

An Exploration of Nursing Students' Experiences Using Case Report Design: A Case Study



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Abstract Case report design in nursing practice and education encourages active learning, scientific writing, and critical thinking. This study explores the experiences of nursing students using a case report design. This study used a case study design. Data collection for the nursing student professional program from January to September 2022 included demographics, case report data, educational media, and semi-structured interviews. The thematic analysis followed Braun and Clarke's framework. The results showed no difference in the characteristics of the four nursing students, who are all women. Differences were found in the patient characteristics and the type of educational media. Two themes emerge: (1) Students learn from patient case reports; and (2) Students learning for scientific writing of case reports. Each theme consists of three sub-themes. Results showed that the case studies can improve students' clinical reasoning in providing quality care. In conclusion, according to the evidence, this study can assist professional nursing education in understanding and improving the integration of clinical practice skills and students' writing skills. In the future, clear guidelines, training, and guidance from lecturers and clinical supervisors are needed.

Keywords Case study · Final clinical skills assignment · Nursing student · Case report design

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Abbreviations

ESRD	End-stage renal disease
HD	Hemodialysis

1 Introduction

Humans are considered holistic individuals consisting of bio-psycho, socio, and cultural dimensions. Appropriately, case studies are widely used for integrated student clinical learning [1]. A case study, also known as a case report, is an in-depth study of a particular individual or group. The report will often use the terms: "review of a specific condition, disease, or problem [2, 3]. Case studies in nursing practice and health education promote active learning. In addition, these methods develop critical thinking skills and enable the healthcare community to share experiences [3–5].

In Indonesia, the Bachelor of Nursing study program includes the academic program stage (Bachelor of Nursing, four years full-time) and the nursing profession program stage (1 year full-time) [6]. Nursing students must complete a case report or case study at the professional nursing stage as a graduation requirement. The goal is for students to be able to practice comprehensive nursing care and scientific writing. In addition, combining nursing care plans with case reports is necessary because it can assist in managing patients with various health conditions to improve the quality of care [7, 8].

According to Gagnier et al. [9], the advantage of students using case reports can be increased scientific writing skills in disseminating information, interventions, or rare diseases and contributing to scientific progress [4]. However, the use of case reports is still rare among medical students. Out of 84 medical students, 67% have never written or presented a case report, and 98% consider the ability to find interesting cases necessary [10]. In a study to evaluate case study learning methods in nursing students for chest physiotherapy skills, the results showed a significant increase in knowledge and skills for nursing students [1]. These findings concluded that case studies are an effective strategy for student learning. However, that study did not explore the experience of nursing students during the case report process. Studies have been conducted regarding case studies which are focused on patients but few are from the perspectives of the nursing students' experiences. Therefore, the authors aimed to explore nursing students' experiences completing their final assignment using case studies to provide an overview of the processes and difficulties they may face. The hope is that the findings can become a recommendation for curriculum needs, including learning scientific writing.

2 Methods

Design

This case study design explores students' experiences in the nursing profession using case study designs for health education interventions in hemodialysis (HD) patients.

Participant Selection

We used a purposive sampling method for the nursing student profession program at the Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia. Inclusion criteria were: (1) nursing students who practiced in the HD unit for six weeks and completed their final assignment using a case report design with educational interventions. Students who met these criteria were 4 of 15 students.

Data Collection

Participants signed a consent form adapted from BMJ Case Reports consent form, developed by The University of Hawaii https://jabsom.hawaii.edu/wp-content/uploads/2022/05/Case-Report_sample-patient-consent-form.pdf. The authors collected demographic data, manuscript case reports, and media education from January to September 30, 2022. Furthermore, semi-structured interviews were conducted concerning: (1) Experience using case reports consisting of 5 questions; and (2) Identification of types of health education intervention media, consisting of the following questions based on the references [11–13]:

Main question: What is your experience in using case design reports?

Following questions: Differences in the use of educational media for HD patients:

(1) What media is used for educating your patient? (2) Why are you interested in using this media? (3) How are you determining the correct media type for your HD patient? (4) What do you think about the implementation of the media in patients? (5) Your opinion, what lessons can be learned from the implementation of educational media? (6) Do you think the media method used is effective and interactive? What are the drawbacks? What's the problem? (7) How can you improve or expand your patient health education program in the future according to the media you use? (8) In your opinion, is your use of educational media following the outcome you set? (9) Is the case method report helped you achieve that outcome?

Zoom interviews were recorded (30–62 min), and transcription was done within 48 h after the interview [14]. The authors independently used the thematic analysis framework developed by Braun and Clarke [15] and discussed the emerging themes.

3 Results

Participants Characteristics

The characteristics information of the four participants are presented in Table 1. Based on these data, the study results showed there were no significant differences in the characteristics of the four nursing students, except there were differences in the problems of each patient, for example, non-compliance with HD. Also, the third patient (P3) was pregnant, while the second participant (P2) was providing care for patients with fluid restriction problems (P2).

