

ORIGINAL ARTICLE

## Evaluating the Effectiveness of Guest Lecturers in a Malaysian Pharmacy Hospital Clerkship I: A Mixed-Method Study of Student Feedback.

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### Abstract

**Introduction:** The integration of guest lecturers into the RPB40104 Hospital Clerkship I course aims to enhance pharmacy students' learning by bridging theoretical knowledge with practical application. This study evaluates the effectiveness of these guest lecturers based on student feedback, focusing on satisfaction, clarity of instruction, and the relevance of sessions to real-world pharmacy practices.

**Methodology:** A mixed-method approach was employed, involving an online feedback form distributed to 67 fourth-year Bachelor of Pharmacy (Hons.) students, with a 98.5% response rate. The survey included both quantitative Likert-scale items and qualitative open-ended questions assessing various aspects of the guest lectures.

**Results:** Quantitative analysis revealed high levels of student satisfaction, with 54.5% reporting satisfaction and 22.7% indicating they were very satisfied. Additionally, 90.9% acknowledged that the sessions enhanced their understanding of pharmacists' roles in hospital settings. Qualitative feedback highlighted the practical application of knowledge and engaging teaching methods as key benefits, while suggestions for improvement included greater clarity in explaining complex topics.

**Conclusion:** The findings suggest that guest lecturers significantly contribute to enriching pharmacy education by providing valuable insights and fostering student engagement. However, improving the clarity of complex topics could further enhance the educational experience. Continued integration of guest lecturers is recommended to sustain and improve student learning outcomes.

**Keywords:** *Guest lecturers, pharmacy education, student feedback, practical application.*

## Introduction

Guest speakers have become an integral part of teaching at colleges and universities, offering a wealth of knowledge and practical experience that enhances the learning process for students [1]. These speakers often possess expertise in their field, along with relevant industry experience, both of which serve as invaluable assets in helping students grasp concepts that will be beneficial to them in their future careers [2]. Their insights into real-world scenarios, current trends, and practices, as well as case studies, contribute significantly to improving the quality of learning in higher education [3].

Given that guest speakers come from diverse backgrounds and cultures, they bring unique perspectives on various topics, adding an element of diversity to the classroom [4]. Their presence also facilitates networking opportunities, allowing students to interact with professionals in their field and potentially establish connections that may prove valuable as they progress in their careers [1, 5, 6]. As Sage (2013) highlighted, guest speakers create an inclusive and participatory learning environment, encouraging students to engage in active learning. This allows them to ask questions, participate in discussions with peers and instructors, and apply classroom concepts to real-world situations [6].

A study by Zorek et al. (2011) found that the incorporation of guest speakers into a professional development seminar series has been shown to positively influence various aspects of student growth, particularly in enhancing student professionalism, a key learning outcome as the profession evolves from a product-centric to a patient-centred focus [2]. Regular exposure to guest speakers from diverse pharmacy career pathways has also broadened advisees' awareness of career opportunities, enabling them to begin formulating their career plans effectively.

In UniKL RCMP's Bachelor of Pharmacy (Hons.) programme, the RPB40104 Hospital Clerkship I course incorporates guest lecturers to bridge the gap between theoretical learning and practical application. These lecturers expose students to real-world challenges and practices in hospital

pharmacy settings. This course, designed for Year 4 Semester 1 students, encompasses diverse areas such as Outpatient Pharmacy, Inpatient Pharmacy, Pharmaceutical Store Management, Therapeutic Drug Monitoring (TDM), Parenteral Nutrition, Cytotoxic Drug Reconstitution (CDR), and Drug Information Services (DIS). To provide a holistic learning experience, five guest lecturers were invited to teach six core topics.

The study aims to evaluate the effectiveness of these guest lecturers in meeting the course objectives, with a focus on students' satisfaction, clarity of instruction, and the practical relevance of sessions. By employing a mixed-method approach, this research provides comprehensive insights into the strengths and areas for improvement in utilising guest lecturers within pharmacy education.

## Methodology

### *Study design*

The study employed both quantitative and qualitative methods. An online feedback form served as the survey instrument, designed to capture a comprehensive evaluation of the guest lectures over a seven-week period.

