

Knowledge and Attitude of Final Year Undergraduate Nursing Students about Research at the University of Technology Jamaica

Abubakar G. Usman*, Britley Robinson, Shashoy Jones Daley, Trisha Goodlitt, Kenice Anderson-Martinez, Kerenia Eccleston

Caribbean School of Nursing, University of Technology, Montego Bay Jamaica, Jamaica

Abstract

The importance of research is well acknowledged, nevertheless, students often feel anxious when it comes to research, mostly because of the extensive and conceptual nature of the subject. Research has investigated students' attitudes toward research. Studies have demonstrated that students' perspectives on research can have a substantial influence on their involvement in research endeavors. Some academic fields, such as medical education and pharmacy, have examined the extent of knowledge, attitudes, and practices about research among students. There is a paucity of scholarly studies that specifically examine the attitude of undergraduate nursing students towards research. Therefore, this study examines the knowledge and attitude of final year undergraduate Nursing students about research at the university of Technology Jamaica. The study employed a quantitative, descriptive, cross-sectional research design. The target population was 116 final year nursing students enrolled in the Bachelor of Science in Nursing program at the university. Most students, at 85.4%, encountered challenges in locating research articles; (67.4%) participants considered the interpretation of the literature challenging yet 61.8% maintained a favorable attitude towards research. Chapter two of the research project posed the greatest challenge for the respondents throughout the first half of their research, whereas chapter one was the least challenging. According to the survey, 78% of the students reported encountering greater difficulties than they had anticipated when conducting research.

Keywords: Attitude, Knowledge, Nursing, Research.

Introduction

Many studies [1-3] have highlighted the importance of undergraduate research training. Gaining insight into the cognition and disposition of undergraduate students regarding research is crucial for cultivating a research-oriented environment, enhancing scholarly achievements, and equipping them with the necessary skills for future research endeavors. Educational institutions can successfully support and empower undergraduate students in their research pursuits by identifying and addressing the elements that influence students' attitudes and understandings about research. Globally, researchers have conducted studies to

assess students' attitudes and knowledge about research. For example, a cross-sectional study was carried out in Saudi Arabia, Bahrain, and Kuwait, which found that undergraduate health sciences students had positive attitudes towards scientific research, but their knowledge scores were relatively lower. The study identified barriers, such as time constraints and inadequate guidance, that hindered students' participation in research activities [4]. Despite its significance, many undergraduate students often perceive research as difficult, intricate, and anxiety-provoking, as reported in [5]. While many students recognize the significance of research, only a minority would opt to participate if it were not mandatory. Despite the

widespread recognition of research's importance, students frequently experience anxiety due to its extensive and conceptual nature [6]. There is a paucity of scholarly studies that specifically examine the research attitudes of undergraduate nursing students. The studies mostly concentrated on pharmacy, medicine, dentistry, and graduate students. These studies were conducted by [7–10]. One university in Jamaica conducted the only known study on this subject, focusing on postgraduate nursing students [11]. Therefore, the aim of the current study is to assess the knowledge and attitude toward research among senior nursing students at the University of Technology, Jamaica.

Materials and Methods

Research Design

The design for this study was a descriptive quantitative cross-sectional design. This is a method of collection of numerical research data from the participants at a single point in time. The survey was conducted to describe the nature of challenges experienced by final year Bachelor of Science Nursing Students.

Area of the Study

The University of Technology Jamaica is Jamaica's national university. The main campus is located at Papine, Kingston. There are other campuses in Kingston, as well as the Western campus in Montego Bay. The Caribbean school of nursing is one of the schools under the College of health sciences. The school offers both undergraduate and graduate programs. The undergraduate programs offered by the school includes Bachelor of Science in Nursing, Bachelor of Science in Midwifery, and Bachelor of Science in critical care nursing. The postgraduate programs offered are master of science in anaesthesia and Master of Science in trauma studies. The university emphasizes student-centered research driven working environment

where core values are lived by all. The mission of the university of technology Jamaica is to positively impact not only Jamaica but the entire Caribbean through high-quality learning opportunities, research and value-added solutions to government, and communities. This underscores the importance of research at all levels.

