Practices in Reinforcing Patient Privacy among Nursing Students

A Literature Review

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Abstract

Information and telecommunication technology are widely used by a majority of nursing students nowadays, and the digitalisation process was further accelerated during the pandemic. However, technological advancement does not only bring merits but poses tremendous risks to patient privacy. Meanwhile, student nurses bear risks and liabilities identical as registered nurses, confronting the factual challenges of patient privacy protection in their clinical practices.

The study is to identify practices in reinforcing patient privacy among students. The purpose of the study is to improve the awareness of nursing students and the satisfaction rate of patients with patient privacy practices. The research question of this study is: what practices reinforce patient privacy patient among nursing students.

The research method of this study is the literature review. Research articles were sourced from CINAHL and PubMed databases. After the article selection process, there were 7 papers chosen for the data analysis out of 393 articles retrieved from the accessible databases.

The main findings of the reviewed articles were coded and synthesised into three distinct themes: Under Occupational Competency, the focus is on Professional Values and Clinical Privacy Awareness. Practical Application and Management of Information Flow were encompassed in Privacy Protection Strategy. They can reinforce patient privacy amount nursing students. This is followed by Contributory Factor Theme, which include Educational Impact and External Influence, as contributes to patient privacy reinforcement among nursing students as well.

The literature review underscores that reinforcing patient privacy in nursing education necessitates a multifaceted approach, which includes fostering a deep understanding of professional values, implementation of practical privacy protection strategies, employing effective educational interventions and being aware of external influences.

Keywords/tags (subjects)

Patient privacy, confidentiality, nursing students, student nurses

Miscellaneous (Confidential information)

N/A
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1 Introduction

Studies showed that a majority of nursing students had discussed academic or clinical assignments using information and communications technology (Chan et al., 2022; Harerimana & Mtshali, 2018), whereas the ever-growing need for improvement of healthcare practices concerning information confidentiality and data protection, patient privacy is nowadays an essential aspect of qualified healthcare delivery, underscored by the importance of compliance (Abuhammad et al., 2020). As medical practitioners, nursing students are liable for compliance practices in terms of patient privacy to deliver high-quality health care fundamentally rooted in the doctrine of legal provisions (Health Care Professionals Act, 1994; Health Care Act, 2010).

Simultaneously, with the steady learning into a deeper understanding of patient privacy, the nursing practices of students have been evolving, under a series of influential factors, to honour the patient privacy right in the healthcare setting: educational findings, technological advancements, legal regulations, and challenging societal expectations, as depicts an increase at the emphasis on protecting patient privacy and ensuring the confidentiality of the personal health information (Ismail et al., 2020; P. Scott et al., 2003).

Technology does bring opportunities but tremendous risks to patient privacy as well: patient privacy and confidentiality can be easily infringed and breached nowadays (Chan et al., 2022; Ladis & Zolkefli, 2021; Papastavrou et al., 2016). However, such risks are even more amplified due to the transformation of the digitalisation process of healthcare management, which has dramatically accelerated under COVID-19 (Abdolkhani et al., 2022). Even though researchers have found factual challenges to nursing students’ protecting patient privacy, the need relative to patient privacy protection has been lacking (Ladis & Zolkefli, 2021; NS Chan et al., 2022; Poorchangizi et al., 2019).

Therefore, the literature review is to identify practices for reinforcing patient privacy among students. The purpose is to improve the awareness of nursing students and the satisfaction rate of patients with patient privacy practices.
2 Background

2.1 Patient Privacy Defined

Privacy is regarded as an essential embodiment of the autonomy of human beings. (P. Scott et al., 2003). The concept of privacy involves all areas of human activity within society, whose conception is multidimensional, interpreted variously from a scope ranging from a right, a claim, a situation, a form of control and a value (G. E. Scott, 1990; P. Scott et al., 2003).

An individual’s privacy cannot be generically defined, and a broad definition is complex without limitation of a setting (Bauer, 1994; Burden, 1998; P. Scott et al., 2003; Westin, 1970). In terms of physical and psychological privacy, they are viewed as basic human needs and rights. Social privacy is defined as the ability to control the level of desired social contract. On the other hand, information privacy is defined as the right to determine how, when and to what degree information is relevant to themselves to be shared with third parties (Burgoon, 1982; P. Scott et al., 2003).

In the case of patient privacy, it was briefly defined by Barron at the beginning as the act of showing the respect for patients wishes, space and belongings (1990), and conception was further supplemented by two different types of privacy concerning a patient: information of the patient and physical well-being of the client (Wainwright, 1994). Hence, informational, physical and psychological privacy constitutes patient privacy protection in the healthcare sector through the lens of validity assessment and its measurement (Serenko & Fan, 2013).

Patient privacy is thus regarded as infringed upon which another person or institute, to whom a patient has given confidential information, violates confidentiality: unauthorised access to medical register, disclosure of sensitive information without consent, and inadequate protection of patient data (Beauchamp & Childress, 1989; Michelson et al., 2022; Sharifzadeh et al., 2019).
2.2 Development of Privacy Protection

The earliest practice to protect patient privacy is believed to be traced back to the ritual of the Hippocratic Oath (Ορκος), 6th to 3rd centuries B.C. This oath places an absolute duty on the preservation of confidentiality of the medical information and observes discretion about general information from patients (Higgins, 1989; North, 2002):

> Whatever I see or hear in the lives of my patients, whether in connection with my professional practice or not, which ought not to be spoken of outside, I will keep secret, as considering all such things to be private.

