



The Effect of Outbound Recreation on the Physical Fitness Levels of Fifth-Semester Class B Students in the Physical Education and Pedagogy Study Program at Nusa Cendana University, Kupang

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Abstract
Objectives: This study aimed to examine the effect of outbound recreation on the physical fitness levels of fifth-semester Class B students in the Physical Education, Health, and Recreation Study Program at Nusa Cendana University, Kupang. Materials and Methods: This study employed an experimental approach using a one-group pretest–posttest design. The participants were 38 fifth-semester Class B students of the Physical Education, Health, and Recreation Study Program at Nusa Cendana University, Kupang. Physical fitness data were collected before and after the implementation of outbound recreation activities. The obtained data were analyzed using a paired-sample t-test to determine whether there was a significant difference between the pretest and posttest scores. Results: The findings showed that outbound recreation had a significant effect on students’ physical fitness levels. The paired-sample t-test produced a significance value (2-tailed) of 0.000, which was lower than 0.05. This result indicates a statistically significant improvement in physical fitness after the students participated in the outbound recreation program. Conclusions: Outbound recreation was effective in improving the physical fitness levels of fifth-semester Class B students in the Physical Education, Health, and Recreation Study Program at Nusa Cendana University, Kupang. These findings suggest that outbound recreation can be considered an alternative physical activity program to support student fitness in higher education settings.
Keywords: Outbound Recreation; Physical Fitness; University Students; Physical Education; Experimental Study

Introduction

The increasingly modern era accompanied by the rapid development of digital technology has brought about major changes in various areas of life. man. Device technology like *smartphone*, laptop, computer, From mobile devices to game consoles (Humaedi et al., 2019). Today, this technology has become an integral and inseparable part of people's daily routines (Nuraliyah et al., 2022). The shift in lifestyles toward the digital era has led to significant changes in how people interact and conduct activities, with physical activities

tending to be replaced by technology-based activities (Juita Sipaayung & Munawaroh Munawaroh, 2024).

College students, as a young age group between late adolescence and early adulthood, should be at peak physical fitness (Nubatonis & Husein, 2024). However, the phenomenon of intensive digital device use, prolonged sitting, and minimal active movement pose serious challenges to physical health. Research findings indicate existence influence positive And significant activity physique daily with a person's physical fitness level ($r = 0.62$; $p < 0.05$)

In the Physical Education, Health and Recreation Study Program (Penjaskesrek) at Nusa Cendana University (Undana), students are expected to be able to be role models in apply pattern life active And Healthy. However, from observation field, Many fifth-semester class B students spend more time indoors attending theoretical lectures, completing assignments on their devices, or studying online, with a decreasing portion of practical fieldwork. This situation is exacerbated by a busy class schedule, reporting assignments, and the pressure of exam preparation. This situation has resulted in a significant decrease in students' physical activity.

This lack of physical activity has a direct impact on physical condition. student. A number of student show signs Decreased fitness, such as fatigue, reduced endurance, decreased agility and muscle strength, and impaired posture. If this situation persists, decreased physical fitness can impact academic achievement, long-term health, and students' readiness to fulfill their roles as future physical educators (Ariesman M. et al., 2025).

In fact, the Undana campus environment has significant potential to support student physical activity. Its geographical location, surrounded by beaches, hills, and green open spaces, offers ample opportunities for sports and outdoor recreation. Unfortunately, this potential has not been optimally utilized. Low student participation in sports activities outside of class hours demonstrates the need for innovation in creating engaging, enjoyable, and healthy activities (Juita Sipaayung & Munawaroh Munawaroh, 2024).