Study Population

The target population of this research are the final year nursing students in the Bachelor of Science in nursing program from both the main campus and the western campus. There was a total of one hundred and sixteen students (116) in the final year.

Sampling Method

Convenience sampling method was used to collect data for the study. We used this method to maximize participation. All the final year nursing students from both campuses were invited to participate.

Data Collection Procedure

Ethical clearance for the study was obtained from the research ethics committee of the university of technology Jamaica after which the survey instrument was administered to the participants. The research instrument, which is a questionnaire was placed on google form. This was sent to the final year student via their group email addresses. While setting up the survey, the option to collect email addresses of the respondents was disabled to ensure anonymity.

Data Analysis

The responses obtained via google form were analyzed using google spreadsheet to address the objectives of the study, namely, to assess the knowledge and attitude of final year nursing students about research. We presented the results in tables and charts.

Results

Table 1. Socio-Demographic Data of the Respondents

Variable	Frequency	Percentage
Gender (N=89)		
Male	1	1%
Female	88	98.9%
Gender total: 89 respondents (100%)		
Age Group of Participants (N=89)		
18 and below	0	0%
19-25	30	33.7%
26-30	30	33.7%
31-35	26	29.2%
40 and over	3	3.4%
Age group total: 89 respondents (100%)		
Campus (N=89)		
Western campus	31	34.8%
Papine campus	58	65.2%
Campus total: 89 respondents (100%)		

Most of the respondents, 98.9%, were female, while only 1% were male. The participants in the study were between the ages of 19 and 25, with a total of 30 responders, or 33.7% of the total sample. 30 students, which is equivalent to 33.7% of the total, are between

the 26-30 age group. Among the respondents, those aged 31-35 constituted 26 (29.2%) of the total, whilst only 3 (3.4%) students were 40 years old or older. One student failed to provide the demographic information.