Through the Middle Ages, the modified Hippocratic Oath was viewed as the highest esteem, emphasising the significance of physicians’ maintenance of patient information. Over the period between c. 1010 to 87 A.D., the responsibility was noted to the physician, that embarrassing information shared from the patient shall be confidential. Following that, an 11th-century manuscript imposes limitations on the notion: the secrecy of the information is void in a situation to be reported or judged (Higgins, 1989).

From 17th to 18th centuries, the practice of patient privacy protection was reinforced. In the United States, Samuel Bard emphasised the importance of not harming another’s reputation, which reflects a broader understanding of confidentiality in professional practice (Higgins, 1989). Before the 1930s, confidentiality was still primarily established through oral promises of secrecy, in which maintenance of secrecy is regarded as a moral virtue and means of trust building in clienthood in Denmark (Wadmann et al., 2023).

Following the Danish practices on patient privacy protection, from 1930 to 1967, confidentiality was viewed as a professional duty with expanding written document archives. This was followed by the era when confidentiality was regarded as citizens’ rights and organisational duties from 1968 to 1999. Starting from 21st Century, the digitisation of patient information and focus on data protection serve as technocratic rules, and confidentiality is more regulated by data protection laws other than professional judgement. Moreover, the integration of data sources and cross-border data transfer became an important topic (Wadmann et al., 2023).
2.3 Privacy as a Statutory Right

Privacy is defined as the ability of an individual to control the personal information of their own, regarded as an inherently fundamental right, where patient privacy is a crucial aspect of the health aspect of healthcare provisions protected by the Constitution, with the affiliated Data Protection Act laid down to guarantee (Altman, 1976; The Constitution of Finland, 1999; Data Protection Act, 2018).

Patients are entitled to enjoy high-quality, safe and appropriate health care, and patients’ privacy as an extension of embodiment of their statutory right is respected in Finland (ACT ON THE STATUS AND RIGHTS OF PATIENTS, 1992).

In the EU, the General Data Protection Regulation (GDPR), sets stringent standards for the protection of personal data, including health information. The regulation emphasises individual controls over their data and places clear obligations on organisations to ensure privacy and security. It has been a powerful tool for patient privacy rights in the EU (Kocharyan et al., 2021). Non-compliance with the provision of GDPR shall lead to severe financial consequences, which may potentially be causing bankruptcy due to stunning penalties/administrative fines: ranging from €10 million or 2% of annual global turnover to €20 million or 2% of annual global turnover, depending on which provision the data controller fall to comply with (General Data Protection Regulation, 2016).

Healthcare through eHealth or in a cross-border healthcare context, and research: clinical trials, epidemiological research, clinical investigations, patient registration. In addition, health and genetic data belong to the category of sensitive data, and unauthorised disclosure is forbidden. Organisations under the duty are aware of the rights of the patients to ensure the patient’s perspective on data sharing, consent and patient privacy; the following table summarises the grounds for data controller/nursing students in this context can process patient data under GDPR (European Patients Forum, n.d.).
### Table 1 Patient Information Process under GDPR*

<table>
<thead>
<tr>
<th>Grounds for Data Processing</th>
<th>The Situation When Nursing Students Able Process Patient Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explicit Consent</td>
<td>Patients provide affirmative action, indicating agreement for data processing.</td>
</tr>
<tr>
<td>Data Made Manifest by Patient</td>
<td>Patients make their health information public, thus agreeing to its use by third parties.</td>
</tr>
<tr>
<td>Patient’s Vital Interest</td>
<td>Consent is not needed if data exchange is vital for the patient who cannot provide consent.</td>
</tr>
<tr>
<td>Healthcare Purposes</td>
<td>Processing necessary for healthcare services, under the condition of professional secrecy.</td>
</tr>
<tr>
<td>Public Interest in Public Health</td>
<td>Necessary processing to protect against serious cross-border health threats or ensure healthcare safety.</td>
</tr>
<tr>
<td>Employment, Social Security, and Social Protection Law</td>
<td>Processing for employment, social security, or to comply with social protection law, with appropriate safeguards.</td>
</tr>
<tr>
<td>Substantial Public Interest</td>
<td>Defined by Member States, respecting data protection rights and fundamental rights.</td>
</tr>
<tr>
<td>Specific Reasons by Not-for-Profit Bodies</td>
<td>Processing by not-for-profit bodies with appropriate safeguards.</td>
</tr>
<tr>
<td>Legal Claims</td>
<td>Processing in the case of any legal claim.</td>
</tr>
<tr>
<td>Archiving, Research, or Statistical Purposes</td>
<td>For public interest archiving, scientific/historical research, or statistical purposes, with respect to data protection laws.</td>
</tr>
</tbody>
</table>

*Applicability of specific provisions for nursing students may be limited and/or vary in different EU member states, subject to their own professional acts. The table is adapted from the European Patients Forum (n.d.).