### *Study population*

The study population consisted of 67 fourth-year Semester 1 Bachelor of Pharmacy (Hons.) students in UniKL RCMP enrolled in the course, with 66 (98.5%) participants completing the survey.

### *Data collection*

The online feedback form comprised two sections:

1. Quantitative Section:
  - Likert-scale items assessed satisfaction levels, clarity, knowledge transfer, and practical relevance of the guest lecture sessions.
2. Qualitative Section:
  - Open-ended questions explored students' perceptions of the most

beneficial sessions, areas needing improvement, and suggestions for enhancing the sessions.

The feedback form was distributed online via a secure platform, ensuring anonymity and confidentiality of responses. Participation was voluntary, and informed consent was obtained electronically before the survey began. Students were provided with detailed information about the study's purpose and could seek clarification before consenting to participate.

#### *Study instrument*

The survey instrument was developed by the authors to align with the specific objectives of this study, as no existing validated tools adequately addressed the context of hospital pharmacy clerkships. To ensure clarity and relevance, the questionnaire was piloted with 10 third-year pharmacy students who were not part of the study cohort. Feedback from the pilot phase was used to refine ambiguous wording and improve the structure of the questions. The survey instrument was a self-administered online questionnaire. Each participant would receive the questionnaire via Microsoft Forms and answer it anonymously. Before starting to answer the questions, informed consent was obtained where participants were given an explanation regarding the study and clicked "I agree" after confirming that they had read and fully understood the information given for the study and that they decided to participate. Should they have any questions, they would have the opportunity to ask the investigators.

The 10-item questionnaire is divided into four sections, each serving a specific purpose. Section A includes the informed consent and demographic profile of the participants. Section B consists of three questions designed to gather students' feedback on the guest lecturers. Section C contains two open-ended questions and one closed-ended question aimed at obtaining specific feedback on the sessions. Lastly, Section D focuses on suggestions for improvement with two targeted questions.

The questions are as follows:

#### Section B:

1. Overall, how satisfied were you with the sessions conducted by the guest lecturers?
2. Did the guest lecturers encourage interaction and address student questions effectively?
3. How would you rate the following aspects of the guest lecturers' sessions?
  - a. The guest lecturers explained the topics clearly and effectively.
  - b. The guest lecturers were knowledgeable and provided real-world insights.
  - c. The sessions met my learning expectations for the course.

#### Section C:

4. Which session or topic did you find the most beneficial? Why?
5. Were there any topics that you think require further clarification or improvement? If yes, please specify.
6. Did you feel the sessions helped you better understand the practical roles of pharmacists in a hospital setting?

#### Section D:

7. What suggestions do you have to improve future sessions with guest lecturers?
8. Would you recommend continuing the practice of inviting guest lecturers for this course?

#### *Data analysis*

All statistical analyses for the quantitative study were performed using a statistical package for social sciences (SPSS), version 25.0 (SPSS, inc., Chicago, IL). The categorical variables were summarised in frequency (n) and percentage (%). A descriptive analysis was used to assess the level of satisfaction.

The qualitative data was collected through open-ended questions in a survey. Participants responded to questions about the most beneficial session or topic (Section C, Question 4), topics

requiring further clarification or improvement (Section C, Question 5), and suggestions for improving future sessions with guest lecturers (Section D, Question 7). The data was systematically coded, and labels were assigned to segments of the text that represent a particular concept, idea, or meaning. For instance, feedback related to clarity and practical relevance was coded under labels such as "Clarity" and "Practical Relevance." Similar codes were then grouped to identify broader themes that capture patterns or commonalities across the data. The identified themes were reviewed and refined to ensure they accurately reflected the content and captured the essence of participants' experiences. Consistency and coherence were checked within and across themes. Each theme was defined and thematically labelled to precisely convey its core concept. The results of the qualitative analysis were expressed in the form of a thematic analysis, incorporating quotations or excerpts from the data to illustrate each theme.