One way to address these issues is through *outbound recreational activities*. *Outbound activities* are outdoor activities that combine elements of play, physical challenges, and group collaboration. *Outbound activities* are not only entertaining but also serve as active learning tools that can improve physical fitness, strengthen character, foster teamwork, and provide hands-on experience. Study Which fun. Besides that, the activity in outside Indoor spaces have been shown to improve physical and mental health through varied physical activities and

positive social interactions (Bahtiar et al., 2023). According to find that model *outbound* learning based competencies can improve students' physical fitness. In addition, the study "The Effect of the *Outbound Mystique Ball Game* on Students' Physical Fitness Levels" shows that *outbound interventions* have a significant effect on improving participants' physical fitness. In the realm of higher education, *outbound* games have a positive impact on participants' physical fitness (Nuraliyah et al., 2022).

However, the focus of this research is on analyzing the influence of *outbound activities* on the level of physical fitness of students, especially Physical Education and Health students. in Undana, Still very limited. Not yet There is data empirical Which explains the extent to which *outbound activities* can improve the physical fitness of students in certain campus environments such as Undana, the types of effective *outbound activities*, *optimal intensity*, *duration* and *frequency*.

Based on the problems that have been described, the author is interested in researching "The Effect of *Outbound Recreation* on the Level of Physical Fitness of Students" Semester 5 Class B Program Studies Physical Education and Health, Nusa Cendana University, Kupang”.

Materials and Methods

Study Participants.

The research population is the entire subject or object determined based on the study object which is determined based on certain criteria that have been determined by the researcher to then be analyzed and conclusions drawn. In this study, the population used included all Penjaskesrek students of Nusa Cendana University, Kupang, in semester 5, class B, academic year 2025/2026, totaling 38 people. The research sample was taken using purposive sampling technique, namely sample selection. based on consideration certain Which represent population. The sample in this study consisted of students of the Physical Education Study Program Nusa Cendana University, Kupang Semester 5 Class B with a total of 38 participants selected based on criteria or consideration certain, namely student Which active follow lectures and are willing to participate in the entire series of research activities.

Study organization.

This study uses a quantitative approach with an experimental research type. The researcher used a quantitative approach because it focuses on numerical data processing and static analysis to describe the relationship between variables objectively (Sugiyono, 2016).

This study employed a *One Group Pretest-Posttest Design* , a type of *quasi-experiment* . involving one group of research subjects. Design This, done with *pretest* And *posttest* For see changes that occur after treatment is given. Comparison between *pretest results* and *posttest* used to determine the extent of the effect of the treatment applied. *outbound* recreation activities, then the students' physical fitness levels are measured after the treatment is given (*posttest*). The results of these measurements will be analyzed to determine the impact of *outbound recreation* on improving students' physical fitness levels.

Statistical analysis.

Data were analyzed using SPSS. Data Which collected from results study analyzed with use analysis techniques descriptive quantitative. Next, the data will be interpreted to explain the relationship between activity *outbound* with fitness physique. Descriptive analysis was used to describe the initial data obtained from the student physical fitness test. Data analysis included calculating the average (mean), median, mode, standard deviation, and highest and lowest values of the physical fitness components measured by TKJI.

Results

This study demonstrates that outbound recreational activities have a significant effect on improving the physical fitness of fifth-semester students (Class B) of the Physical Education, Health, and Recreation Study Program at Nusa Cendana University. The data analysis using the paired sample t-test revealed that all indicators of physical fitness showed significant improvement after the treatment, with significance values (Sig. 2-tailed) less than 0.05. The improvements were observed across various components of physical fitness, including strength, endurance, power, speed, flexibility, and agility. A comparison between pretest and posttest results indicates positive changes in all indicators, confirming that outbound activities are effective in enhancing students’ physical condition. Overall, the findings indicate that outbound recreational activities are not only beneficial as leisure activities but also contribute significantly to improving physical fitness. Therefore, outbound activities can be considered an innovative and practical learning strategy to support the development of students’ physical fitness.