However, GDPR is limited and not applicable in a verbal situation. Patient information is entered into the system only after documentation and is digitally stored. By then, patient privacy is generally protected, if talking with health care professionals (including nursing students, while exerting occupational rights on a temporary basis)(ACT ON THE STATUS AND RIGHTS OF PATIENTS, 1992; Health Care Professionals Act, 1994).
Compared with the privacy rights upheld in the EU, the Health Insurance Portability and Accountability Act (HIPAA) governs the protection of patient privacy and varies from GDPR, resulting in different practices in the United States (K. Kim et al., 2016). Meanwhile, the situation in China regarding patient privacy protection studied by Kovač & Rudolf is that, patient protection is more comprehensive and advanced due to cultural differences and democratic safeguards (2022). Thus, it is a universal legal practice to protect patients’ privacy rights despite their geography, culture, education, and socioeconomic differences.

2.4 Relevance to Students and Patients

Patient privacy protection is fundamental to establishing trust in nurse-patient clienthood. Patients are prone to disclosing sensitive information to the healthcare giver if trusted, which is rooted in the assurance of confidentiality and privacy (Sankar et al., 2003).

Meanwhile, the protection of patient privacy is a critical issue in the nursing field, which is of significance from the perspective of legal and ethical implications (Haynes et al., 2007). Also, patient privacy is nursing students’ fundamental responsibility in medicine, and is essential for maintaining patient dignity and trust in healthcare settings (Foroozadeh et al., 2016; Tehrani et al., 2018). If nursing students breach patient privacy in clinical practices, compromised patient trust, dissatisfaction with care, and reluctance to engage with the healthcare providers may happen, ultimately negatively impacting the quality of the patient-nurse clienthood and overall patient experience of the healthcare delivery (Lin et al., 2013; Tehrani et al., 2018). In addition, patient privacy violations may spawn negative consequences—clients withholding information from healthcare practitioners and decreased satisfaction with the healthcare experience (Karro et al., 2005; Lin et al., 2013).

Nevertheless, qualified implementation of patient privacy protection can increase patient satisfaction, which is vital for the success of healthcare facility management (Gupta et al., 2014). On account of merit: self-adherence to nursing instruction gaining a better prognosis, nursing students should cultivate awareness of patient privacy protection and optimise their clinical practices correspondingly (Vaz, 2018).
3 Study Aim, Purpose and Research Question

The aim of the study is:

To identify practices in reinforcing patient privacy among students.

The purpose of the study is:

To improve awareness of nursing students and satisfactory rate of patients on patient privacy practices.

The research question of this study is:

What practices reinforce patient privacy among nursing students?

4 Methodology

4.1 Literature Review

Literature reviews are perceived by Cram et al. and Rahman et al. as an essential component of any academic research by describing, understanding, explaining, and testing the constructs and theories within a given field, with gaps in literature and limitations of knowledge identified (2020; 2022). Directions for future research and development within a particular discipline are pointed out through the outcomes of the studies.

The significance of the literature reviews is further demonstrated by their compacity to resolve broader and more abstract questions, participate in post hoc theorising, provide a more compelling argument for the null-hypothesis conclusion, and more effectively recognise and use the methodological diversity, as eventually result in the advancement of knowledge in the area (Baumeister & Leary, 1997; Niazi, 2015).
4.2 Literature Search

The literature articles in this study were retrieved from the electronic databases CINAHL and PubMed, which are freely accessible to students at JAMK University of Applied Sciences via its library service. Boolean operators “And” and “OR” were used together with keywords for searching articles against synonyms for thorough results: patient, individual, privacy, nursing students, undergraduate student nurses, satisfaction, awareness, and perspectives relevant to the research topic and questions. The used terms were probed with the PICOs Module, as shown in Table 2 below.
Table 2 PICOs Criteria

<table>
<thead>
<tr>
<th>P (Population)</th>
<th>Patient OR patients OR client OR clients OR individual or individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>I (Interest)</td>
<td>Privacy</td>
</tr>
<tr>
<td>CO (Context)</td>
<td>Nursing students OR student nurses OR undergraduate student nurses OR pre-licensure nurse</td>
</tr>
<tr>
<td>S (Study Design)</td>
<td>Written in English, Published between 2014 and 2024, Peer reviewed, Full text available to JAMK nursing students</td>
</tr>
</tbody>
</table>

Inclusion and exclusion criteria (see Table 3) serve as a search strategy, in which inclusion criteria is to screen the collected articles, which are peer-reviewed, research article, full-text provided, in English, published from 2014 to date and answering the research question; And exclusion criteria filter out articles that are not peer-reviewed, not research article, full-text not provided, in languages other than English, out of the given timeframe and not answering the research questions.

Table 3 Inclusion and Exclusion Criteria

<table>
<thead>
<tr>
<th>Inclusion Criteria</th>
<th>Exclusion Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer Reviewed</td>
<td>Not Peer Reviewed</td>
</tr>
<tr>
<td>Research Article</td>
<td>Not Research Article</td>
</tr>
<tr>
<td>Full-Text Provided</td>
<td>Full-Text not Provided</td>
</tr>
<tr>
<td>Articles in English Language</td>
<td>Articles in Languages other than English</td>
</tr>
<tr>
<td>Articles Published from 2014 to Date</td>
<td>Articles out of the Given Timeframe</td>
</tr>
<tr>
<td>Articles Answering the Research Questions</td>
<td>Articles not Answering the Research Questions</td>
</tr>
</tbody>
</table>

4.3 Article Selection

A preliminary search was implemented through the PICOs model, which stands for Population Intervention Comparison Outcome. From accessible databases, 393 articles were obtained, of which 173 were obtained from CINAHL and 220 were obtained from PubMed. After implementing the
criteria for inclusion and exclusion, the number of articles decreased to 49. Of these, 39 remained in CINAHL after 134 were automatically excluded, and 10 remained in PubMed after 210 articles were excluded (203 automatically and 7 manually). Following the importation of the filtered articles into Zotero to consolidate potential duplicates, 48 articles remained, one of which was subsequently excluded. Following this procedure, 35 articles were selected based on their titles, with the exclusion of 13. Further, 21 studies were omitted, leaving 14 papers after their abstracts were evaluated. From the final inclusion, a subsequent review of the full texts of the articles led to an exclusion of 7 articles (see Figure 2).