## Results

### *Quantitative study*

The results indicated a high level of overall satisfaction among students regarding the sessions conducted by the guest lecturers (Table 2). Notably, 75.8% of respondents reported being "Satisfied," while 13.6% expressed that they were "Very Satisfied." A smaller segment, comprising 9.1%, remained neutral in their assessment, and only one student (1.5%) indicated dissatisfaction. This feedback suggests that the guest lecturers generally met or exceeded student expectations. In terms of interaction and engagement during the sessions, an impressive 81.8% of students agreed that the guest lecturers encouraged interaction and effectively addressed student questions. This points to a positive learning environment fostered by the guest lecturers, which is essential for enhancing student engagement and understanding. Students also rated the clarity of the lectures highly, with 86.4% agreeing that the topics were explained clearly and effectively. Furthermore, an

overwhelming 90.9% felt that the lecturers were knowledgeable and provided valuable real-world insights, reinforcing their credibility and effectiveness in teaching complex subjects.

The sessions were deemed to meet learning expectations effectively, with 84.8% of students agreeing that their expectations for the course were fulfilled. This highlights the overall success of the guest lectures in delivering relevant content that aligns with educational objectives.

Additionally, a significant majority of respondents (90.9%) reported that the sessions helped them better understand the practical roles of pharmacists within a hospital setting, which is crucial for their professional development as future practitioners.

When asked about the continuation of inviting guest lecturers for this course, an overwhelming 95.5% responded positively, indicating strong support for this educational approach.

In conclusion, the analysis of student feedback indicates that the guest lecturer sessions were highly effective and well-received by students. The high levels of satisfaction, combined with positive assessments of lecturer interaction, clarity, knowledge, and relevance to practical roles in pharmacy, suggest that incorporating guest lecturers into the curriculum is an effective strategy for enhancing student learning experiences in pharmacy education. These findings support ongoing efforts to integrate such innovative teaching methods into academic programmes to enrich student engagement and understanding in their respective fields.

### *Qualitative Study*

Themes for the Reasons Behind the Session or Topic that Students Found Most Beneficial (Question 4):

1. Practical Application of Knowledge: Students appreciated the connection between theoretical knowledge and real-world application.
  - *"The guest lectures helped me understand how concepts like Cytotoxic Drug Reconstitution and*

*TDM are applied in real hospital settings.*” – Student A

- *“I found it enlightening to learn how pharmacists manage challenging cases, especially during the Diabetes Medication Therapy Adherence Clinic (DMTAC) session.”* – Student B

2. Engagement and Interest:  
The sessions sparked interest and sustained motivation among students.

- *“I was genuinely engaged during the discussions, as the guest lecturers used real-life cases to explain concepts.”* – Student C
- *“The interactive teaching style of the DMTAC session kept me focused and interested throughout.”* – Student D

3. Relevance to Future Roles:  
Students valued the insights into the pharmacist’s role in hospital settings.

- *“Learning directly from practising pharmacists gave me a clearer picture of what to expect in my future career.”* – Student E
- *“The lectures showed us how to handle practical challenges, which I found extremely relevant.”* – Student F

Themes for Challenges Encountered During the Guest Lectures (Question 6):

1. Clarity and Depth of Explanation:  
Some students noted that the complexity of certain topics, particularly TDM, required further clarification.

- *“The TDM session was too technical, and I struggled to follow the calculations and interpretations.”* – Student G
- *“I would have appreciated more examples and practical demonstrations during the TDM lecture.”* – Student H

2. Time Constraints:  
The limited time for each session was a

challenge, leaving little room for deeper exploration of topics.

- *“The lectures felt rushed at times, especially during the Parenteral Nutrition session.”* – Student I
- *“I wish there had been more time for Q&A or case discussions.”* – Student J

3. Resource Availability:  
Some participants highlighted the lack of additional materials to support their learning.

- *“Supplementary notes or handouts would have been helpful to revisit the topics after the sessions.”* – Student K

Themes for Suggestions to Improve Future Guest Lectures (Question 7):

1. Interactive Learning Methods:  
Students recommended incorporating more interactive components to enhance engagement and understanding.

- *“Including case-based discussions or role-playing exercises would make the sessions more engaging.”* – Student L
- *“Real-world problem-solving activities could help us better understand the practical applications.”* – Student M

2. Enhanced Clarity for Complex Topics:  
Specific suggestions were made to improve the delivery of challenging concepts like TDM.

