Revised Physical Fitness Test Manual under DepEd Order No. 34, s. 2019 (Department of Education, 2019). The scorecard covered health-related fitness measures, namely body mass index, cardiovascular endurance, strength, and flexibility, and skill-related fitness measures, namely coordination, agility, speed, power, balance, and reaction time.

Table 1. *Physical Fitness Measures Used in the Study*

Fitness Domain	Component	Assessment Activity
Health-related	Body composition	Body mass index (BMI)
Health-related	Cardiovascular endurance	3-minute step test heart-rate measures
Health-related	Strength	Push-up and basic plank
Health-related	Flexibility	Zipper test and sit-and-reach test
Skill-related	Coordination	Juggling
Skill-related	Agility	Hexagon test
Skill-related	Speed	40-meter run
Skill-related	Power	Standing long jump
Skill-related	Balance	Stork balance stand
Skill-related	Reaction time	Stick-drop test

Data Gathering Procedure

The researcher secured permission from the college dean before conducting the study and presented the purpose of the research to the dean and program chairperson. The participants completed the pretest physical fitness assessment. After the baseline assessment, Project HOPE was implemented for one hour per day, from 7:00 a.m. to 8:00 a.m., Monday to Friday, over 20 days. The same fitness assessment procedures were used during the posttest. Accomplished score sheets were collected, organized, and prepared for statistical analysis.

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Data Analysis

Mean and standard deviation were used to summarize pretest and posttest scores. A paired-samples t-test was used to determine whether significant differences existed between the pretest and posttest scores. The level of significance was set at .05. Cohen's d was used to describe the magnitude of the effects. The results were interpreted using the reported effect sizes, where higher absolute values indicated stronger intervention effects.

Ethical Consideration

Permission to conduct the study was secured from the appropriate college officials. The objectives and procedures were explained before the implementation of the assessments and activities. Individual fitness score sheets were treated as research records, and the findings were reported in aggregate form to protect the participants' privacy.

RESULTS AND DISCUSSION

Pretest and Posttest Fitness Outcomes

Table 2 presents the pretest and posttest outcomes of Project HOPE. Statistically significant differences were reported for all measured health- and skill-related fitness components. The reported p-values ranged from .014 to .001, indicating that the observed changes met the .05 level of significance. The inferential results are presented using the values reported in the source manuscript.

Table 2. *Pretest-Posttest Fitness Outcomes After the Implementation of Project HOPE*

Fitness Measure	Pretest M (SD)	Posttest M (SD)	t	p	Cohen's d
BMI	18.74 (3.43)	20.34 (2.40)	3.55	.001	0.60
Step-test heart rate: before	119.66 (23.61)	125.83 (25.72)	2.58	.014	0.44
Step-test heart rate: after	72.91 (24.04)	81.66 (19.04)	5.81	.001	0.98
Push-up	6.20 (3.34)	11.63 (4.56)	10.66	.001	1.80
Basic plank	3.34 (1.08)	5.54 (1.44)	6.83	.001	1.15
Zipper test: right	3.66 (0.97)	4.40 (0.60)	4.96	.001	0.84
Zipper test: left	3.31 (0.96)	4.29 (0.62)	5.84	.001	0.99
Sit-and-reach test	59.89 (19.68)	76.74 (12.54)	9.75	.001	1.65
Juggling	27.31 (3.39)	34.00 (4.54)	9.24	.001	1.56
Hexagon test	8.60 (1.65)	5.80 (0.83)	11.58	.001	1.96
40-meter run	5.66 (0.94)	4.46 (0.61)	8.18	.001	1.38
Standing long jump	127.37 (10.72)	167.03 (12.55)	15.55	.001	2.63
Stork balance: left	127.29 (13.91)	165.23 (14.74)	11.12	.001	1.88
Stork balance: right	125.51 (13.44)	166.34 (12.27)	13.18	.001	2.23
Stick-drop reaction time	8.66 (1.94)	5.66 (1.03)	12.20	.001	2.06

The BMI mean increased from 18.74 to 20.34. Based on the descriptive interpretation in the source manuscript, the average BMI remained within the normal classification. This indicates a measurable shift in body composition without moving the group beyond the normal range. The cardiovascular measures also changed significantly, with a small-to-moderate effect for the first step-test heart-rate measure (d = 0.44) and a large effect for the second measure (d = 0.98).

