

NUTRITION

Exploring the Influence of Nutrition on Academic Success Among First-Year Bachelor of Physical Education Students at Bataan Peninsula State University-Orani Campus

Jay Mark Sinag

Abstract

The World Health Organization (WHO) emphasizes its importance in health and development. This qualitative-phenomenological study explores the role of nutrition in learning and education among first-year Bachelor of Physical Education (BPED) students at Bataan Peninsula State University, Orani Campus. The study involved 2 male and nine female BPED students aged 19-21. Four research questions guided the study: the importance of nutritional food in school canteens, nutrition's effect on students' personal, social, and academic aspects, experiences of nutritional deficiency during class, and the impact of nutrition knowledge on academic performance. Data analysis revealed three themes and eight sub-themes, highlighting students' experiences with nutritional deficiency, the impact of nutrition on learning and academic performance, and their responses to these challenges. Most students experienced a lack of nutrition, affecting their learning and academic performance. Additionally, the research uncovered how nutritional food influenced their educational outcomes and overall well-being. First-year students often lacked awareness of the importance of

Jay Mark Sinag, Bataan Peninsula State University Please send author correspondence to jmdpsinag@bpsu.edu.ph

nutritious food and its impact on learning and academic performance, revealing a need for improved nutrition education. Overall, the study highlights the crucial role of proper nutrition in the educational context, underscoring the need for enhanced nutrition awareness and practices among students to foster their academic and personal development.

Introduction

Nutrition is fundamental to human existence (WHO, 2024). An individual's nutrition is determined by their daily dietary intake. If the consumed list comprises a balanced diet requisite for the body, then the individual may maintain a normal nutritional status. Nutritional status denotes an individual's comprehensive state arising from the consumption, absorption, and metabolism of food (StatPearls, 2024).

According to the World Health Organization (WHO), nutrition is an important aspect of health and development. Better nutrition is associated with improved infant, child, and maternal health, stronger immune systems, safer pregnancy and childbirth, a lower risk of non-communicable diseases (such as diabetes and cardiovascular disease), and a longer life. In addition, Wedu et al. (2018) said nutrition is the most basic thing in human life. Someone's nutrition is derived from the daily menu they consume. If the list consumed contains a balanced diet that the body needs, then the person can have a normal nutritional status. Nutritional status refers to a person's overall condition resulting from the intake, absorption, and metabolism of food.

In the Philippines, the latest national nutrition survey reveals that the total prevalence of underweight Filipino preschoolers is 33%. About 8% of school children are moderately and severely underweight, while 20% are mildly underweight. Even mild undernutrition affects learning. The survey also revealed that iron deficiency anemia (IDA) is the most widespread nutritional deficiency in the Philippines, affecting approximately 20 million Filipinos, including 30.8% of schoolchildren and 26.7% of preschoolers. (Solon et al., 2013). Moreover, the WHO (1946) defined health as a state of complete physical, mental, and social well-being, not just the absence of disease and infirmity. An adequate diet, which is the central tendency and master of all qualities, can regulate the body's immune

system to achieve “freedom from diseases” and maintain normal bodily functions.

However, over time, nutrition theory has changed. Scientists and philosophers have long regarded nutrition as one of life’s essential elements. Therefore, it should come as no surprise that nutrition was an essential part of every global medical science concept. The time of Aristotle and Galen marked the development of the earliest theories on nutrition. They recognized nutrition as a crucial component of overall wellbeing, as well as illness, performance, and recovery. Every portion of the body is thought to be powered by the blood that flows to it. The nutrients absorbed from the food consumed form the blood. The ancient Chinese medicine text Huangdi Neijing (Yellow Emperor’s Classic of Medicine), considered the Chinese equivalent of the Hippocratic Corpus, describes notions similar to those found in ancient European theories of nutrition and human physiology. In accordance with classical literature from Greece, Rome, and China, a balanced diet should consist of a majority of cereal grains, legumes, fruits, honey, fish, and milk. Meat, booze, and sweets should all be enjoyed in proportion. The ability of those ancient physicians and philosophers to forecast a general dietary plan without having a thorough understanding of how the human body functions is fascinating.

Statement of Purpose

The general purpose of the study is: How do the nutrients affect the learning and education of first-year BPED students in the Bataan Peninsula State University Orani Campus during academic Year 2022-2023? Specifically, it sought answers to the following questions: 1. What is the importance of nutritional food that is served in the school canteen?; 2. How does nutrition affect the first-year BPED students in terms of their holistic development, including personal, social, and academic aspects? What are the experiences of first-year BPED students in the lack of nutrition during class hours?; 4. How does an infographic help the students recognize the different nutritional information?

Methodology

Research Design

This descriptive phenomenological study aims to identify the role of nutrition in the education of first-year Bachelor of Physical Education students at Bataan Peninsula State University, Orani Campus. The study involved 11 respondents: two male and nine female first-year students aged 19-21. The study employed a qualitative approach to gain an understanding of concepts, opinions, and experiences related to nutrition and education (Pritha Bhandari, 2020). Phenomenology describes lived experiences and studies essences, seeking to uncover meanings in everyday existence to fulfill human nature.