- *“Simplifying the TDM lecture with visual aids and step-by-step explanations would be beneficial.”* – Student N
- *“Interactive examples or small group discussions on TDM could make it easier to follow.”* – Student O

3. Additional Support Materials:  
Students expressed a preference for supplementary learning resources.

- *“Providing lecture slides or videos after the sessions would allow us to*

*review the content at our own pace.”*  
– Student P

## Discussion

Our study findings indicate that incorporating guest lecturers in the hospital pharmacy clerkship course is highly effective, as evidenced by high levels of student satisfaction, engagement, and perceived relevance to real-world pharmacy practice. These findings align with previous research that highlights the benefits of guest lecturers as an effective teaching strategy across various educational fields [5, 7, 8]. Inviting industry experts to share their work experiences was particularly valuable, as reflected in both survey results and qualitative feedback. Students appreciated the guest lecturers' use of case studies, hands-on demonstrations, and discussions on practical challenges in pharmacy practice, which allowed them to engage with the subject matter beyond theoretical concepts taught in traditional classrooms. This aligns with findings by Merle & Craig (2017) who reported pharmacy learning is enhanced when the lecturers are professional industrial experts [9]. Furthermore, collaborative teaching with guest lecturers from the field not only enriches practice-oriented knowledge but also plays a crucial role in shaping pharmacy students' professional development and career readiness [10]. Our study observed similar trends, with students expressing a strong preference for continuing this approach in the future to better prepare them for their professional roles.

In pharmacy education, guest speakers can help students better understand real-life healthcare situations, which may lead to better health outcomes in their future practice [11]. Phan et al. (2024) concluded that when guest speakers are carefully chosen and supported with well-planned preparation and follow-up activities, they can significantly enhance students' learning experiences [12]. Additionally, a qualitative survey by Jablon-Roberts & McCracken was

given to 114 students to explore their past experiences and expectations regarding industry guest speakers [5]. Among those who had attended a class with a guest speaker, 86.1% reported enjoying the experience, particularly when the speaker worked in a related field, spoke with enthusiasm and honesty, and actively answered questions [13].

While Zorek et al. (2011) [2] demonstrated the benefits of guest lecturers in enhancing student professionalism within a general seminar series, our study uniquely focuses on hospital pharmacy clerkships and specialised topics such as TDM and CDR. This context-specific approach provides deeper insights into how guest lecturers bridge theoretical knowledge with hands-on clinical practices, which is critical for pharmacy students transitioning into hospital roles.

Despite the overall positive feedback, students identified several areas for improvement, particularly regarding instructional methods, engagement strategies, and resource availability. One of the primary concerns was the complexity of certain topics, such as CDR and TDM, which some students found difficult to follow, especially in terms of calculations and data interpretation. Given that these concepts are critical for patient safety and pharmaceutical care, structured instructional approaches are necessary to facilitate better understanding. Research highlights that effective teaching relies on a lecturer's ability to deliver clear, well-organised instruction [14] while also incorporating interactive teaching methods to enhance student comprehension and satisfaction [15].

In response to these challenges, students suggested the inclusion of teaching aids, such as visual materials and step-by-step demonstrations, to simplify complex concepts. Additionally, they emphasised the need for more active learning strategies, including role-playing, simulation exercises, and case-based discussions. Studies have shown that these methodologies significantly improve student engagement, knowledge retention, and practical application

skills in pharmaceutical education [16, 17]. Student feedback indicated that the DMTAC session was engaging and effectively maintained their focus, as the guest lecturer used real-life cases to explain key concepts. This approach aligns with previous research highlighting the benefits of instructor-led modelling, role-playing, and small-group case discussions in building students' confidence, satisfaction, and perceived usefulness of the session for real-world practice [18, 19]. Click or tap here to enter text. Students also noted that the interactive delivery of the DMTAC session made it more interesting and helped sustain their attention throughout. However, it is essential to align these teaching strategies with course learning outcomes to ensure their effectiveness [17].

Another major concern was time constraints, particularly given the six-week duration of the Hospital Clerkship I attachment. Many students felt that the limited time available restricted their ability to fully grasp complex topics. To address this, a revised course structure could integrate focused instructional strategies that maximise learning within the available timeframe. Providing pre-lecture materials, such as reading assignments or recorded lectures, may also help students prepare in advance and reinforce their understanding post-session [20]. Furthermore, students recommended incorporating small-group discussions to enhance engagement and allow for more personalised learning experiences. Research suggests that shifting from a speaker-centred to a student-centred guest lecturing model can improve student participation and comprehension [21]. Specifically, for TDM, a study by Bowers & Asbill (2022) mentioned that case-based activities in small discussion groups hone pharmacy students' skills and prepare them for their experiential rotations [22]. Despite that, Li et al (2015) also highlighted that this approach requires careful planning, as it may strain available resources and increase the workload for guest lecturers [21]. A possible solution is to distribute teaching responsibilities among

multiple lecturers or increase the number of tutors to facilitate more interactive sessions.