The type of educational media was adjusted to the patient's condition in (P1), (P3), and (P4). Flashcard media aimed to increase interaction and knowledge during HD (P1). However, the implementation of education was affected by the instability of the patient's condition.

Participant (P2) chose the Padlet educational media because patients and their families are familiar with using smartphones. In addition, there was easy access for the patients and families. In contrast, the participant (P4) made a flipchart due to a lack of skills in using digital information.

Table 1 Characteristics of participants and media education (n = 4)

Characteristics	Participant 1 (P1)	Participant 2 (P2)	Participant 3 (P3)	Participant 4 (P4)
Age (years)	25	24	23	24
Gender	Female	Female	Female	Female
Education	Undergraduate Nursing	Undergraduate Nursing	Undergraduate Nursing	Undergraduate Nursing
Patient	Patient 1	Patient 2	Patient 3	Patient 4
Age (years)	52	60	23	56
Gender	Man	Man	Woman	Woman
Diagnosis	ESRD history of diabetes mellitus	ESRD with hypertension	ESRD with pregnancy	ESRD with severe anemia
Problems	Non-compliance with HD	Volume-dependent hypertension	Non-compliance with HD and not routine antenatal checks	Non-compliance with HD and severe anemia (Hemoglobin 4.4 g/dL)
Media education	Intervention	Intervention	Intervention	Intervention
Media education	Flashcards	Padlet® Education Platform	A booklet with interviewing motivation	Flipchart
Outcome	Knowledge and HD compliance	Fluid restriction compliance	HD and antenatal checks routine	Knowledge and compliance with the treatment

ESRD: End-stage renal disease, HD: hemodialysis

For the participant (P3), educational media involved motivational interviews using a logbook as continuous monitoring to overcome the non-compliance of HD patients who are pregnant.

Emerging Themes and Sub-themes

Overall, the themes that emerged in this study are described in Table 2.

Theme 1: Students' learning from patient case report

In this theme, participants learn to recognize the nursing care process. However, all participants agreed that they had little experience. Participants feel they have limited time because they are simultaneously doing practical work and writing the case reports. Participants overcame this challenge by preparing nursing care plans, interacting effectively with patients, and managing their time.

... it's still not effective (intervention), because there are several conditions from the patient and maybe I also don't have much experience. (P3_23_Line 245).

Yes, I usually write down what I want to convey before going to the patient... even though it's already listed when I meet them, I tend to forget too. (P4_24_Line 284).

...is this a bit difficult to pursue clinical nursing skills. So, you must be smart about dividing your time between doing your final assignment (case report) and pursuing nursing knowledge or skills (clinical practice). (P3_23_Line 206).

Participants in this study revealed that conducting nursing care through case reports can help them recognize the unique characteristics of patients being managed, thereby strengthening clinical reasoning in determining interventions that suit the patient's needs.

In my opinion, the experience of using this case report is unique, ma'am. Because of the first one, we can do it first (study) related to unique cases and further adjust it to the patient's needs. So, because there are patients, this also motivates researchers to know more or review the literature. (P3_23_Line 203).

Something unexpected happened when the third participant (P3) identified the patient as pregnant but still taking irbesartan. Participants coherently identified the root of the

Table 2 Themes and sub-themes

Themes	Sub-themes
Students' learning from patient case report	Recognize the process of nursing care
	Recognize patient needs according to patient characteristics
	Helping to strengthen clinical reasoning
Students' learning for scientific writing of case reports	Finding the unique case to gain experience in clinical nursing care
	Challenging in writing a case report
	Trying to find a strategy for writing a case report

problem and found that the patient was ignorant of her condition and did not report her pregnancy to the doctor. Through the case reporting, the participants' clinical offerings can help improve the quality of life of the patients being managed.

I was confused when patients were still taking irbesartan. I searched various literature and immediately examined the patient and reported the results to the doctor. (P3_23_Line 215).

Then, all participants agreed that they must establish trusting communication with patients and involve their families so that interventions through educational media can be received by the patients properly and effectively. Some managed patients showed a positive effect with an increase in scores from the educational media intervention provided by the participants.

...So, after I did education with the Padlet media...after being exposed to several interventions, the patient's score increased (adherence to fluid restriction) and was also better (the HD process) than before the intervention. (P2_24_Line 151).

Theme 2: Students' learning for scientific writing of case reports

This theme revealed that participants learned to structure and correct scientific writing through case reports. All participants agreed that case reports have distinctive characteristics from other methods, such as having easier to follow flow, being flexible in writing, more concise, and considered more applicable in achieving outcomes.

... from me, it is very flexible too from this method (case report) ... it makes it easy for us too. (P1_25_Line 28).

In my opinion, this (case report) is enough to measure patient outcomes to be applied later in clinical settings. (P3_23_Line 256)

In this study, several participants explained their steps when determining which cases to be managed coherently, starting with a survey of unique cases, and adjusting to the abilities and the needs of the patient. In addition, participants also believed that support from lecturers and clinical supervisors in selecting managed cases was significant.