Figure 2 Article Selection Flow Chart

4.4 Data Analysis

Systematic analysis and interpretation of non-numerical data: text, image or audio, for instance, is involved in qualitative studies to identify patterns, themes, and meanings, which serves as a widely-used qualitative research method used in health field studies (Hsieh & Shannon, 2005). The data analysis can thus reveal gaps in studies and provide new research directions (Pauceanu et al., 2021).
The inductive content analysis (ICA), which is a bottom-up approach to the analysis of textual data, is used in this qualitative study, where the fragmented literature is fragmented in the phenomenon of study. Categories and themes are derived directly from data (Elo & Kyngäs, 2008). ICA consists of five procedures: Read and Familiarise, Five-Round Coding, Second-Round Coding, Refining the Fine-Grained Subcategories and Synthesis and Interpretation. The primary step is to become familiar with the content by thoroughly reading the selected articles, which is followed by the first coding. Broad categories of the content related to the research question are identified and labelled at the moment. The third step is to take a closer look into the text and code it with more fine-grained subcategories corresponding to the specific details and meanings within the text. Refining the subcategories follows the last procedure: comparing and refining the subcategories by collapsing similar ones and reserving distinct ones. Furthermore, lastly, synthesis of the data is done to synthesise and connect the categories to create a rich answer to the research question (Vears & Gillam, 2022). In brief, code, subcategories, categories and a theme are concluded in ICA (Graneheim & Lundman, 2004).

Figure 3 Process of Inductive Data Analysis Adopted from Vears & Gillam (2022)

5 Result

The reviewed articles were studied in the following countries/areas respectively: Turkey (2), Iran (2), Hongkong (1), Cyprus (1) and Brunei (1). The Research methods used in the reviewed article were a two-part survey, a qualitative descriptive study, a Patient Privacy Scale (PPS) questionnaire, a single-anonymised, two groups with pre-test and post-test design, a qualitative study through the formation of four focus groups, a cross-sectional study and another PPS questionnaire (more details see Appendix 2).

The main findings of the reviewed articles were coded and synthesised into three distinct themes: Occupational Competency, Privacy Protection Strategy and Contributory Factor, together with sub-themes. Both the theme and the sub-theme are further illustrated in Table 4 below.
### Table 4 Themes and Sub-Themes

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Occupational Competency</strong></td>
<td>Professional Values</td>
</tr>
<tr>
<td></td>
<td>Clinical Privacy Awareness</td>
</tr>
<tr>
<td><strong>Privacy Protection Strategy</strong></td>
<td>Practical Application</td>
</tr>
<tr>
<td></td>
<td>Management of Information Flow</td>
</tr>
<tr>
<td><strong>Contributory Factor</strong></td>
<td>Educational Impact</td>
</tr>
<tr>
<td></td>
<td>External Influence</td>
</tr>
</tbody>
</table>

### 5.1 Occupational Competency

#### 5.1.1 Professional Values

Of significant priority, patient privacy and confidentiality were reported in protective measures in clinical settings among nursing students: “...students prioritise maintaining patients’ privacy confidentiality in daily nursing practice...” and “... view that maintaining patients’ privacy and confidentiality ensures they are comfortable while staying in hospitals.” (Ladis & Zolkefli, 2021; Poorchangizi et al., 2019). Also, students recognised that patients enjoy the statutory right to privacy and values of privacy and confidentiality, an essential indicator of client-centred care implementation (Ladis & Zolkefli, 2021).

Most students could adequately understand the significance of privacy and the correlation between dignity and privacy, in which privacy serves as an indispensable part of patients’ dignity: “Maintaining privacy was considered by the majority of study participants as an integral part of preserving patients’ dignity” (Ladis & Zolkefli, 2021; Papastavrou et al., 2016). The ground of the idea originates from the closeness between patient private space and confidential information, which are steadily accessible to nursing students. Students perceive the interrelationship between dignity, autonomy and patient privacy. It was reported in the reviewed article that empathy is a professional quality needed for the exercise of privacy protection (Ladis & Zolkefli, 2021; Papastavrou et al., 2016).
Furthermore, the ability to emphasise the patient’s situation and needs helps students promote the practices of asserting privacy and patient dignity as a whole: “Put yourself in their shoes. For example, we also want to be comfortable with privacy, especially when you are sick, you do not want to be crowded, need some privacy, and need your place to rest. Give them space!” (Ladis & Zolkefli, 2021)

Students perceived the maintenance of patients’ privacy as their professional role. Further, they broadened the responsibility of guarding, where the public and everyone, including patients themselves, are responsible for asserting patient privacy (Ladis & Zolkefli, 2021).

