



DIFFERENCES IN STUDENT NURSING KNOWLEDGE LEVELS ABOUT HEALTH TOURISM USING PROJECT-BASED LEARNING METHODS AND CONVENTIONAL STRATEGIES

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ABSTRACT

Healthcare workers, particularly nursing students, need to understand health tourism as a key initial asset in preparing for health tourism implementation in Bali. A deeper understanding of health tourism, including its definition, types of activities, the advantages and benefits of health tourism, and the basic skills required by nurses, is crucial before engaging in healthcare services that support health tourism. This research aims to implement and develop a project-based learning lecture strategy in the health tourism course regarding Health Tourism. The research design used a True Experimental Design with a Pretest-Posttest Control Group Design. The sample size was 240 students selected through multistage random sampling (60 students per class). Data were collected using a pretest and posttest to assess health tourism knowledge. The questionnaire used showed that all items had a Corrected Item-Total Correlation value of 0.432–0.811, and a Cronbach's Alpha value of 0.892. The data analysis technique used in this study was a t-test, a comparative study technique. The pretest results from the experimental and control groups revealed that students' initial knowledge of health concepts in public places and tourism was quite low. The posttest results for both the experimental and control groups indicated that their knowledge had significantly improved. The Project-Based Learning method provides better knowledge enhancement than conventional learning strategies because it encourages students to actively engage in the learning process, develop critical thinking skills, solve problems, collaborate in teams, and integrate theoretical concepts with real-life situations in the health tourism field.

Keywords: conventional strategy; health tourism; knowledge; nurses; project-based learning

INTRODUCTION

International tourism has steadily increased annually over the past few decades. This upward trend has also been seen in Indonesia, particularly Bali, one of the most popular tourist destinations in the Asia Pacific. In 2015, 10.2 million tourists visited Indonesia, increasing to 11.5 million in 2016 (Kurniasari, Widyanthini, Mulyawan, & Wirawan, 2021). A total of 552,403 foreign tourists visited Bali in 2019, a 10.74 percent increase compared to 2018 (BPS, 2020). The phenomenon of health tourism has emerged as a crucial aspect that significantly combines efforts to achieve health and happiness in the mobility of travel activities. Various activities undertaken to improve health while traveling have contributed to the development of health tourism. Health tourism can be defined as a type of tourism activity in which participants travel far from their home, primarily for health reasons, and is conducted as a leisure vacation. Health tourism encompasses various forms, ranging from medical physical health recovery, beauty treatments, relaxation, entertainment, and enjoyment, to seeking psychological and spiritual balance (Alwi et al., 2022).

The term "Health Tourism" is divided into two categories: Medical Tourism and Wellness Tourism (Ministry of Health of the Republic of Indonesia, 2014). This phenomenon, in which tourists seek medical treatment abroad, has the potential to change the traditional dynamics of the health and tourism sectors. Health tourism represents a growing market within the tourism and healthcare sectors, emerging as a relatively new phenomenon that requires increased government investment. The health tourism industry has significant economic potential, contributing to a global market worth billions of dollars. Therefore, health tourism deserves serious attention from the government, the public, and healthcare professionals, particularly nurses (Figueiredo, Abrantes, & Costa, 2024).

Health tourism has been packaged in such a way as to become a promising business opportunity for a country, providing both healthcare and tourism services. Health tourism consumers are not limited to foreign tourists but also include domestic urban residents. Health tourism is one of the national

tourism patterns outlined in the national tourism development strategy. This national tourism development is characterized by high levels of expenditure on health tourism activities and the length of trips taken (Alwi et al., 2022). Health tourism has been considered one of the most profitable industries in the healthcare sector worldwide. Health tourism can positively impact health system change in a country, particularly in countries with greater budget and revenue deficits for improving their health sector (Shaygani, Ahmadi Marzaleh, & Gheibi, 2023). Currently, health tourism is gaining popularity as a specialized type of tourism that combines visits to tourist attractions and health activities accompanied by healing, such as cosmetic surgery, dental care, and so on (Jungprawate, 2021).