In this study, personal experience was the starting point. After gathering textual sources, researchers interpreted the data and identified meaning units through a research plan or proposal. This process balanced explicit methodological statements with openness to explore unforeseen directions, techniques, procedures, and sources. The ultimate aim was to become more fully who we are by understanding the essence of the phenomena governing the instances of nutrition's impact on education.

Environment

This study involved first-year Bachelor of Physical Education students from Bataan Peninsula State University, Orani Campus. It focused on their experiences with the importance of nutrition in food for their learning capabilities. The research aimed to explore how proper nutrition impacts their academic performance and overall educational experience, highlighting the critical role of a balanced diet in enhancing cognitive function and academic success among these students.

Participants

Participants were selected using randomized sampling, a probability sampling method where the researcher randomly selects a subset of participants from a population, ensuring each person has an equal chance of being chosen. Data was gathered from as many of the randomly selected individuals as possible who agreed to par-

ticipate in the surveys. The researcher predetermined the criteria for the participants and was already familiar with them. As all survey respondents fit a specific profile, purposive sampling was employed to select a targeted subset of individuals.

The participants were first-year bachelor of Physical Education students from Bataan Peninsula State University Orani Campus, aged 18-20 years. The gender distribution was unequal, with six female and four male participants. This method ensured a representative sample to explore the role of nutrition in their learning capabilities and overall educational experiences.

Data-Gathering Procedure

To begin the interview and survey process, the researchers first presented the respondents with a letter requesting their permission to conduct the interview. The researchers conducted interviews on weekdays and personally distributed the questionnaires at the school or in a location where the interviewers and interviewees felt comfortable. This process was completed within two weeks. The interviews were recorded through note-taking and audio-recording. The researchers thoroughly explained the research intent to the respondents and established rapport to elicit accurate responses to the interviews and questionnaires. For data gathering purposes, the questionnaire was specifically prepared according to the problem raised in the study. The responses were treated as primary data and formed the basis for the study's conclusions and recommendations. In constructing the survey questionnaire, the researchers consulted books, theories, theses, and other related materials. An initial letter was sent to the respondents to obtain the necessary information for the study. The researchers explained the study's objectives and purpose, which was to appraise. Favorable action was taken in response to the letter. After preparing and assessing the questions, the researchers conducted the interviews to identify which questions were reliable and which were not.

Data Analysis

Colaizzi's (1978) seven-step approach guided the researchers in collecting data. The technique that the researchers used was to determine the respondents' opinions and experiences, which can be gath-

ered through face-to-face interviews and focus groups. Colaizzi's step-by-step approach was used in the data analysis.

Step One: Ask Questions

The researchers provided 10 questions to seek answers about the role of nutrition towards learning and education of bachelor of Physical Education, first-year students at Bataan Peninsula State University, Orani Campus.

Step Two: Data Collection

The researchers asked the respondents about their academic achievements and their experiences at school, as well as their personal information (e.g., name, sex, age, and grade level). The researchers gave them a paper to fill out the questions

Step Three: Conduct an Interview

Researchers ask the 10 respondents from the first year about their knowledge and experience with the role of nutrition to their academics.

Step Four: Collecting of Respondents' Answers

The researcher collected all the data they got from the interview.

Step Five: Summarizing the Data

The researchers collect and organize all of the information they have gathered: personal information and responses to the questions.

Step Six: From the Data Gathered

The researchers were able to draw the conclusion and result of the nutrition towards learning and education of bachelor of Physical Education, first-year students at Bataan Peninsula State University, Orani Campus.

Step Seven: Interpreting the Results

The researchers identify the issue and the need for improvement in the school health nutrition services.

This step-by-step approach will help researchers gradually understand the importance of school health services to all students, particularly student-athletes who require these services. A focus group was used in this study, where the researchers and students formed a circle to share their opinions and experiences, and an interview was conducted to answer the questions.

Research Instrument

Using a self-made questionnaire, the researchers conducted interviews with participants over the course of a week, distributing the questionnaires in person at the school or at another comfortable location that was convenient for both the interviewers and the interviewees. The researchers utilized smartphones to record audio and take notes during the sessions. To obtain suitable answers, the researchers established a rapport with the respondents and provided a thorough explanation of the study's goals. The questionnaire was specifically created to address the issues identified by the study. The conclusions and recommendations were derived from the questionnaire responses, which were treated as primary data.

Additionally, the researchers consulted relevant books, theses, theories, and other reading materials to inform the creation of the survey questionnaire.

Construction and Validation of the Instrument

The content validation of the questionnaire aimed to determine whether the problems under study were answerable based on the respondents' knowledge or experience. The validity of the questionnaire is defined as its ability to measure and describe what it is intended to identify, based on asking and receiving answers to questions that collectively define the attribute, state, or quality the researchers aim to identify (Glenn et al. 2007). A formal letter of request was sent to the Office of the Campus Director, and the researchers personally administered the instruments to ensure a high retrieval rate from the respondents.