5.1.2 Clinical Awareness of Privacy

Nursing students reached a common understanding across different reviewed papers, where patient privacy and confidentiality were infringed and violated commonly, which jeopardises patients’ feelings towards medical practitioners and an essential part of treatment—trust, without which prognosis is negatively affected (Ladis & Zolkefli, 2021; Papastavrou et al., 2016). Additionally, the trust is hardly won back: “If we break their trust, they will not believe us again” (Ladis & Zolkefli, 2021). Noticeably, patient privacy is easily infringed due to the development of technology nowadays and in emergencies (KULAKAÇ et al., 2021; Ladis & Zolkefli, 2021).

Attitudes towards patient privacy and privacy consciousness of patient privacy among nursing students determine the exercise of patient privacy protection, where the promotion of awareness will reinforce patient privacy protection (Kucukkelepce et al., 2021). Proper perspectives of students on privacy and confidentially result in positive influence and good practices against misuse of information and disclosure to non-authorised persons, improve clienthood between nursing students and clients through trust, and advance patients’ well-being (Kucukkelepce et al., 2021; Ladis & Zolkefli, 2021).

Different reports have unveiled a common finding in which nursing students have well-asserted patients’ privacy, as can be validated by the Patient Privacy Scale (PPS) and Privacy Consciousness Scale (PCS): 4.32±1.20 (range: 1 to 5) of PPS and 3.49 ± 0.25 (range: 2.50 to 4.40) of PCS from the study conducted by Kucukkelepce et al. (2021), and 119.7 ± 12.1 out of 135 from the research done by Chan et al. (2022). Students are of good practices to protect patient privacy (Chan et al., 2022;
In addition, it was underscored by Kucukkelepce et al. that weak negative correlations were observed between PPS and PCS (Kucukkelepce et al., 2021).

Cultural sensitivity is emphasised in a reviewed study. Students are compelled to cultivate cultural sensitivity as professional competency due to various cognitions in terms of religion. In the case of Muslim patients, “awrah” is taken seriously in light of physical privacy (Ladis & Zolkefli, 2021).

### 5.2 Privacy Protection Strategies

#### 5.2.1 Practical Application

Patients are suggested to be involved in the decision-making of the treatment, as honours the right to know of patients (Papastavrou et al., 2016; Poorchangizi et al., 2019). On the basis of this idea, medical procedures done by nursing students are required to have consent/permission from patients to keep them informed: “They also practised asking permission and consent for every procedure.” The patient is given the right to choose their treatment based on the provided information (Ladis & Zolkefli, 2021; Papastavrou et al., 2016).

Curtains are recommended to be used in every possible situation before the commencement of a medical procedure. However, a curtain in a clinical setting is usually insufficient to fulfil the purpose of information isolation/privacy protection, but it serves as the least procedure (Ladis & Zolkefli, 2021; Papastavrou et al., 2016). Students are also reminded to close the door (Papastavrou et al., 2016). Moreover, the medical practices of students shall be in accordance with law and ethical codes: “...privacy is the number one priority when taking care of patients; this is also included in the law and ethics code of ethics” (Ladis & Zolkefli, 2021).

Volume and tone have to be lowed when discussing with colleagues and patients, as acts of this kind may infringe patient rights and jeopardise their dignity: “Controlling one’s voice when discussing ...for example, nurses or doctors with a loud voice when giving nursing care or discussing would cause other people from the same ward or cubicle to hear something embarrassing or too personal.” (Ladis & Zolkefli, 2021).
5.2.2 Management of Information Flow

It is reported by Chan et al. that most nursing students have discussed academic or clinical assignments or shared clinical experiences via ICT, in which social media serves as the main channel of communication between nursing students (2022), but it is challenging for medical professionals and the public aware of their actions, which potential exert effects between patient and nursing students (Ladis & Zolkefli, 2021).

Nursing students argue and discuss the demarcation line for information exchange in light of privacy protection: “…information privacy and confidentiality are important but observed confidential matters being discussed by nurses with auxiliary staff or other patients” (Papastavrou et al., 2016).

Ladis & Zolkefli suggest that crucial information should be used and disclosed to medical practitioners and third parties with consent from the patient. Such restriction is still upheld and applicable to patients and other family members, if without permission. Moreover, tremendous awareness should be put on stigmatised diseases, for instance, STDs, which stands for sexually transmitted diseases (Ladis & Zolkefli, 2021).

Researchers discovered that students who have never photographed patients are of higher PPS scores than those who have taken photos of patients with consent and are regular users of Instagram (Chan et al., 2022).

Researchers discovered that students who have never photographed patients are of higher PPS scores than those who have taken photos of patients with consent and are regular users of Instagram (Chan et al., 2022). Furthermore, the requirement of mentors’ presence upon accessing and using sensitive information through online health information systems sets up limitations for nursing students (Ladis & Zolkefli, 2021).
5.3 Contributory Factors

5.3.1 Educational Impact

Poorchangizi et al. found that students with better academic performance have higher scores in professional values. However, the education semesters students are enrolled in do not necessarily cause any difference (Poorchangizi et al., 2019).

In the study conducted by Adib-Hajbaghery & Faraji, both group discussion and education booklet methods improved students’ attitudes towards patient privacy. Nevertheless, the educational booklet method did not significantly affect the student’s practices in essence. However, group discussion has proven effective and is recommended for use by nurse educators in teaching and schooling (Adib-Hajbaghery & Faraji, 2016).