Health tourism is a type of service sector where there is direct interaction between healthcare practitioners and patients or customers, which poses several challenges due to differences in cultural and social backgrounds. Knowledge of healthcare practitioners, including nursing students, about health tourism is a crucial characteristic in supporting the creation of a profitable health tourism sector (Rokni et al., 2019). Nursing, as a professional and comprehensive service, must act based on knowledge. Knowledge of healthcare workers, especially nursing students, regarding health tourism is crucial as one of the initial assets in preparing for health tourism implementation in Bali. A deeper understanding of health tourism, including its definition, types of activities, the advantages and benefits of health tourism, and the basic skills nurses must possess, is crucial before engaging in healthcare services that support health tourism. However, a problem in the lecture process is that some lecturers still present and explain lecture content through lectures, while students simply take notes and pay attention (Lee et al., 2024). This type of lecture activity can make students passive, as they are not required to study the material beforehand. Therefore, when the lecturer explains, students lack the knowledge to discuss it together in class. It is better for students to first try to learn the material, then present their work in front of the class and discuss it with other students, so that the lecture atmosphere becomes more lively and enthusiastic under the direction of the lecturer (Dwi Putra & Purwasih, 2016). This research will be conducted at the ITEKES Bali campus to see the extent of the readiness of nursing students as prospective professional health workers before working in health services that support health tourism services by using 2 methods, namely Project Based Learning and Conventional Strategy. This research aims to implement and develop a project-based learning lecture strategy in the health tourism course regarding Health Tourism.

METHOD

This research was conducted in the Nursing study program from July to August 2024. This research method is an experimental method, involving two classes: an experimental class that uses a project-based learning strategy and a control class that uses a conventional strategy in the form of lectures. The population in this study were all nursing students at ITEKES Bali. Meanwhile, the selected sample was 240 students selected through multistage random sampling (60 students for each class). Research data were collected through a test instrument on health tourism knowledge through a pretest and posttest. The questionnaire used showed that all items had a Corrected Item-Total Correlation value of 0.432–0.811, so all items were declared valid because they exceeded the minimum limit of 0.30. The results of the reliability test showed a Cronbach's Alpha value of 0.892, which indicates that the instrument has good reliability and is suitable for use in research. The data analysis technique used in this study was the t-test used in comparative studies. The research design used was a True Experimental Design with a Pretest-Posttest Control Group Design pattern.

RESULT

Before being given treatment using project based learning strategies and conventional strategies in the health tourism course regarding Health Tourism, a pre-test was carried out first to determine students' initial knowledge about the course, both for the experimental group and the control group. The instrument used was a student knowledge instrument about Health Tourism with 10 essay questions. Instruments were given to 112 nursing students at the Bali Institute of Technology and Health for each group. The description of the data obtained is as follows: Based on the data collected during the pre-test, for the experimental group the average (mean) was 75.33, the standard deviation was 3.324, the highest score was 80 while the lowest score was 64. From the results of the pre-test the score range was 24. For the control group the average (mean) was 76.43, the standard

deviation was 3.459, the highest score was 80 while the lowest score was 50. From the pre-test results, a score range of 88 was obtained.

Table 1.
 Pre-Test Results of Students' Knowledge about Health Tourism

Descriptive Analysis	Pre-test Data for Experimental Group	Class Pre-Test Data. Control
n = Sample	112	112
Mean	75.33	76.43
Standard Deviation	2.324	3.459
Highest Value	80	80
Lowest Value	62	50

The pre-test results from the experimental and control groups revealed that students' initial knowledge of health concepts in public places and tourism was quite low. This was because during the pre-test, students in both the experimental and control groups tended to be less serious and assumed the test results would not impact their final semester grades. Following the pre-test results, both the experimental and control classes were treated with different teaching strategies. After being treated with project-based learning and conventional strategies for the health of public places and tourism course, a post-test was administered to determine students' knowledge of the course, both in the experimental and control groups. The instrument used was the same as the pre-test for Health Tourism students, consisting of 10 essay questions. The instrument was administered to 112 nursing students from the Bali Institute of Technology and Health, one for each group. The data obtained are as follows:

Table 2.
 Post-Test Results of Students' Knowledge about Health Tourism

Descriptive Analysis	Pre-test Data for Experimental Group	Class Pre-Test Data. Control
n = Sample	112	112
Mean	88.45	83.10
Standard Deviation	4.663	6.549
Highest Value	100	80
Lowest Value	76	64

Based on data collected during the post-test, the experimental group obtained a mean of 88.45, a standard deviation of 4.663, with a maximum score of 100 and a minimum score of 80. The pre-test results yielded a score range of 89. The control group obtained a mean of 83.10, a standard deviation of 6.549, with a maximum score of 76 and a minimum score of 64. The pre-test results yielded a score range of 23. The post-test results for both the experimental and control groups indicate a significant increase in student knowledge. This is because both the experimental and control groups achieved post-test scores above 80. This means that some of the questions were answered correctly. However, when compared to the control group, the average post-test results were still below those of the experimental group.

Statistical analysis was used to examine differences in treatment outcomes through pre-test and post-test results in both groups using a t-test. As a prerequisite for the t-test, all data obtained were tested for normality. Normality was tested using the Kolmogorov-Smirnov test on pre-test and post-test scores. The test results were determined based on the probability obtained through the K-S test on the data from all four groups, as follows: the p-value for all four data groups was greater than 0.05; according to the test criteria, H0 indicates that all data were normally distributed. After the normality test and the data were normally distributed, a homogeneity test was conducted using the Bartlett's test. The homogeneity test was conducted between the pre-test scores of the experimental group and the pre-test scores of the control group to determine whether all data groups had relatively equal variances (homogeneity). The results of the homogeneity test indicated that the data had a homogeneous variance range. Because the data were normally distributed and had homogeneous variances, a parametric statistical test, the t-test, could be used. The results of the effectiveness test analysis were used to differentiate the means of the criterion variables between the

two groups. To test the hypothesis of parameter differences between the experimental group and the control group, t-test statistics can be used. The requirements for the test analysis must be met, namely the placement of subjects in the tested groups must be selected randomly, the data must be normal. The following are the results of the effectiveness test of the use of strategies in the experimental class and the control class: Based on the results of the analysis of the dependent sample t-test on the pre-test and post-test scores of the experimental group, $t_{count} = 13.604 > t_{table} = 2.704$ at $\alpha = 0.01$. Thus, H_0 is rejected, which means that there is a significant difference between the pre-test and post-test scores in the experimental group. This means that knowledge about the health of public places in the group that received the project-based learning strategy showed a very significant difference when compared to before receiving the project-based learning treatment.

DISCUSSION

Based on the results of the dependent sample t-test analysis on the pre-test and post-test scores of the control group, $t = 6.876 > t = 2.704$ at $\alpha = 0.01$. Therefore, H_0 is rejected, indicating a significant difference between the pre-test and post-test scores in the control group. This means that knowledge about Health Tourism in the group receiving the conventional strategy showed a very significant difference compared to before receiving the conventional lecture. The results of the study indicate a novelty in the form of a difference in student knowledge about Health Tourism between those given the project-based learning strategy and the conventional strategy. This finding is supported by several other studies, such as research on differences in student knowledge before and after health education using the lecture method and the video method. The results of this study showed a difference in student knowledge after the lecture and video methods regarding premarital sex. The conclusion is that the video method is more effective in increasing student knowledge about premarital sex than the lecture or conventional method (Kasoema et al., 2022). This research reveals that student knowledge will improve if innovative methods tailored to their interests, such as video presentations, are used. Videos make the message and meaningfulness of learning content more easily understood by students. This contrasts slightly with the findings of this study, where conventional strategies were more effective in improving students' cognitive skills. Lectures remain effective, but if the learning objective is to transform students' knowledge, they are less effective. In the process of knowledge transformation, performance and the process of producing a product must also be considered (Kasoema et al., 2022). Based on this comparative research, it can be analyzed that innovative methods do not always produce good learning outcomes; sometimes conventional methods can produce the opposite results. This must be taken into account when considering psychological conditions, needs, and appropriate materials (Aley et al., 2024).