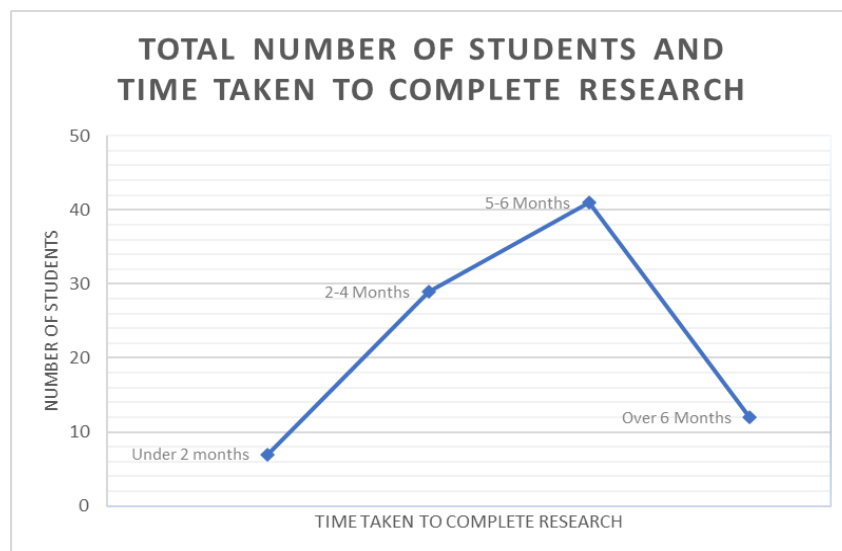


Figure 1. Time Taken by Students to Complete their Research Project

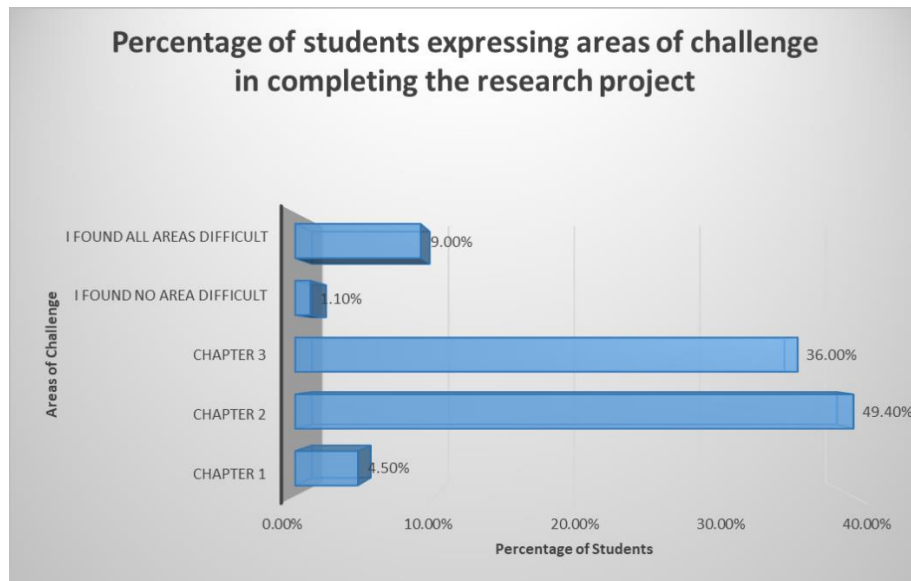


Figure 2. Areas of Challenges Experienced by Students while Conducting Research

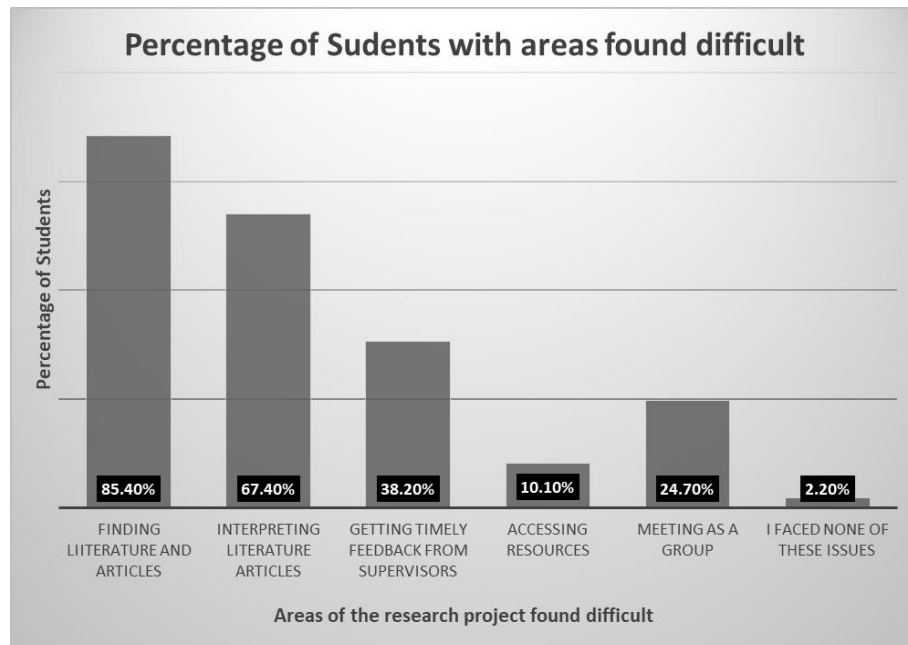


Figure 3. Areas of Difficulties Experienced by Students while Conducting Research