While challenges such as topic complexity, time limitations, and resource constraints were identified, they can be addressed through improved instructional strategies, active learning methodologies, and additional learning resources. By implementing these enhancements, guest lectures can continue to serve as a valuable addition to hospital pharmacy education by bridging the gap between theoretical knowledge and real-world practice. Future studies may explore the long-term impact of guest lectures on student knowledge retention and skills competency to further validate their contribution in Hospital Clerkship I course.

## **Conclusion**

Guest lecturers play an integral role in providing specialised knowledge and practical insights in the RPB40104 Hospital Clerkship I course. While the sessions were highly effective overall, targeted improvements particularly in the clarity of complex topics like TDM are necessary. Adopting more interactive and student-centred approaches will further enhance the educational experience, better preparing students for their future roles in hospital pharmacy.

## **Limitations of study**

This study relied on anonymous, voluntary student feedback collected as part of routine course evaluations. Although formal ethics approval was not sought, all procedures complied with institutional guidelines for educational quality improvement. Additionally, the findings are specific to a single cohort and course, limiting generalisability to other settings or programmes. Future research could incorporate longitudinal designs to evaluate the long-term impact of guest lectures on professional competency.

## **Conflicts of interest**

The authors declare no conflict of interest.

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**Authors' Contributions**

AAAJ was responsible for the conceptualisation of the research, study design, data collection, formal analysis, interpretation of results, and drafting the manuscript. NSMH is responsible for the discussion and critical revision of the manuscript.

**Source of financial / funding:** None

Table 1. Descriptive analysis of the demographic characteristics of respondents (n=66)

Data	Number of Students	Percentage (%)
<i>Gender</i>		
Male	17	25.8
Female	49	74.2
<i>Race</i>		
Malay	65	98.5
Indian	1	1.5

Table 2. Student satisfaction levels with guest lecturer sessions (n=66)

Satisfaction Level	Number of Students	Percentage (%)
Very Satisfied	9	13.6
Satisfied	50	75.8
Neutral	6	9.1
Dissatisfied	1	1.5

Figure 1. Students' Perceptions and Evaluations of Guest Lecturers' Teaching Effectiveness (n=66)