Most sampled students have taken privacy training courses (Kucukkelepce et al., 2021; KULAKAÇ et al., 2021), but it was argued by finding of Kucukkelepce et al., that there is no significant difference based on whether students took courses with regard to patient privacy (2021).

5.3.2 External Influences

Research by KULAKAÇ et al. argues that female nursing students perform better than male students in terms of privacy awareness towards patients, validated by PPS (2021), whose finding contradicts the study result of Kucukkelepce et al.: “There was no significant difference between the gender of the students, the status of taking any course related to patient privacy, and privacy consciousness” (2021; 2021). In addition, gender was not an influential factor in the study of professional values, stated Poorchangizi et al. (2019).

Privacy protection is regarded as a collective responsibility, where patients themselves are concluded. Moreover, failure of privacy protection can put patients, as mentioned in the study of Ladis & Zolkefli, into depression or embarrassment, sadness and potential suicide; conversely, satisfaction with treatment is realised if privacy is respected (2021).
Personnel mental state is reported to be a changing factor, either promotive or violative towards privacy protection (Papastavrou et al., 2016). In the study of KULAKAÇ et al., researchers discovered the causal correlation between heavy workload and difficulties asserting patient privacy. Furthermore, in the same study, students living in dormitories showed higher PPS scores, indicating better practices concerning patient privacy awareness (2021).

6 Discussion

6.1 Discussion of Results

The aim of the study is to identify practices in reinforcing patient privacy among students. In this research, Occupational Competency (1), Privacy Protection Strategy (2) and Contributory Factor (3) are identified as main themes, together with their sub-themes, in which professional values and clinical privacy awareness as well as practical application and information flow management can reinforce patient privacy among nursing students. Educational impact and external influence also contribute to patient privacy reinforcement among nursing students.

The core of professional values among nursing students resolves a deep understanding of the importance of patient privacy and confidentiality, which is not merely adhering to the compliance requirements but rooted in the recognition of privacy as an integral part of patient dignity and autonomy. In addition, empathy plays a crucial role here, as it allows students to appreciate the patient’s perspective and the significance of maintaining their privacy (Ladis & Zolkefli, 2021; Papastavrou et al., 2016). Meanwhile, such a viewpoint is advocated by Ma et al., who also acknowledged that empathy is a cornerstone for effective clinical practice in high-quality healthcare and is required in nursing education (2021).

Clinical privacy awareness concludes by recognising the various approaches in which patient privacy can be compromised, particularly in modern healthcare settings, where technological advancements and emergency scenarios pose new challenges. The awareness is a critically helpful compass in guiding nursing students to adopt practices that safeguard patient privacy: being vigilant of the usage of electronic health registers, mobile devices, and social media in clinical areas during this era (Chan et al., 2022; Ladis & Zolkefli, 2021; Papastavrou et al., 2016).
In the realm of privacy protection, practical applications play a crucial role in fostering a safe and respectful environment, for example, using curtains during examinations and ensuring private conversation by lowering the volume and enclosing room for possible procedures. Furthermore, ethical and legal guidelines were practical tools in disciplining students’ practices in terms of patient privacy protection (Ladis & Zolkefli, 2021; Papastavrou et al., 2016). However, the measures above collected from reviewed articles may not be enough, as noticed by Ladis & Zolkefli, the use of single-occupancy rooms may contribute to patient privacy protection much better. Considering the price-quality ratio, it is worthy of instalment for the sensitive groups in maternity and palliative care, where family members can be actively involved in treatment periods and encourage close relations (Bertuzzi et al., 2023; Lombardo et al., 2013).

In the light of findings from KULAKAÇ et al. and Kucukkelepce et al., the impact of theoretically educational courses on reinforcing privacy practices cannot be overstated, whereas interactive learning methods, such as group discussions and simulation exercises, can significantly enhance students’ understanding and effectively promote practices (Adib-Hajbaghery & Faraji, 2016; 2021; 2021). Nevertheless, promoting patient privacy is never the sole responsibility of a single party but ranges from individual to national level, with educational efforts prioritised (Y. Kim, 2021). Lastly, external factors such as personal attitudes, cultural background, workload and living arrangements can all or partially influence a student’s approach to patient privacy protection, with gender remained to be discussed (Kucukkelepce et al., 2021; KULAKAÇ et al., 2021; Poorchangizi et al., 2019). Recognising and addressing these factors will benefit both nursing students and patients.

### 6.2 Ethical Considerations, Reliability and Validity

A critical appraisal entails a thorough and deliberate evaluation of the reliability or methodological rigour of a study, which aids in determining the degree to which individuals can place trust in the results of a collection of research (Tod & Smith, 2021). The reviewed articles were evaluated through a critical appraisal tool developed by Hawker et al. (2002), attached in Appendix 1. The quality of the articles was evaluated through aspects of abstract and title, introduction and aims, methods and data, sampling, data analysis, ethics and bias, results and transferability of generalizability and implications and usefulness. Each section of the nine viewpoints is scaled from one to four, from lowest to highest score. Thus, 36 is the highest possible score. All of the articles are above/equal to 32 points.
Relevant ethical committees have approved all reviewed articles, and/or administrative bodies: the Ethics Committee of Kashan University of Medical Sciences, the Cyprus National Bioethics Committee, the Ethics Committee Affiliated to the Kerman University of Medical Sciences, Gümüşhane University Non-interventional Clinical Research Ethics Committee, the Faculty Research Ethics Committee and the Survey and Behavioural Research Ethics Committee of the Chinese University of Hong Kong, with approval to Kucukkelepçe et al. from the unspecified committee (Adib-Hajbaghery & Faraji, 2016; Chan et al., 2022; 2021; KULAKAÇ et al., 2021; Ladis & Zolkefli, 2021; Papastavrou et al., 2016; Poorchangizi et al., 2019). All participants of the review student have been informed and given verbal and written consent, except for Poorchangizi et al. (2019), whose participants’ consent was obtained impliedly/tacitly by returning the completed questionnaire. Researches of Adib-Hajbaghery & Faraji and KULAKAÇ et al. were conducted in accordance with the Declaration of Helsinki.