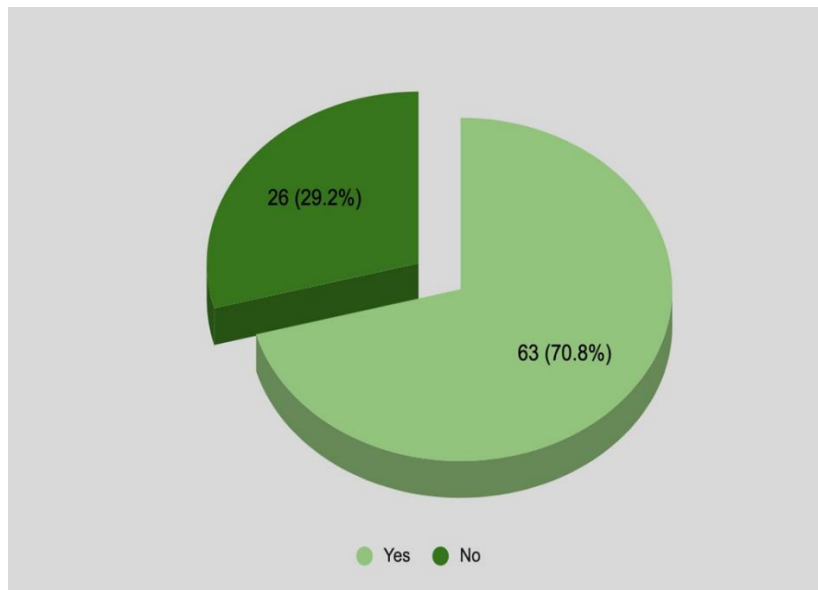


Figure 4. Respondents who Reportedly Failed Exams Due to Focusing on their Research Project.

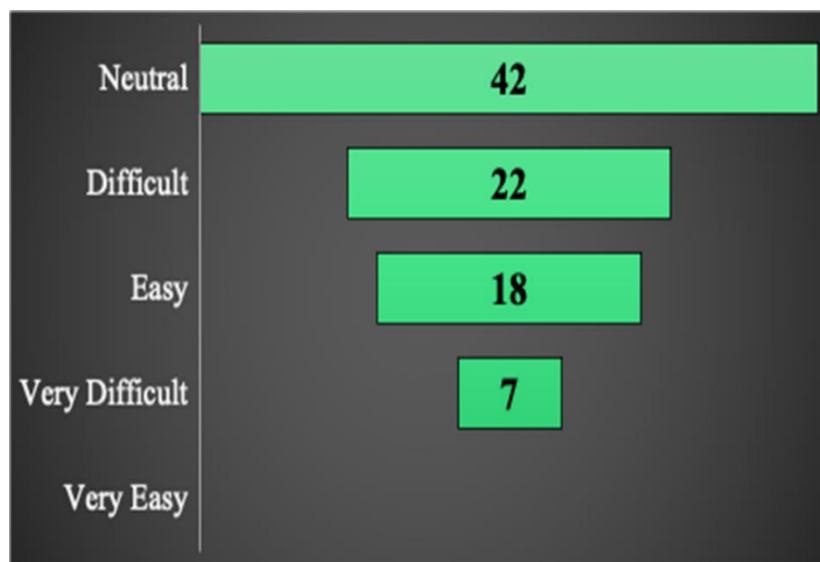


Figure 5. Navigating the University Library to Search for Research Articles

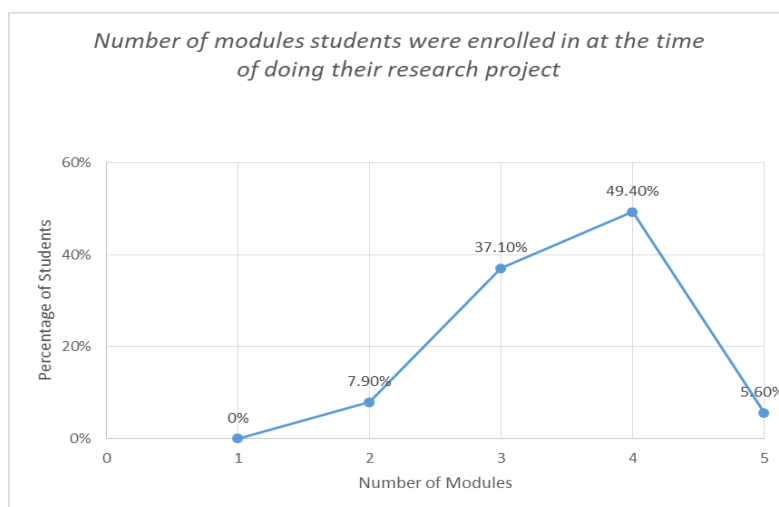


Figure 6. Number of Modules Students were Doing Concurrently while Doing Research Project