After the questionnaire was answered and collected from the respondents, the data were carefully tabulated, analyzed, interpreted, and presented to fulfill the purpose of this investigation.

Ethical Considerations

The researcher obtained prior consent from the respondents for participation in the research. Permission was also obtained from the Program Head of the Bachelor of Physical Education and the Campus Director of Bataan Peninsula State University, Orani Campus, and forwarded to the participants. All participants were informed about the study's details. Participation was voluntary, and participants

could withdraw from the study without any consequences. The anonymity of participants was guaranteed. To ensure confidentiality, participants were provided with an encrypted code and were not identified by name.

Results

The goal of this phenomenological study was to understand the role of nutrition in the learning capabilities of first-year bachelor of Physical Education students at Bataan Peninsula State University, Orani Campus. The following research topics motivated this study: (1) What is the importance of nutritional food served in the school canteen? (2) How does nutrition affect the first-year BPED students in personal, social, and academic aspects? (3) What are the experiences of first-year BPED students lacking nutrition during class hours? (4) What are the implications of lacking nutritional knowledge on students' academic performance?

In this study investigating the experiences of BPED-1st year students at Bataan Peninsula State University, Orani Campus, on academic performance, three themes and eight (8) sub-themes were revealed through data analysis. The themes highlighted students' experiences with a lack of nutrition, the impact of nutritional food on their learning and academic performance, and their responses to these challenges.

Importance of Nutritional Food Served in School Canteens

On the theme of nutritional food, most participants emphasized the importance of having a school canteen. As first-year students, they are particularly busy with their academics and do not have the time to prepare their own meals. Participants described their experiences with the food in the school canteen.

The following outlines the various experiences and reasons why the school canteen is important for providing food to students.

Theme 1. Significance of Serving Food to the Students

Each respondent has a unique perspective on why serving food in the school canteen is important, especially during this transitional period following several years of blended or online learning due to the pandemic. Most of them say it's important because they are busy

with their academics, so having food served in the canteen is very convenient. It provides them with more energy throughout the day and helps them focus better in class, especially when they have early classes.

Having a good meal can enhance students' learning capabilities. The sub-theme is "Importance of Nutritional Food," which discusses explicitly how the quality of nutritional food affects students' learning capabilities.

Sub-Theme 1. Importance of Nutritional Food

This implies that a student's ability to learn and concentrate in class is enhanced by consuming nutritious food. According to other research, improving the quality of learners' meals leads to better performance in various tasks, potentially higher test scores, and increased attendance. As the participants revealed that:

The food provided by the school canteen is important for the first years who are in the apartment or dormitory because we are so busy with activities that we don't have enough time to prepare for our meals. So instead we go in the school canteen to buy healthy foods. (Participant J)

The nutrients is very important to our body because it produce energy for our daily routine on campus. (Participant B)

The importance of nutritional food provided by our school canteen is that it helps us maintain healthier diet. (Participant I)

According to the participants, maintaining regular eating habits and proper nutrition enables them to maximize their learning potential in the environment. Living among strangers in a dorm, managing a new class schedule, navigating a new social scene, and functioning without a parental safety net are all new experiences for them as college freshmen. Eating well helps them concentrate in class. Based on the survey, the food served in the school canteen is important to them, especially in relation to their academic performance.

Effects of Nutrition on the Students in Terms of Their Holistic

On the theme of nutritional impact, physical, emotional, social, and academic performance received the highest count of participants. One hundred percent of the participants reported improvements in their physical health, emotional well-being, social interactions, and academic performance through the consumption of nutritious food.

Participants described their experiences based on how their nutrition influenced their education and learning capabilities. The following illustrates the thematic interconnection of the students' experiences with the concepts, meanings, and statements expressed by the participants.

Theme 2: Nutritional Impacts

Nutritional impacts refer to the various aspects of a student's perspective that reflect the effects of nutrition on their physical, emotional, social, and academic performance.

The nutrition of students can significantly impact their educational outcomes and learning capabilities. The sub-themes are "Impacts on Physical Health," "Impacts on Emotional Health," "Impacts on Social Health," and "Impacts on Academic Performance." These sub-themes specifically discuss the holistic capabilities of students through nutritional consumption.

Sub-Theme 2.1. Impacts on Physical Health

This indicates that a student's ability to learn and succeed in school is affected by physical factors related to nutrition. As the participants revealed that:

Nutritional food helps me to strengthen my physical body and makes me strong and gives me power for everyday chores. (Participant A)

If I eat nutritional food, it is good for me and gives me a great impact that makes me physically fit. (Participant J)

The term "Impacts on Physical Health" refers to the influence of nutritional food intake on students. The impact of nutrition on their physical health leads to improvements in their education and

learning capabilities. It enhances their activity level, vitality, and participation in school activities.