The reliability and validity of the article can be proven through the descriptive process of the literature review, which can thus be repeated. The review articles were analysed deliberately, avoiding bias. The American Psychological Association 7th Edition was utilised in this work for citation and paragraphing, honouring the authors of the original sources. Plagiarism was avoided through the mentioned guidelines and the Turnitin report.

The majority of the studies sampled were conducted in Asian countries or regions, with only one country from Europe, suggesting that the results may not be globally generalisable. Additionally, The demographic makeup of the participant pool was predominantly female, which thus resulted in less comprehensive data on male participants. The research articles were exclusively retrieved from CINAHL and PubMed databases, potentially limiting the transferability of the findings.

6.3 Conclusion

The literature review findings reveal that reinforcing patient privacy among nursing students requires multifaceted approaches, which encompass a deeper understanding of professional values, practical strategies for patient privacy protection, effective educational interventions, and an awareness of external influences. Integrating these elements into the curriculum, along with the ongoing evidence-based research and adaption to the changing healthcare landscape, is fundamental for preparing nursing students to confront various challenging settings. Future studies
could focus on exploring more interactive and practical educational approaches to reinforce patient privacy protection and promote patient satisfaction.
References


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Data Protection Act, 1050/2018 (2018). https://finlex.fi/en/laki/kaan-nokset/2018/en20181050?search%5Btype%5D=pika&search%5Bkieli%5D%5B0%5D=en&search%5Bpika%5D=data%20protection

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https://doi.org/10.1108/dlp-03-2022-0024


## Appendix 1. Critical Appraisal of Selected Articles

<table>
<thead>
<tr>
<th>Author</th>
<th>Abstract and Title</th>
<th>Introduction and Aims</th>
<th>Methods and Data</th>
<th>Sampling</th>
<th>Data Analysis</th>
<th>Ethics and Bias</th>
<th>Results</th>
<th>Transferability or Generalizability</th>
<th>Implications and Usefulness</th>
<th>total</th>
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<tbody>
<tr>
<td>Papastavrou et al. (2016).</td>
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<td>Poorchangizi et al. (2019)</td>
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<td>Chan et al. (2022).</td>
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<td>Kucukkelepce et al. (2021).</td>
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<td>KULAKAC et al. (2021).</td>
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Appendix 2. Summary of Reviewed Articles

<table>
<thead>
<tr>
<th>Authors, (Year), Country/Region</th>
<th>Purpose and Aims of the Study</th>
<th>Research Methods or Instrument</th>
<th>Sample (n)</th>
<th>Validity / Reliability</th>
<th>Main results</th>
<th>Critical appraisal (Hawker et al., 2002)</th>
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<tr>
<td>Chan et al. (2022). Hongkong.</td>
<td>To investigate nursing students’ practices of patient privacy protection and to identify factors associated with their practices.</td>
<td>A two-part survey was used to collect two types of data on nursing students: (1) personal characteristics, including demographics, clinical experience and use of information and communication technology and social media and (2) practice of patient privacy protection, collected using the Patient Privacy Scale.</td>
<td>A total of 319 nursing students aged 18 or above, studying pre-registration nursing programmes and who had attended at least one block of clinical placement, were recruited from a university in Hong Kong</td>
<td>The Chinese version of the scale has been shown to be reliable, with a Cronbach’s alpha of 0.94 for the overall scale and of 0.89, 0.73, 0.87, 0.88 and 0.84 for subscales 1 to 5, respectively.</td>
<td>The findings improve our understanding of nursing students’ practice of patient privacy protection and the associated factors. This will inform the development and revision of current strategies to enhance nursing students’ practice of patient privacy protection, especially their use of social media.</td>
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<tr>
<td>Ladis &amp; Zolkefli. (2021). Brunei.</td>
<td>The study explores nursing and midwifery students’ perspectives on protecting patients’ privacy</td>
<td>A qualitative descriptive study design via focus group discussions was employed to elicit responses from the students.</td>
<td>The study was conducted using a qualitative approach through focus group discussions with 48 first-year nursing and midwifery students.</td>
<td>To ensure the study’s findings are credible, a pilot study was conducted to pre-test the questions for</td>
<td>Three themes were derived from the findings of the study: (1) Dignity of patients, (2) The values of privacy and confidentiality, and (3) Duty and everyone’s re-</td>
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and confidentiality through knowledge and insights gained from clinical experiences.

Students from two nursing institutions in Brunei Darussalam.

The focus group discussions.