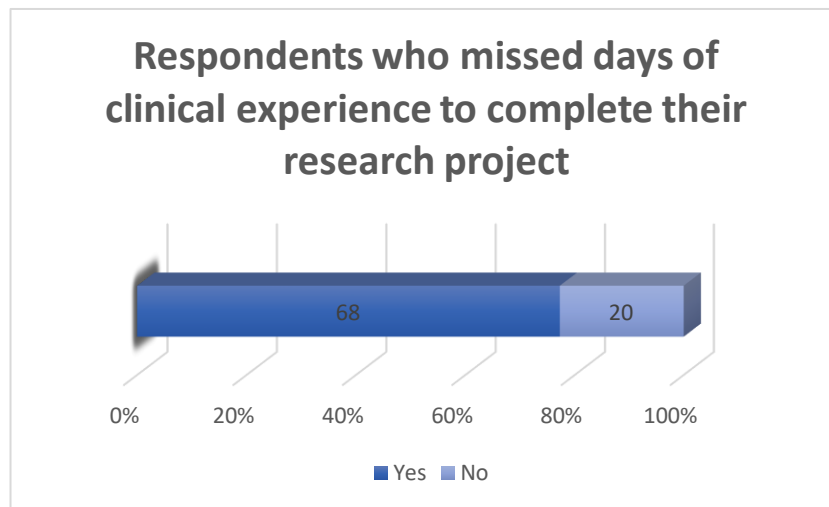


Figure 7. Students who Missed Some Days of Clinical Experience while Making Effort to Complete their Research Project.

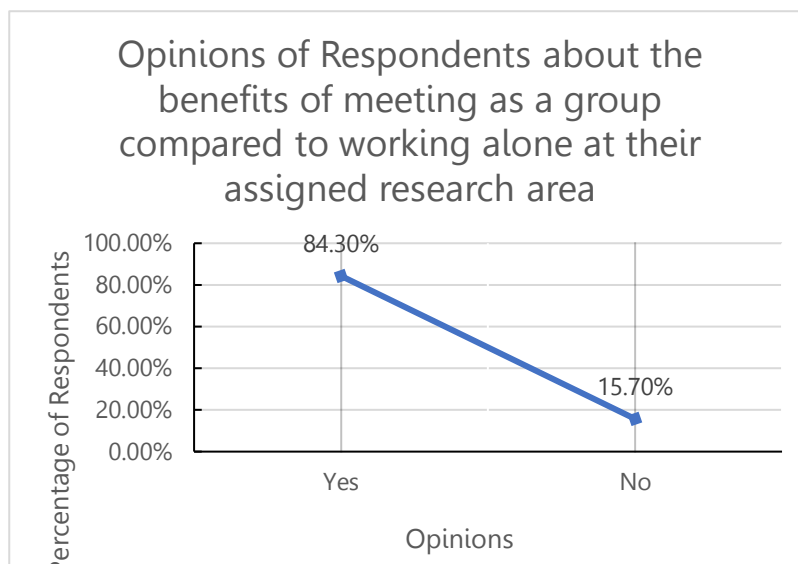


Figure 8. Students' Opinion on Whether they thought Meeting as a Group is more Beneficial Compared to Working on Assigned Area of Research Alone.