For yesterday's stages it was related to something more, such as a survey first for unique cases that can be appointed as case reports, then consulted with clinical and academic supervisors. Furthermore, after several unique cases were found, discussions and mutual agreements were carried out... (P3_23_Line 198).

In addition, all participants also revealed that scientific writing using the case report method was challenging because it was their first experience, so they were still confused. Therefore, a clear guide is needed regarding the rules for writing case reports so that they can guide students in correct and structured scientific writing.

... it is also a challenge for me because I do not have experience, so I am still figuring out kind of case report should be made. (P4_24_Line 274).

... there must be a special guideline (case report) with that standard (P2_24_Line 106).

In this study, several participants expressed strategies for writing case reports, including knowing how to write a case report. In addition, look for similar references and serve as a

benchmark in writing. For example, in this study, some participants mentioned using previous senior paper references. Then the most important thing is to actively consult with clinical supervisors and lecturers regarding the case report writing process.

In my opinion, the lesson learned (writing a case report) is that when you want to examine a case, you have to be structured for its preparation (case report). So, starting from finding a unique case, reviewing it, then determining the problem (P3_23_Line 242).

Then for writing it (case report), I also discussed it with my lecturer, and I also looked for references from previous friends, Mrs. who did the case study. (P4_24_Line 280).

4 Discussions

In this study, the authors explore the experiences and learning from nursing students' perspectives regarding using the case report method in final assignments. This study revealed two main themes that emerged from the interview results: students' learning from patient case reports and students' learning from scientific writing of case reports.

The learning gained by students from patient case reports in this study is that students can recognize systematic nursing processes. It starts with the participants looking for managed cases. Then, they make a nursing care plan from the assessment and the intervention for evaluation. Nursing planning requires analytical skills to relate theory to nursing practice [16]. Case reports are reported to have contributed to integrating knowledge with practice [17]. According to a study conducted by Boonkong et al. [16], case reports can improve systematic thinking, analysis, and the ability to plan nursing care and student confidence in clinical practice.

In this study, participants learned to recognize the characteristics of the patients being managed. Case reports are used to investigate in depth and systematically related to individuals, groups, or communities to increase the author's understanding [18]. A case report is a detailed report on the patient's signs, symptoms, diagnosis, treatment, and follow-up [19]. Case reports could improve the clinical reasoning of participants in this study, making it easier to determine the interventions needed by the patients. The case method is a means of bridging the gap between theory and professional practice [20]. This study proved that case reports help form good clinical reasoning in coherent students. Students are more sensitive in gathering information and understanding patient problems so they can implement interventions. These results are supported by research that case reports provide opportunities for students to practice clinical reasoning to create quality and patient-centered care [21].

The second theme is students' learning for scientific writing of case reports. All participants experienced confusion at first. A study by Yasir et al. stated that novice researchers usually experience confusion with using case reports and the differences with other methods [22]. Case reports motivate novice researchers to seek experience in writing more contextual research [23]. The findings in this study are that participants feel challenged with new situations and consider case reports to

be more flexible, practical, and applicable in the clinic. The results, in line with the study of Brogan et al. [24], stated that this design is flexible, in-depth, and contextual in understanding the phenomena of interest.

Participants started writing case reports by looking for unique and interesting cases, then consulted with clinical supervisors and lecturers. One of the stages of compiling case writing, according to Alsaywid and Abdulhaq [25] is consulting an expert or advisor in determining the case to be managed. A quality and communicative guidance process between supervisors and students is the key to success in the case report process [26–28].

The challenge in writing a case report in this study is that there are no clear and standard guidelines or guidelines. Even though it is very necessary to have concise guidelines that can be followed practically when using design case studies [29]. Efforts made by participants seeking references from seniors or similar reports were in line with the study of Alsaywid and Abdulhaq [25] indicating that the writing of case reports varies. Hence, it is necessary to understand the case report type. Support and guidance by lecturers and clinical supervisors are significant in improving knowledge and skills, overcoming challenges, and writing case reports. A survey conducted by Jha et al. revealed that the supervisor's role in facilitating the writing and presentation of reports is essential for producing a good case report [10].

5 Conclusions

Based on the findings of this study, all students initially experienced confusion in integrating the practice of nursing skills and scientific writing of case reports in nursing care. Participants completed the stages and considered how to overcome the same challenges. The study findings show that students could develop good clinical reasoning to improve the quality of patient care. Specific training and clear guidelines are needed to explain case reports, including the step-wise method in writing them. This case report approach can also help nursing education professionals understand students' perspectives on the final assignment. We highlight the significant role of lecturers and clinical supervisors in helping to understand case reports, best practices, and scientific writing.

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Arif Annurrahman—responsible for collecting data, conducting transcription and analysis, and writing manuscript drafts.

Khudazi Aulawi—responsible for reviewing the data collection and analysis and revising the manuscript draft.

Atikah Kurnia Alda—responsible for collecting data, conducting transcription and analysis, and writing manuscript drafts.

Astrid Pratiidina Susilo—responsible for methods and analysis and writing manuscript drafts. All authors have read and approved the published version of the manuscript.

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