Sub-Theme 2.2: Impacts on Emotions

This means that emotional aspects are influenced by nutritional food consumption, which affects the education and learning capabilities of a student. As the participants voiced that:

In terms of emotions, for example, when I drink coffee, I get in a good mood and my spirit becomes active. (Participant E)

Because if I do gym and eat nutritious food that's where I get happiness and joy. (Participant H)

Nutrition improves my mood and improves my ability to focus. (Participant I)

The term “Impacts on Emotions” describes how students’ eating patterns affect their emotional state. The effect of nutrition on students’ emotions has a positive influence on their education and learning capacity, enhancing their motivation, attention, productivity, and overall happiness in participating in school activities.

Sub-Theme 2.3. Impacts on Social

This means that social aspects of the students are influenced by nutritional food consumption, which impacts the education and learning capabilities of a student. The participants articulate that:

When we get together with our classmates, it's like we're eating together and we're noisy because we have fun talking and it's really nice that kind of bounding. (Participant H)

Nutrition helps with my mood and gives me the energy to participate in any group activities that will be conducted in school. By this, I will most likely enjoy certain activities. (Participant I)

Nutrition affects me socially when I eat healthy foods, I become approachable to others, I'm always in the mood to

make conversations, but now it's rare because I'm doing so much that I can't eat properly, so I only buy at the canteen. (Participant J)

The "Impacts on Social" refers to the impact of the students' food choices on their social interactions. The effect of nutrition on students' emotions has a positive impact on their education and learning capacity, making them more approachable, bonding with others, and cooperating with them, which leads to enjoyment in performing out-of-school activities.

Sub-theme 2.4. Impacts on Academic

This indicates that a student's ability to learn and develop academically is impacted by the nutritional quality of the food they consume. The participants shared their experience:

When what I eat every day is nutritious, my performance is better, like example dance, acting, drama, the creativity of my brain is better. (Participant B)

Nutrition is important, especially academically, especially when preparing for the exam, midterm, finals, we really need to eat nutritious food to better retain what is being reviewed. (Participant C)

Nutrition gives me the energy to think properly and process lessons effectively. (Participant I)

The term "Impact on Academic Performance" refers to the effects of nutritional food intake on students. The impact of nutrition on their academic performance leads to improvements in their education and learning capabilities. It helps students focus on their lessons, process information effectively, be creative, think critically about the material, and perform well academically.

Providing Pertinent Nutritional Food Information

In today's world, people are increasingly seeking information that helps create effective and relevant knowledge. This analysis highlights the importance of relevant information, particularly regarding nutritional food.

Food is essential for Filipinos, who are renowned for preparing delicious meals and recognizing the importance of both physical and mental nourishment. When considering how food affects students, opinions vary widely. Some students have limited knowledge about nutritional foods, while others acknowledge their ignorance.

This analysis will emphasize the importance of food safety and healthy eating, highlighting its crucial role in students' overall well-being and academic performance. By focusing on the impact of nutrition, we aim to highlight its crucial role in enhancing students' learning capabilities and overall health.

Theme 3. Advantages of Information and Ideas About Nutritional Food

Acknowledging processed meals helps others take responsibility for their dietary choices and optimize their nutrition. Awareness and timely information about healthy foods offer Bataan Peninsula State University, Orani Campus students new knowledge.

The study reveals how participants' understanding of healthy foods and their eating habits influence their lives. The benefits of knowing about proper nutritional food include: (1) improved logical and effective thinking, (2) increased activity, especially intellectually, (3) new awareness, (4) enhanced information validity, and (5) greater curiosity.

On the other hand, disadvantages arise from a lack of nutrition knowledge, including (1) insufficient understanding of essential nourishment, (2) unawareness of potential constraints, and (3) negative impacts on academic performance. The study clearly explains and presents data to illustrate the importance of nutritious food, providing a comprehensive understanding through the sub-theme.

Sub-Theme 3.1 The Results of Knowing the Nutritional Foods

We reiterate the advantages of understanding nutritional food, but what is the actual result for students? Was it beneficial? What impact did it have?

According to participants, knowing about food helped them engage more in class and acquire knowledge. Healthy food made them more active in activities, boosting their ability and confidence in learning. This benefits them by enhancing academic achievement,

expanding their knowledge-sharing capacity, and helping them avoid the negative effects of poor nutrition.

The survey revealed that awareness of nutritional food led students to better understand how to care for themselves and the positive effects of proper nutrition on their well-being. As the participants revealed that:

If you have an idea or have knowledge, you will not have a hard time searching or doing research. And you can make your body stronger by eating. First of all, when you eat, you don't need to search because you will have a plan to be physically fit. (Participant E)

We will be more aware so that the body can be strong and disease can be avoided. (Participant D)

It's easy to say because the natural like vegetables that don't need to be cooked or used with deep fried oil are especially healthy foods compared to junk foods and greeny vegetables. The advantage of having it is because you know to avoid and attack our body if we also know our needs, we don't have to think about whether or not a stone is nutritious because it's just a thought that we know that the nutrients we need are there. (Participant C)

Vulnerability to disease will be lessen. (Participant G)

The perspective on the direct consequences or belief in being aware of healthy food varied among them. However, they agreed that understanding the significance of food is crucial for preventing illness and avoiding potential costs.