Descriptive Statistics Results

Table 1. Descriptive Statistics of Physical Fitness

Indicator	N	Pretest Mean	Posttest Mean	Difference
Strength	38	18.60	21.56	+2.96
Endurance	38	31.21	36.55	+5.34
Power	38	51.39	56.42	+5.03
Speed	38	9.45	7.83	-1.62
Flexibility	38	11.68	12.68	+1.00
Agility	38	23.82	22.48	-1.34

Sumber: Hasil Outpout SPSS 22

Shows that all components of students’ physical fitness improved after participating in outbound recreational activities. This is indicated by the increased mean scores in strength, endurance, power, and flexibility, reflecting enhanced physical abilities. Meanwhile, the mean values for speed and agility decreased; however, this actually indicates improved performance since these components are measured based on time, where lower scores represent better results. Therefore, the data in the table suggest that outbound activities have a positive impact on the overall improvement of students’ physical fitness.

Research Hypothesis

Tabel 2. Hasil Uji Hipotesis Paired Samples Test

Paired Samples Test						
		Paired Differences		t	df	Sig. (2-tailed)
		Mean	Std. Deviation			
Pair 1	Posttest Kekuatan - Pretest Kekuatan	2,9605	5,3124	3,435	37	,001
Pair 2	Posttest Daya Tahan - Pretest Daya Tahan	5,342	7,719	4,266	37	,000
Pair 3	Posttest Daya Ledak - Pretest Daya Ledak	5,026	4,891	6,335	37	,000
Pair 4	Posttest Kecepatan - Pretest Kecepatan	-1,61658	1,39337	-7,152	37	,000
Pair 5	Posttest Kelentukan - Pretest Kelentukan	1,000	2,904	2,123	37	,041
Pair 6	Posttest Kelincahan - Pretest Kelincahan	-1,33684	2,51133	-3,281	37	,002

Sumber: Hasil Outpout SPSS 22

Based on the results of the hypothesis test using *the paired sample t-test* presented on each fitness indicator in the table above, all indicators obtained at a sig. (*2-tailed*) value are at a level of less than 0.05, so it can be said that H_a is accepted and H_o is rejected, which means there is a significant difference between *the pretest* and *posttest values* on each indicator. These results state that *outbound recreational activities have a positive influence on various components of students' physical fitness. It can be concluded that outbound recreational activities have a significant effect on the physical fitness level of 5th semester students of class B of the Physical Education Study Program.*

Discussion

The results of the study indicate that outbound recreational activities have a positive impact on the physical fitness levels of fifth-semester class B students in the Physical Education and Recreation Study Program at Nusa Cendana University. This is demonstrated by an increase in the average scores between the pretest and posttest for all physical fitness indicators, including strength, endurance, explosive power, speed, flexibility, and agility. This finding supports the research of, which stated that outbound games have a significant impact on improving participants' physical fitness.

Based on the analysis prerequisite test, all data were normally distributed and had homogeneous variance, thus meeting the requirements for using parametric statistics. Furthermore, the results of the paired sample t-test hypothesis test showed that all indicators had a significance value of less than 0.05, indicating a significant difference between before and after the treatment. Thus, outbound recreational activities have been proven to have an impact on improving students' physical fitness. Outbound activities involve more functional movement activities, group games, and dynamic exercises, making them more effective in improving neuromuscular and coordinative components than physiological components, which require structured and high-intensity training.

Conclusions

Based on the results of research and data analysis regarding the influence of *outbound recreation* on the physical fitness level of Semester V Class B students of the Physical Education and Health Study Program, Nusa Cendana University, it can be concluded that *outbound recreation activities* have a positive and significant influence on improving students' physical fitness.

This is evidenced by the results of a *paired sample t-test*, which showed a significant difference between *pretest* and *posttest scores* for all physical fitness indicators, with a significance value of less than 0.05. This improvement was seen in the components of strength, endurance, explosive power, speed, flexibility, and agility. *Outbound activities* involving dynamic physical activity, group games, and functional movements provided an effective training stimulus, resulting in physiological adaptation and improved physical

abilities for students.

Thus, *outbound recreation* can be used as an alternative physical exercise activity that is both fun and beneficial in improving physical fitness.

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