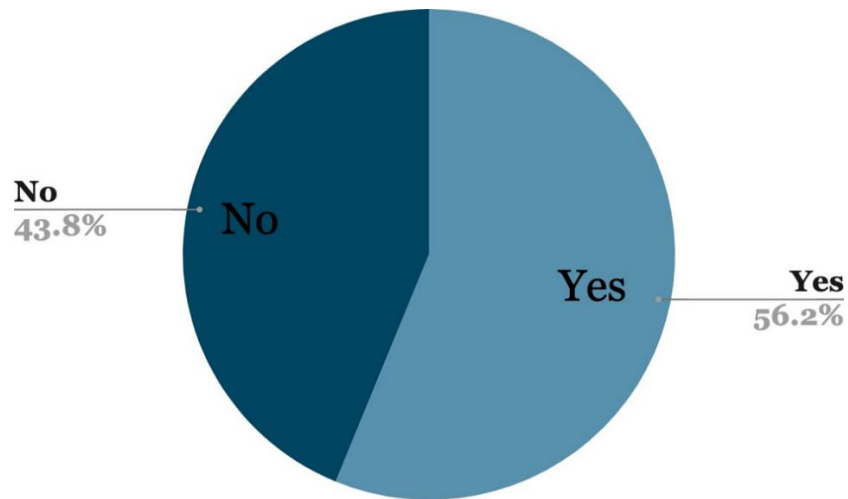


Figure 9. Respondents who Sought Help from Past Students

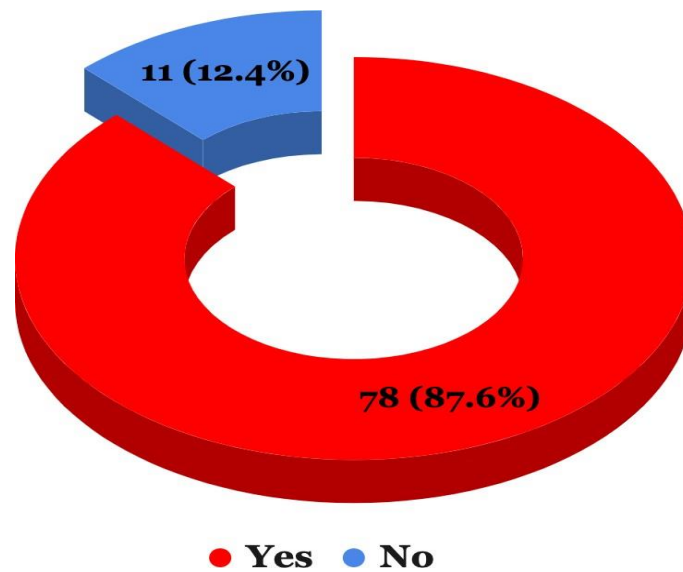


Figure 10. The Proportion of Students who thought that they were Encountering More Difficulties than Anticipated

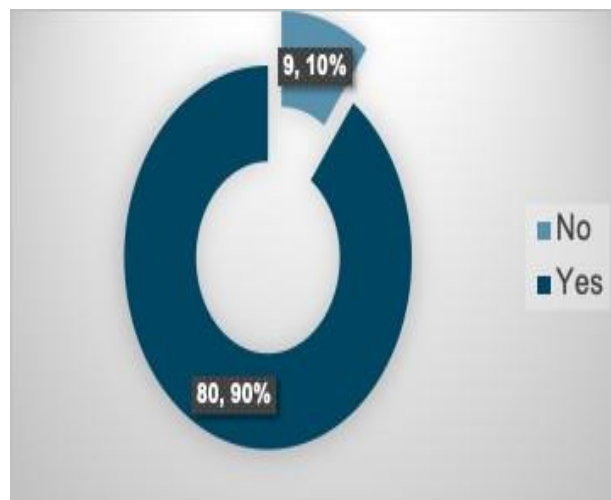


Figure 11: The Respondents' Perspectives on the Advantages of Meeting with the Research Supervisor. Most of the Respondents Opined that Meeting with the Research Supervisor is Beneficial.

Discussion

Demographic Characteristics of the Respondents

Most of the respondents were female, representing 98.9%, with just 1 male responding, which accounts for 1% (Table 1). This may be because males are in the minority and underrepresented in the nursing profession. The nursing profession is predominantly female [12]. Additionally, Jamaican women are more likely than Jamaican men to pursue university or higher-level education. While Jamaican men do aim to further their studies, women are more likely to complete their higher education courses [13].