One goal of consuming healthy food is to provide the body with adequate nutrition. This knowledge is especially helpful to learners. Eating nutritious food is important not only for maintaining health and well-being but also for generating new knowledge.

Sub-Theme 3.2 The Media's Dictate

As a result of modern technology and the widespread adoption of the digital era, it has become a bridge for BPSU–Orani Campus students to share knowledge about nutritional food.

Over time, the information that helps students—and indeed, almost everyone—understand the importance of healthy food has become more extensive. This illustrates various ways participants used digital tools to learn more about nutrition. According to the participants:

While watching the videos, I was looking for advice like that, but I'm familiar with the infographic. It helps, of course, it indicates how important the information is. (Participant G)

Internet, that's where I know the importance of food, whether it's junk food or whether it can help our body to improve, yes, I'm familiar with the child before with nutritional food 50/50. If you don't do research, you won't know anything, but if you do research, it's like when you make infographics, it's not just your brain that's used. (Participant J)

With the help of social media posts, YouTube/ Tiktok videos, mainly the internet, students will have the access to browse about food nutrition. With those, they can be able to understand and learn more about the nutrition they get in the food they eat. (Participant I)

Students were initially unfamiliar with the significance of consuming nutritious food through seminars or other programs. However, modern media—such as social media, infographics, YouTube, and other platforms—helped participants understand and decide what foods to include, avoid, or reduce in their diets.

Sub-Theme 3.3 Affect the Thinking

Knowing about healthy foods causes (1) your beliefs to change, (2) your knowledge to expand, and (3) you to become more cautious and selective about the food that may harm your health.

This final subtheme will illustrate the understanding and importance of nutritional food. According to the participants:

I searched on Google about unhealthy and healthy, like fat and greasy foods that are unhealthy and fruits like bananas that have protein. (Participant J)

Read books to find out the information that will help our body. (Participant F)

You know, take care of yourself, [choose] the food you eat so it won't make you sick. (Participant A)

This led to a more careful approach for BPSU-Orani Campus students. Since they need to understand their dietary choices, they should be more knowledgeable about healthy foods. This has given them a greater appreciation for health and provided insights that can enhance their studies.

The theme and its connections are accurate, based on participants' responses. All information is relevant and clear. Understanding proper nutrition is crucial for personal growth and becoming a knowledgeable individual with adaptable ideas.

The study highlights the importance of nutrition and its impact on academic, social, and personal contexts. Awareness of nutritional foods is essential, as many students frequently eat out without knowing if the food is healthy or beneficial. As digitalization advances, recognizing important nutritional information is vital. This study underscores the significance of diverse and relevant opinions from participants.

Discussion

The purpose of this phenomenological study was to explore the impact of nutrition on the learning abilities of first-year Bachelor of Physical Education students at Bataan Peninsula State University, Orani Campus. It examined the importance of nutritious food served in the school canteen, the effects of nutrition on students' personal, social, and academic aspects, and their experiences with nutritional deficiencies during class hours. The study also examined the impact of a lack of nutritional knowledge on academic performance.

Nutrition involves studying how food and beverages affect the body, focusing on essential nutrients like carbohydrates, fats, fiber,

minerals, proteins, vitamins, and water. It includes understanding physiological and biochemical processes, how food provides energy, and its role in forming body tissues. Nutrition is fundamental to human survival, health, and development throughout life.

Importance of Nutritional Food Served in School Canteens

Most respondents emphasize the importance of having a canteen on campus because, as students, especially first-year students, they are often preoccupied with academics and do not have sufficient time to prepare their own food. This study determined and analyzed the significance of nutritional food for every learner.

Theme 1. Significance of Serving Food to the Students

Serving food in the school canteen is crucial, especially after years of blended or online learning due to the pandemic. Nutritious meals significantly impact students' learning abilities. Nutrition education is most effective when it focuses on behavior and action, not just knowledge, and integrates relevant theory, research, and practice. It encourages healthy eating among children. According to the National Institute of Medicine (2005), schools are ideal for teaching healthy diets since children spend much of their time there. Trained instructors can improve students' behavior and knowledge about nutrition, leading to better health outcomes.

Sub-Theme 1. Importance of Nutritional Food

According to the survey, the food served in the school canteen is crucial for students, particularly for their academic abilities. Living in a boarding house, navigating a new social scene, and managing without parental support are challenges for college students. Maintaining good eating habits and nutritious food helps them maximize their school experience and improves class concentration. Research shows that better meal quality leads to enhanced performance, higher test scores, and increased attendance.

Nutrition's role in addressing societal, environmental, and economic issues is gaining recognition. Adequate nutrition helps reduce food insecurity through purposeful agricultural practices. As Ohlhorst et al. (2013) noted, the importance of nutrition in meeting

the global demand for a safe, sustainable, and affordable food supply is becoming more appreciated.