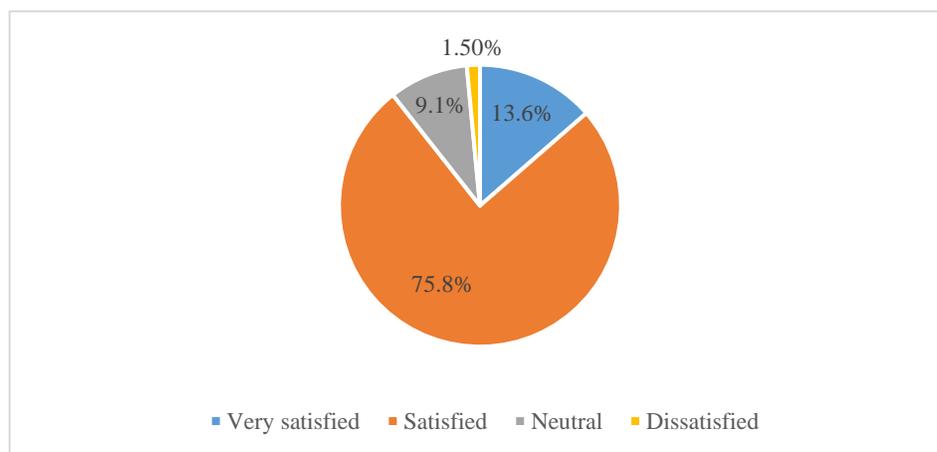


Figure 1a. Overall Experience with the Sessions Conducted by the Guest Lecturers

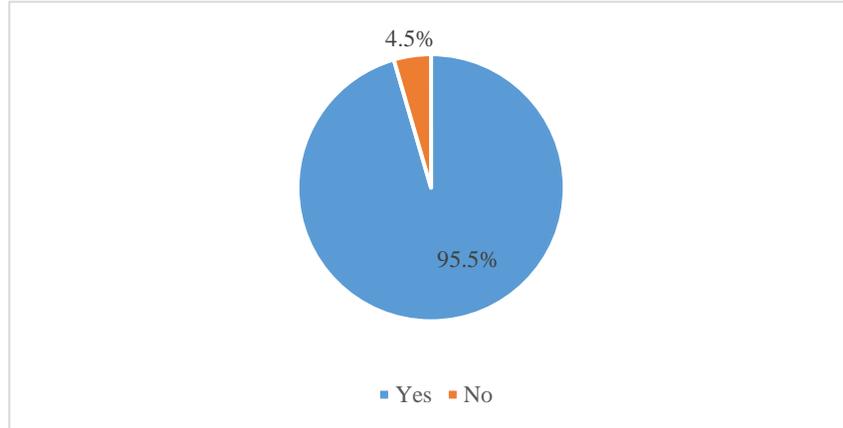


Figure 1b. Guest Lecturers' Encouragement of Interaction and Effectiveness in Addressing Questions

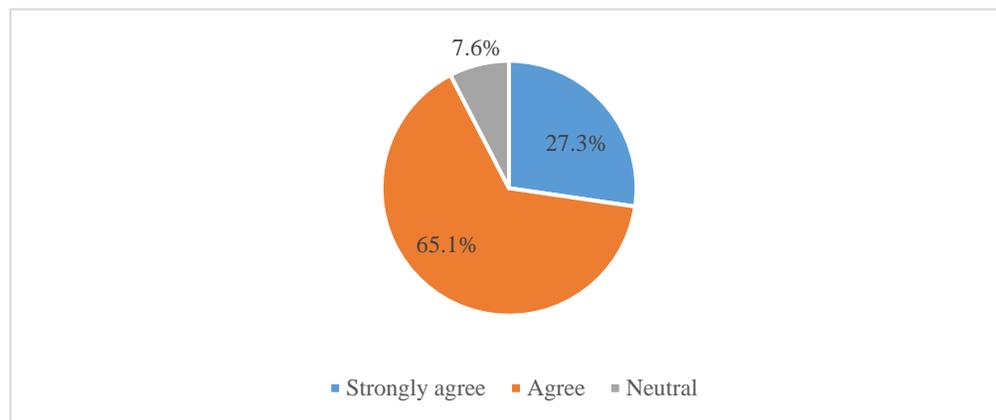


Figure 1c. Student Evaluation of the Clarity and Effectiveness of Topic Explanation by Guest Lecturers