Knowledge of Research among Students

Typically, students at the University of Technology Jamaica enroll in and complete the "Research Methodologies" module during their third year, prior to enrolling in the final year research project known as the "Major Project". Among the respondents of this study, most students (98.9%) completed the research methods module, with only one student explicitly stating that he or she did not do the module. Even though nearly all participants in this study completed and successfully passed the research methodology module prior to doing the major project, a portion of the respondents, specifically 42 respondents (47.2%), admitted to lacking knowledge on how to conduct research. The Research Methodology module is mandatory for all nursing students because it serves as a prerequisite for their research project. Conducting a research project in undergraduate nursing necessitates meticulous attention to several crucial prerequisites to ensure its success. It is of utmost importance to provide essential support to undergraduate nursing students in the process of finding and critically assessing research papers [14]. A study conducted by [15] found that undergraduate nursing students have challenges

when submitting research proposals for the first time, despite being introduced to research through several courses. This underscores the importance of students have a strong basis in formulating research ideas prior to commencing their research endeavors. Prior to conducting research, undergraduate students in various disciplines, including nursing, must complete a curriculum on research methodology. Upon completion of this module, students are expected possess the essential knowledge and skills in research methodologies, which serves as the foundation for progress in their respective fields. [16]. Acquiring knowledge of research methodologies is crucial as it equips students with the necessary abilities to conduct ethical and effective research. Furthermore, students with a solid grasp of research methodology are better equipped to understand the practical aspects of the research process [3]. Providing students with exposure to research equips them with crucial knowledge on delivering evidence-based nursing care to patients [17]. Nursing students can employ rigorous research procedures in their studies to ensure the validity and reliability of their findings by possessing a strong comprehension of research methodology.

Time Taken for the Participants to Complete their Research Project

The respondents took anywhere from under two months to over six months to complete their research projects. 7 (7.9%) students finished in less than two months, 29 (32.6%) respondents took 2–4 months, 41 (46.1%) took 5–6 months, and 12 (13.5%) went beyond 6 months. Completing the research project entails preparing a research proposal and applying for ethical clearance from the university's research ethics committee. Depending on the nature of the study, some students must obtain ethical clearance from two research ethics committees. For instance, when conducting data collection at hospitals, students need to secure ethical

clearance from both the Ministry of Health and the university's research ethics committee. This may account for the wide variation in time to complete their research projects. A qualitative study by [17] focused on undergraduate nursing students conducting clinical research projects as part of their bachelor theses. This study included students who had chosen to participate in ongoing clinical research projects and write academic papers as part of their bachelor's theses. Such projects typically involve an in-depth exploration of a research topic, data collection, analysis, and academic writing, which could extend over a considerable period.

Literature Search and Interpretation of Literature

Most of the participants of this study opined that the second chapter of their research project posed the greatest challenge (Figure 2 & Figure 3). The chapter focuses on examining the relevant literature for their study. When writing a literature review, students must carefully identify any gaps in the related studies. The task involves thoroughly examining, describing, and assessing research articles [18]. Many students find literature reviews to be a source of anxiety, often considering them the most intimidating part of research [19]. Students often perceive literature reviews as challenging resulting in increased procrastination or avoidance. Students often encounter numerous challenges when it comes to literature reviews, which can lead to a negative mindset and ultimately hinder their ability to publish on a wide range of topics. Interestingly, the literature review emerged as the most challenging aspect of their research, leading to a negative attitude towards the overall research process [20].

When questioned about the challenges they faced during the literature review, most respondents (85.4%) indicated that locating the relevant articles was the most arduous task. Supporting this discovery, [21] found in their research that Libyan students encountered significant obstacles when trying to access

literature. [21] also observed that undergraduate students in Zimbabwe encountered a similar challenge. Traditional perceptions of libraries as ideal spaces for research have recently undergone a noticeable shift. Libraries nowadays offer students outdated information that may not be applicable to their research [22]. Most individuals who accessed literature had to pay for it, which may not be feasible for many people [23]. Undergraduate nursing students may vary in their confidence regarding their ability to assess literature and analyze evidence [24].