Effects of Nutrition on the Students in Terms of Their Holistic

Theme 2. Nutritional Impacts

A healthy, balanced diet is crucial for overall health and well-being. Nutritional impacts affect students' physical, emotional, social, and academic performance. Consuming nutritious food enhances students' activity levels, vitality, and participation in school activities, thereby boosting their motivation, attention, productivity, and overall happiness. It improves approachability, social bonds, and cooperation, leading to enjoyment in both academic and extracurricular activities. Focusing on lessons, effective processing, and enhancing creativity and critical thinking contribute to increased educational and learning capabilities.

Dodsworth (2010) in "Student Nutrition and Academic Achievement" emphasizes that proper nutrition is essential for both physical and mental growth. Healthy diets aligned with the U.S. Food Guide Pyramid have been shown to improve problem-solving skills, test scores, and school attendance, supporting our findings that a balanced diet positively impacts physical health, emotions, social skills, and academic performance.

Sub-Theme 2.1. Impacts on Physical

Eating well reduces the risk of physical health problems and is crucial for students' academic success. The term "Impact on Physical" refers to how nutritional food intake influences students' physical health and learning capabilities. Proper nutrition enhances activity levels, vitality, and participation in school activities.

Furthermore, consuming low-nutrition food can weaken the immune system, increasing the risk of illness. An article from "The Nutrition Source" by Harvard School of Public Health cites poor diet as a factor in reduced immunity, noting that malnutrition impairs immune cell production and activity. This supports our findings that many participants choose less nutritious meals due to limited time and resources, particularly those living in dorms, leading to lower energy levels in class.

Sub-Theme 2.2. Impacts on Emotions

Nutritional food consumption affects students' emotional states and impacts their education and learning capabilities. The term "Impact in Emotions" reflects how eating patterns influence emotions, enhancing desire, attention, productivity, and happiness in school activities.

In the Pollitt and Lewis (2010) study, good nutrition positively affects social development, including friendliness, verbalization, social play, and exploratory behavior. This supports our findings that nutritional intake benefits social behavior. Participants reported that having sufficient meals improves their mood and interactions with classmates, while insufficient food negatively affects their social engagement.

Sub-Theme 2.3. Impacts on Social

Nutritional food consumption affects students' social aspects, impacting their education and learning capabilities. The "Impacts on Social" term highlights how food choices influence social interactions. Proper nutrition enhances students' social behavior, making them more approachable and cooperative, which improves their enjoyment of extracurricular activities.

According to the University of Pennsylvania (2010) study, good nutrition positively affects social development, including friendliness, verbalization, social play, and exploratory behavior. This supports our findings that nutritional intake benefits social behavior. Participants reported that having sufficient meals improves their mood and interactions with classmates, while insufficient food negatively affects their social engagement.

Sub-Theme 2.4. Impacts on Academic

The nutritional quality of food has a significant effect on students' academic development. The term "Impact in Physical" refers to how nutritional intake affects students' academic performance and learning capabilities. Good nutrition enhances focus, learning, processing, creativity, critical thinking, and overall academic success.

According to Dodsworth (2010) in "Student Nutrition and Academic Achievement," issues like chronic hunger, iron deficiency, skipping breakfast, and general nutritional deficiencies are linked to poor academic outcomes. Malnutrition contributes to cognitive

underdevelopment, low energy, and concentration problems, correlating with increased school absences, hyperactivity, aggression, anxiety, and poor test scores. This study aligns with Dodsworth's findings, emphasizing that proper nutrition is crucial for academic improvement. Students who consume nutritious food are generally more engaged and motivated, leading to better academic performance compared to those who eat unhealthy food. Therefore, ensuring adequate nutrition is crucial for improving students' educational outcomes.

Providing Pertinent Nutritional Food Information

This study examines the effects of inadequate nutrition on first-year Bachelor of Physical Education students at Bataan Peninsula State University, Orani Campus, focusing on their academic performance, mental and emotional well-being, social interactions, and overall holistic health.

The research highlights that while Filipinos have a broad knowledge of food, many are unaware of what constitutes nutritious food.

According to the World Health Organization (WHO), nutrition is crucial for health and development. Proper nutrition supports cognitive function and overall growth, much like a plant needs sunlight to thrive. Without essential nutrients, learning and growth are compromised.

The study findings show diverse perspectives among students regarding nutritional food, with some lacking knowledge. We emphasize the importance of food safety and healthy eating, reflecting the study's significance for improving students' well-being and academic success.

Theme 3. Advantages of Information and ideas about nutritional food

The importance of understanding and consuming nutritious food is highlighted in this analysis. Participants had varied perspectives; some believed that nutritious food focused mainly on vegetables, which could potentially lead to misconceptions. However, nutritional value also includes fruits, and meeting a student's average body needs is crucial for overall health. Knowledge about healthy food helps individuals avoid less beneficial options and select foods that support academic, social, and personal success.

Benefits of knowing appropriate nutritional information include improved logical thinking, increased physical activity levels, enhanced awareness, and greater validity of information. Effective nutrition education enables individuals to make informed food choices, thereby positively contributing to both academic performance and personal well-being. It promotes intellectual activity, logical reasoning, and curiosity.