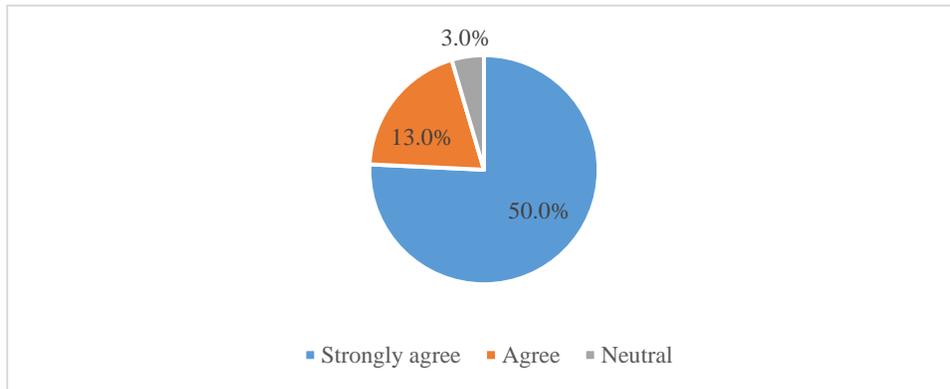


Figure 1d. Knowledge and Real-World Insights Provided by Guest Lecturers

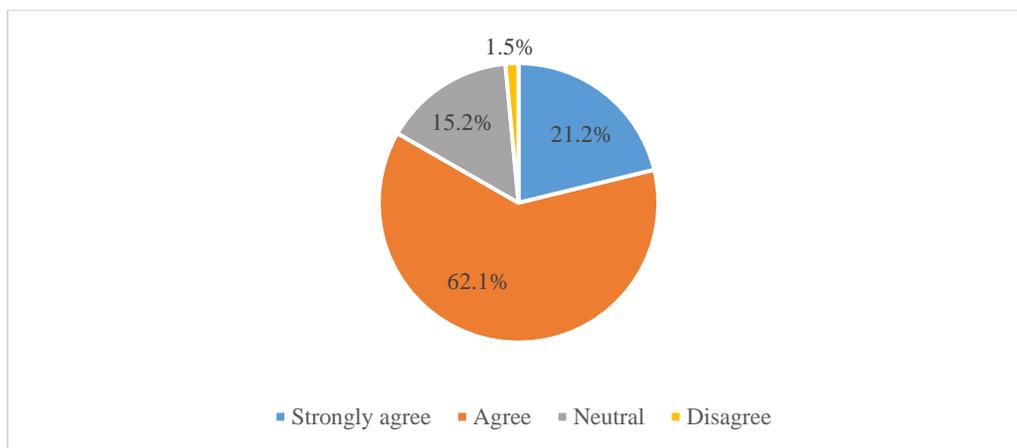


Figure 1e. Alignment of Sessions with Learning Expectations for the Course

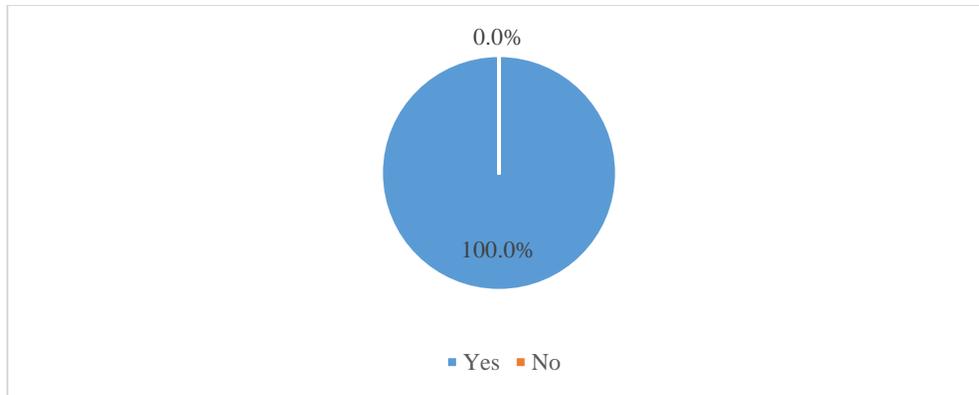


Figure 1f. Effectiveness of Sessions in Enhancing Understanding of the Practical Roles of Pharmacists in a Hospital Setting

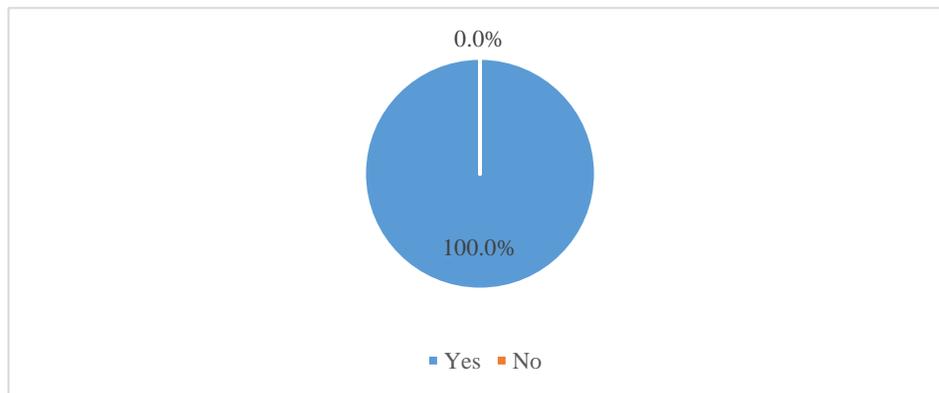


Figure 1g. Student Willingness to Recommend the Continuation of Inviting Guest Lecturers for Future Courses

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