Further research supports the finding that students taught using the project-based learning model achieved an average score of 87.83, significantly better than the average score of 58.58 using conventional learning methods. Based on this data, it can be concluded that the implementation of the project-based learning model is more efficient than the thematic learning outcomes of students using conventional learning methods (Novitasari & Suhartono, 2023). This research demonstrates that the project-based learning strategy is more effective in improving student learning outcomes, which aligns with research conducted to improve knowledge of Health Tourism, where knowledge is a key component of learning outcomes (Fatria, 2023). This research finding is also supported by other research, which indicates that the project-based learning strategy is suitable for implementation in 21st-century lectures, such as improving students' scientific writing skills (Yudha, 2019). Based on the results obtained above, it is clear that the innovative project-based learning strategy is very suitable to be applied to health lectures in public places, because it will be able to develop the ability and skills to solve problems, especially problems related to poor sanitation in public places such as in Indonesia (Iffah Salma, 2025). Other research findings concluded that, students who received lectures with the expository (conventional) method, only a small number of students obtained very satisfactory grades, because they were not encouraged to seriously study as applied in project-based learning. The learning achievement and activeness of

students who received lectures with project-based learning were better than those who received lectures with the expository (conventional) method (Dwi Putra & Purwasih, 2016). Therefore, it can be concluded that in addition to improving student knowledge, the project-based learning strategy is also suitable to be implemented to improve student learning achievement and activeness (Supriadi & Widiastuti, 2023).

The findings of this study align with active learning theory, which states that direct student involvement in the learning process will improve conceptual understanding, information retention, and the ability to apply knowledge to real-world situations. In Project-Based Learning (PjBL), students learn through a process of investigation, collaboration, communication, reflection, and evaluation of the project outcomes. These activities not only enhance cognitive aspects but also develop 21st-century skills such as critical thinking, creativity, communication, collaboration, digital literacy, and problem-solving abilities (Huriah et al., 2018). From a nursing education perspective, the use of Project-Based Learning (PjBL) also supports the achievement of graduate competencies that emphasize clinical skills, professionalism, communication, leadership, and evidence-based practice (Hanklang & Sivasan, 2021). The topic of health tourism requires an understanding of quality healthcare services, international patient safety, patient culture, and interprofessional coordination. Therefore, project-based learning provides a more authentic experience than conventional learning because students learn to address problems that mimic real-world conditions in healthcare practice (Pratiwi, 2024). The results of this study can also be explained through the Experiential Learning Theory developed by David Kolb. This theory explains that the learning process optimally occurs through four stages: concrete experience, reflective observation, abstract conceptualization, and active experimentation. In Project-Based Learning (PjBL), these four stages occur systematically as students identify problems, develop projects, discuss results, obtain feedback, and reflect on the learning process. This cycle helps students develop a deeper understanding than simply receiving information passively (Febiana et al., 2026).

In addition to increasing knowledge, Project-Based Learning (PjBL) also has the potential to increase student learning motivation. Active involvement in project completion fosters a sense of responsibility for the learning process, fosters curiosity, and encourages students to independently seek out various scientific references. A collaborative learning environment allows students to exchange ideas, develop communication skills, and learn to respect the opinions of others. These factors indirectly contribute to improved learning outcomes (Qomariyah, 2021). However, implementing Project-Based Learning (PjBL) also presents several challenges. This method requires longer learning time, the readiness of the lecturer as facilitator, the availability of learning resources, and the students' ability to collaborate and manage the project. Furthermore, the assessment process in Project-Based Learning (PjBL) is relatively complex because it assesses not only the final product but also the group work process, critical thinking skills, creativity, communication, and project presentation. Therefore, the successful implementation of PjBL requires thorough learning planning, the preparation of clear assessment rubrics, and institutional support in providing learning facilities (Wijayanti & Septipani, 2026).

SIMPULAN

The findings of this study indicate that Project-Based Learning is an effective learning approach to improve nursing students' understanding of health tourism. Therefore, this method is recommended as an alternative learning strategy in nursing education, particularly in courses related to global health services, health tourism, health service innovation, and professional competency development. The implementation of Project-Based Learning is expected to produce nursing graduates who not only possess better knowledge but also are able to think critically, collaborate, and be prepared to face developments in the health tourism industry at the national and international levels.

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