Muscular fitness improved substantially. Push-up performance increased from 6.20 to 11.63, with a large effect (d = 1.80), while basic plank performance increased from 3.34 to 5.54, with a large effect (d = 1.15). These results are important because the baseline assessment identified strength and core endurance as areas requiring improvement. The improvement after the intervention suggests that repeated structured exercise can address these weaknesses, although continued strengthening activities remain necessary.

Flexibility also improved. The right and left zipper-test measures recorded effect sizes of 0.84 and 0.99, respectively, while the sit-and-reach test produced a large effect of 1.65. The results indicate increased mobility

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and flexibility after the intervention. These findings are consistent with the principle that structured physical activity programs should address multiple fitness dimensions rather than focus on only one form of exercise.

The skill-related fitness outcomes showed substantial improvement. Juggling increased from 27.31 to 34.00 (d = 1.56). Faster performance was observed in the hexagon test and 40-meter run because the mean completion times decreased from 8.60 to 5.80 and from 5.66 to 4.46, respectively. The standing long jump demonstrated the strongest effect in the study (d = 2.63), indicating considerable improvement in explosive power. Balance also improved markedly, with very large effects on the left and right stork-balance measures (d = 1.88 and d = 2.23). Stick-drop reaction time likewise improved because the mean decreased from 8.66 to 5.66, with a very large effect (d = 2.06).

Overall, the pattern of results supports the use of a structured, multi-component exercise program. Demetriou and Höner (2012) noted that physical activity interventions can influence fitness outcomes, while Pesce et al. (2013) showed that diversified physical education experiences can improve physical fitness and motor competence. In the present study, Project HOPE produced meaningful changes across health- and skill-related fitness components and provided a practical basis for a sustained fitness program for Bachelor of Physical Education students.

Basis for an Enhanced Fitness Program

The results suggest that Project HOPE may be sustained as a campus-based fitness program while giving greater attention to muscular strength and core endurance. Table 3 summarizes the recommended program priorities based on the observed fitness outcomes.

Table 3. *Recommended Priorities for the Sustained Project HOPE Fitness Program*

Priority Area	Program Emphasis	Rationale Based on Findings
Muscular strength and core endurance	Progressive push-up, plank, and core-stability activities	Strength improved substantially but remained a continuing priority.
Cardiovascular endurance	Regular aerobic and step-based conditioning	Significant cardiovascular changes support continued aerobic training.
Flexibility	Dynamic warm-up, zipper-test mobility, and stretching activities	Flexibility measures improved and should be maintained.
Power, speed, and agility	Standing long jump drills, short runs, and agility circuits	Large effects indicate that these activities are responsive to structured training.
Balance, coordination, and reaction time	Juggling, stork-balance activities, and reaction-time drills	Very large effects support continued neuromuscular and motor-skill activities.
Monitoring	Periodic pretest-posttest assessment using the same scorecard	Regular assessment can guide program adjustment and learner support.

CONCLUSION

Project HOPE was effective in improving the physical fitness outcomes of Bachelor of Physical Education students at Ifugao State University- Potia Campus. The 20-day structured intervention produced statistically significant differences across all reported health- and skill-related fitness measures. Moderate to very large effect sizes were observed, with the strongest improvements in power, balance, and reaction time. The participants also improved in strength, flexibility, coordination, agility, and speed. Although muscular strength and core endurance improved, these areas should remain priorities in succeeding implementations. The findings demonstrate that a structured and monitored exercise program can provide a practical basis for improving the overall physical fitness of Bachelor of Physical Education students.

Recommendations

- Project HOPE should be sustained as a campus-based fitness program for Bachelor of Physical Education students, with regular implementation schedules and periodic monitoring.
- The program should provide additional progressive activities for muscular strength and core endurance, particularly push-up, plank, and related functional exercises.
- Physical education instructors should use fitness assessment results to adjust exercise activities according to the needs of the students and to provide appropriate feedback on their progress.
- University and college administrators should support the implementation of Project HOPE through scheduling, suitable activity spaces, and basic fitness-monitoring resources.
- Future researchers should validate the statistical outputs using the original dataset, examine the longer-term effects of Project HOPE, and consider comparison groups or follow-up assessments to strengthen the evidence for sustained implementation.

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