Challenges Navigating the University's Library

The survey results revealed that 42 students (47.2%) reported a neutral experience when it came to navigating the university library. Out of the total respondents, 18 (20.2%) reported that they found it easy, while 22 (24.7%) expressed difficulty, and 7 (7.9%) students found it to be very difficult to navigate the library (figure 5). Understanding the intricacies of a university library and conducting research can pose a significant challenge for undergraduate students. Navigating through a vast library complex to locate and access the most pertinent resources can be quite daunting. [25,26] conducted research that illuminated the difficulties faced by first-year students and library users in navigating library resources. While it is understandable of this finding among first year students, why final year students will have difficulties accessing information from the library need to be investigated. Challenges navigating the library can cause students to feel confused, disoriented, and anxious, as highlighted in studies conducted by [27,28].

Participants' Reported Challenges Conducting Research

A significant number of the respondents reported encountering more challenges than

anticipated. Specifically, 78 (87.6%), indicated they were encountering greater challenges than they had anticipated (figure 10). This finding is consistent to the finding of a study was conducted at a university in Singapore, where students discovered that the initial phase of their research posed greater difficulties than anticipated. The students faced numerous challenges and utilized different methods to successfully finish their research project [29]. A study at the College of Science and Arts, Al-Namas, University of Bisha, Saudi Arabia, corroborated our research findings. It highlighted the difficulties associated with writing research project proposals in their initial phases [30]. There was a significant correlation between taking more research courses and experiencing a decrease in research anxiety. Ref. [31] emphasized the link between students' enhanced self-efficacy and their favorable attitudes towards research. During research projects, students often come across various challenges. Given these challenges, students discovered the importance of employing a variety of strategies to facilitate the completion of their research project. Most of the respondents found that meeting with a supervisor and reviewing examples of research like their topic were the most helpful (Figure 11). One of the strategies for coping with the challenges experienced by the students was to seek help from previous students (Figure 9). Additionally, because of how challenges faced by the students while conducting research, most of them had to miss clinical experience sessions to prioritize completion of research (Figure 7). One of the reasons the respondents find working on research projects challenging is because they were doing other modules while at the same time trying to complete their research projects (Figure 6). Due to the excess workload associated with research some students reportedly failed their examination (Figure 4).

Meeting with Research Supervisor

Out of the total number of students who responded, nine students (10%) expressed dissatisfaction with the value of meeting with their supervisor. In contrast, the majority of 80 students (90%) found these meetings to be beneficial (Figure 11). This correlates with the fact that most of the students prefer to meet as a group rather than working alone on an assigned area of their research projects (Figure 8). Supervisors' feedback is crucial for undergraduate students involved in research projects to enhance their learning and research abilities. Offering prompt and appropriate feedback can greatly impact the advancement and growth of students. Ref. [32] conducted research that emphasizes the importance of efficient in-person feedback for professional growth. Refs. [33,34] emphasize the need for supervisors to provide students with regular, timely, and constructive feedback to assist their progress and learning. Nevertheless, there are obstacles to delivering timely feedback, as shown by Bastola (2020), where supervisors have difficulties offering rapid feedback to students, thereby affecting their perception of support. According to [35], effective feedback plays a vital role in the teaching and learning processes. Ref. [36] carried out a study that examined students' perceptions of supervision, highlighting the crucial role of feedback in ensuring effective supervision. By implementing feedback systems, as outlined by [37], universities can establish opportunities for undergraduate research and promote the exchange of research methodologies among faculty members. Moreover, feedback processes are subject to the influence of other elements, such as online settings and cultural diversities, as emphasized by [38].

Conclusion

Based on the results, it seems that many participants found the first three chapters of their research to be more challenging than anticipated. While many of the respondents had

prior experience with research methodology, others had taken a course on the subject and were now more knowledgeable. Finding articles for review was another challenge, and chapter two (2) was the most difficult part of the research. The respondent found that meeting with their supervisor was a particularly helpful technique for completing their research, while reaching out to former students for assistance was least beneficial.

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Conflict of Interest

No funding was received from any organization for this study therefore there is no conflict of interest.

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