Despite these advantages, a lack of nutritional knowledge can result in an incomplete understanding of nutrition and its limitations, potentially impacting academic performance. Awareness of the core of nutrition and potential dietary constraints is essential to fully benefit from healthy eating practices. Proper nutritional knowledge enables students to select foods that enhance their overall performance and well-being.

Sub-Theme 3.1 The Results of Knowing the Nutritional Foods

Understanding healthy foods is beneficial for both health and academic performance. Knowledge about nutrition helps individuals avoid unbeneficial foods and choose those that support educational, social, and personal success.

Our study found that students who understand nutritional food make better food choices, leading to increased engagement and confidence in class. They are more active in activities and perform better academically.

The research emphasizes that awareness of nutritional foods has a positive impact on education and learning. Students who consume nutritious foods tend to exhibit improved motivation, attention, productivity, and overall well-being in school. This awareness also enhances social interactions, making students more approachable and cooperative, which boosts their enjoyment of school and extracurricular activities.

Nutrition has a positive influence on students' physical health, activity levels, and participation in school activities, thereby enhancing their overall educational experience. Proper nutrition leads to better focus, creativity, and critical thinking, which are essential for academic excellence. Understanding the effects of nutrition on one's health and learning capabilities highlights the importance of a well-balanced diet.

Sub-Theme 3.2 The Media's Dictate

According to Health Planet, Health Youth (HPHY), the Self-Determination Theory (SDT) highlights the importance of motivation quality, ranging from intrinsic to extrinsic. This study employed both qualitative and quantitative methods to assess the average use of nutritional food, incorporating digital tools to boost motivation for healthier food choices and reduce food waste. Social media plays a key role in this, increasing awareness of nutritional information.

We included the Media's Dictate to reflect the current technological landscape, where social media helps participants learn about and choose beneficial foods. Our research shows that, despite initial unawareness among first-year students, the evolution of technology has enabled them to search for and understand nutritional information better. Participants appreciate how these resources help them make healthier food choices, leading to improved knowledge and faster cognitive processing.

Sub-Theme 3.3 Affect the Thinking

The researchers in this study have explored the benefits of understanding nutritional food, its outcomes, and how it influences the participants' thinking. The increased awareness about nutritional food has led to more enlightened thinking among participants, who now understand its importance more deeply. As college students, they initially found it challenging to engage in discussions and academic activities due to poor nutrition. However, their improved understanding has made them more aware and concerned about their dietary choices.

Karen Camelo and Marta Elliott's study, "Food Insecurity and Academic Achievement Among College Students at a Public University," investigated the correlation between food insecurity and GPA. They examined how food insecurity impacts academic performance and whether it mediates the relationship between student characteristics and GPA. This study connects to our research on the role of nutrition in the learning and education of first-year Bachelor of Physical Education students at Bataan Peninsula State University, Orani Campus. The well-informed participants in our study showed improved academic performance due to better nutritional knowledge.

Our findings reveal that understanding nutrition has helped participants reflect on and address their previous poor eating habits. This reflection has enabled them to make more informed food choices and understand the limitations of their dietary options. The participants have gained a newfound appreciation for health, which supports their academic and personal growth.

The proposed research highlights the importance of applying nutritional knowledge and its impact on academic, social, and personal contexts. In today's digital age, where many students buy food without knowing its quality, understanding nutrition is crucial. Our study emphasizes the significance of nutritional education and its holistic impact on students. The rapid evolution of technology makes it increasingly difficult to discern the importance of nutrition, underscoring the need for continued awareness and informed choices regarding healthy eating.

Rationale

This study explores the impact of proper nutrition on the holistic development and academic performance of first-year Bachelor of Physical Education students at Bataan Peninsula State University, Orani Campus. It evaluates whether the school canteen provides adequate nutrition and its effects on students' physical, emotional, and mental health. Utilizing a qualitative approach, the research examines concepts, opinions, and experiences related to nutrition. Randomized sampling was used to select a representative subset of participants from the student population. The aim is to understand how nutrition influences students' overall well-being and academic success.

Objectives

To fully deliver the nutritional value toward the education and learning capabilities of the students in the first-year BPED in the BPSU-Orani campus.

- Promote nutritional food purchase provided by the school canteen
- Encourage students to choose nutritious food intake over non-nutritious food intake.

- Influence students to appreciate and utilize informative materials like an infographic to gain information about nutrition.

Implementation

Researchers' plans were evaluated subjectively, and we provided effective strategies for implementation. At Bataan Peninsula State University, Orani Campus, we conducted orientation programs and distributed brochures on nutrition. The intervention program aims to test and enhance students' knowledge and abilities, offering new ways to assess their performance. This approach may lead to more efficient and successful methods than current practices:

Conduct: Train all Physical Education leaders at the college level on using the intervention program to assess first-year physical education students.

Execute: Follow the program's instructions precisely, from start to finish, during the orientation or training for BPED first-year students on nutrition.

Monitor: Continuously check the program's progress to ensure it is effective and valuable.

Evaluation: Thoroughly assess the program to determine how well it meets its goals and identify areas for improvement.