The findings have shown that the students understand and know the value of privacy and confidentiality and agreed that protecting patients’ privacy and confidentiality are their moral duty and obligation.

| Kucukkelepce et al. (2021). Turkey. | This research aims to determine the relationship between nursing students’ privacy consciousness and attitudes towards patient privacy. | The data were collected with a questionnaire prepared by the researchers and the Patient Privacy Scale (PPS). | This is a descriptive, correlational research. The sample of this study consisted of 200 nursing students who were studying in the nursing department of a state university. | The Cronbach’s alpha value of the scale for this study was .48, indicating a low level reliability. | It was found that there was a significant relationship between the students’ continued class and consciousness regarding privacy of others and behaviours regarding privacy of others. It was found that there was a significant relationship between consciousness and behaviours regarding privacy of the self and their belief that necessary attention is paid in clinics to patient privacy. | 32 |
This study aimed to compare the effects between group discussion and educational booklet on nursing students’ attitude and practice toward patient privacy in Iran.

A single-blind, two groups, pre-test, and post-test design was conducted in this study. The study was conducted in the second educational semester of the year 2015 from 22 May 2015 to 31 July 2015. The study was conducted on 60 nursing students in Kashan, Iran who were randomly allocated into two groups to be trained on patient privacy either through group discussion or by an educational booklet.

The content validity of the questionnaire was approved by 10 nursing instructors and the content validity index (CVI) ranged from 0.85 to 0.94. Moreover, the content validity ratio (CVR) was > 0.62. This checklist was developed through literature review and validated by the researchers and consists of 11 items on the four aspects of patient privacy including physical space (3 items), informational privacy (2 items), psychological privacy (1 item), and social privacy (5 items). The content validity of the SPTPP checklist was confirmed by

Before the intervention, no significant difference was found between the group designated to group discussion and that designated to the educational booklet in the mean overall score of attitude ($P = 0.303$) and practice ($P = 0.493$) toward patient privacy. After the intervention, the mean attitude score significantly increased in the two groups ($P = 0.001$). Moreover, the students’ practice score increased in the discussion group while it did not significantly change in the booklet group ($P = 0.001$).
Papastavrou et al. (2016). Cyprus.

To explore the issue of patients’ dignity from the perspective of nursing students.

A qualitative study was employed with the formation of four focus groups and the participation of nursing students. Data were analysed via a thematic content analysis of the discussions.

The researchers recruited students through advertisements placed in the nursing laboratories. Students should have had at least one clinical placement. From those students who expressed interest in the first day, 36 were selected—through purposive sampling—and invited to participate. All students except two (N = 34) accepted the invitation.

The study’s protocol was reviewed and approved by the Cyprus National Bioethics Committee. Ethical standards were followed throughout the study.

Several factors that maintain or compromise patients’ dignity emerged. These factors were grouped into five themes: (a) patients’ preferences, verbal abuse and regarding a patient as a unique person; (b) privacy and confidentiality; (c) loss of autonomy and need for help; (d) discrimination and (e) attribution and reciprocity.

Poorchangizi et al. (2019) Iran.

The present study aimed to investigate the importance of

This cross-sectional study was conducted at the Kerman University-Of the remaining 106 students, 100 students com-

The validity of the translated questionnaire was confirmed using face

Results showed that the mean score of the students’ professional values was at high level
Professional values from nursing students’ perspective.

The data were collected with the questionnaire developed by the researchers and the Patient Privacy Scale. To evaluate the data, continuous variables were expressed as mean, and content validity as well as expert opinion. Reliability of the NPVS-R was reported to be 0.91 using Cronbach’s alpha. To establish reliability of the NPVS-R in Persian, a pilot study was conducted with 20 nursing students, which resulted in a Cronbach’s alpha coefficient of 0.90.

The values with less importance to the students were “participating in public policy decisions affecting distribution of resources” and “participating in peer review”. The professional value score had a statistically significant relationship with the students’ grade point average (P < 0.05).

<table>
<thead>
<tr>
<th>KULAKAC et al. (2021). Turkey.</th>
<th>This research was conducted in a descriptive design to determine the privacy awareness</th>
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<td>The data were collected with the questionnaire developed by the researchers and the Patient Privacy Scale. To evaluate the data, continuous variables were expressed as mean,</td>
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<td>The sample of this descriptive study consisted of 490 nursing students studying in Gümüşhane University Health Sciences Faculty</td>
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<td>The study revealed that gender, place of residence, and education on privacy were the factors affecting privacy awareness. The reasons for the violation of privacy were determined as “careless</td>
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of nursing students and associated factors. A comparison of variables that did not show normal distribution between groups was evaluated by the Mann-Whitney U test, Kruskal Wallis, Post-Hoc Tukey test and the relationship between numerical variables was evaluated by Spearman correlation analysis.

Nursing Department and Recep Tayyip Erdogan University Health Sciences Faculty Nursing Department. As frequency, percentage, mean, standard deviation, median (25th-75th percentile), and Kolmogorov-Smirnov distribution test were used for normal distribution. In comparing the variables without normal distribution among the groups, the Mann-Whitney U test, the Kruskal-Wallis and Post-Hoc Tukey test was applied, and the relationship between numerical variables was evaluated by Spearman correlation analysis. p<0.05 was considered statistically significant.

“work of nurses”, “heavy workload of nurses”, “environmental deficiencies”, and “emergencies”. The privacy scale scores of the students who chose ‘emergencies’ as the factor causing privacy violation were found significantly high in the confidentiality of private life (p=0.021), sexual privacy (p=0.014), physical privacy (p=0.039), ensuring a favourable environment (p=0.014), and privacy scale scores (p=0.007).