Conclusion

Nutrition science examines nutrients in food, their utilization by the body, and their impact on health and disease, using principles from molecular biology, biochemistry, and genetics. This study examines the impact of nutritional food on the academic performance and learning competencies of first-year bachelor of Physical Education (BPED) students at Bataan Peninsula State University, Orani Campus.

The study explored several aspects, including the importance of nutritional food served in the school canteen, its holistic effects on students, and the relevance of nutritional information provided. Findings indicated that while students had varied opinions on nutrition, they shared a common goal of leveraging dietary benefits to enhance their academic, emotional, and social well-being.

Implementing a nutrition program, especially for a large audience, presents challenges. However, understanding healthy foods can significantly broaden students' perspectives and improve their academic abilities by promoting a healthy mind and body.

Strengths of this study include the ability to gauge participants' viewpoints, enhance awareness of nutritional impacts, and prepare researchers for future educational roles. However, limitations include communication difficulties with participants due to their busy schedules and the absence of grade comparisons, which may affect the study's results.

This research aims to highlight the importance of proper nutrition in enhancing academic performance and learning competencies. It advocates for schools, canteens, and future educators to recognize and implement effective nutritional programs. Additionally, it seeks to raise community awareness about nutrition and inspire further research in the field. The study's findings are valuable not only for current educational settings but also for future institutions, educators, learners, and researchers, enhancing the overall environment for student development and well-being.

References

- Bell, J. W., & Luebbe, A. M. (2009). Student nutrition and academic achievement: The mediating role of mental health. *The College Student Journal*, 43(1), 169–181.
- Camelo, K., & Elliott, M. (2019). Food insecurity and academic achievement among college students at a public university in the United States. *Journal of College Student Development*, 60(3), 307–318. <https://doi.org/10.1353/csd.2019.0028>
- Good nutrition positively affects social development, research shows. (n.d.). *ScienceDaily*. <https://www.sciencedaily.com/releases/2016/05/160510160320.htm>
- Institute of Medicine (IOM). (2005). *Dietary reference intakes for energy, carbohydrate, fiber, fat, fatty acids, cholesterol, protein, and amino acids*. The National Academies Press.
- Literature review on nutrition education. (n.d.). *Bartleby*. <https://www.bartleby.com/essay/Literature-Review-On-Nutrition-Education-PC3EJQFJG>
- No food for thought: Food insecurity is related to poor mental health. (n.d.). *Journal of Health Psychology*. <https://journals.sagepub.com/doi/abs/10.1177/1359105318783028?journalCode=hpqa>

- Ohlhorst, S. D., Russell, R., Bier, D., Klurfeld, D. M., Li, Z., Mein, J. R., Milner, J., Ross, A. C., Stover, P., & Konopka, E. (2013). Nutrition research to affect food and a healthy lifespan. *Advances in Nutrition*, 4(5), 579–584. <https://doi.org/10.3945/an.113.004176>
- Pollitt, E., & Lewis, N. L. (2010). The effect of nutrition on cognitive and social development. In J. E. Z. R. K. Z. I. H. B. O. (Ed.), *Developmental neuroscience* (pp. 581–594). Blackwell Publishing.
- Prescott, M. P., Burg, X., Metcalfe, J. J., Lipka, A. E., Herritt, C., & Cunningham-Sabo, L. (2019). Healthy planet, healthy youth: A food systems education and promotion intervention to improve adolescent diet quality and reduce food waste. *Nutrients*, 11(8), 1869. <https://doi.org/10.3390/nu11081869>
- Rana, R. (n.d.). The impact of nutrition on physical and mental health. *Imprint*. <https://uwimprint.ca/article/the-impact-of-nutrition-on-physical-and-mental-health/>
- Serhan, M., & Serhan, C. (2019). The impact of food service attributes on customer satisfaction in a rural university campus environment. *International Journal of Food Science*. <https://www.hindawi.com/journals/ijfs/2019/2154548/>
- Singh, A., & Prashar, N. (2022). Differentials in the health nutrition and the academic performances in hostellers and dayscholar students of a university in Chandigarh. *Journal of Postgraduate Medicine, Education and Research*, 56(3), 121–125. <https://doi.org/10.5005/jp-journals-10028-1592>
- Solon, F. S., Solon, J. A., Solon, M. S., Solon, E. T., Solon, H. A., Solon, N. A., & Sarol, J. N. (2013). Evaluation of the impact of the Philippine Food Fortification Act on iron deficiency anemia. *Food and Nutrition Bulletin*, 34(2), 224–230.
- StatPearls. (2024). *Nutritional Assessment*. National Center for Biotechnology Information (NCBI) Bookshelf. <https://www.ncbi.nlm.nih.gov/books/NBK580496/>
- Wilder Research. (2014). *Nutrition and students' academic performance*. https://www.wilder.org/sites/default/files/imports/Cargill_lit_review_1-14.pdf
- World Health Organization. (2022). *Nutrition*. https://www.who.int/health-topics/nutrition#tab=tab_1
- World Health Organization. (2024). *Nutrition*. <https://www.who.int/health-topics/nutrition>