RESEARCH ARTICLE

Factors related to the Pharmacy students' empathy towards geriatrics: A qualitative study on educators and practitioners

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Abstract

Background: Empathy is an essential component of professionalism in the healthcare field, particularly for professionals such as pharmacists who directly interact with patients. In addition, healthcare students, including pharmacy students, must possess empathy, which is crucial for their professional development. **Objective:** This study aimed to investigate factors that are related to pharmacy students' empathy towards geriatrics. **Method:** This study was a qualitative study that included educators and practitioners in one-on-one interviews using Internet video conferencing. This study was carried out between October 2022 and February 2023. The verbatim transcripts were analysed using thematic analysis to identify codes, which resulted in the generation of themes from the data. **Result:** Out of the 16 participants, eight were educators, and the other were practitioners. The study revealed five distinct themes, including educational environment, familial environment, advances in technology, interaction with peers, and personal factors. **Conclusion:** Factors such as educational environment, familial environment, technological advancements, interaction with peers, and personal factors influence empathy among pharmacy students. Institutions might consider all these factors when developing programs that cultivate a greater sense of empathy among students for the elderly.

Introduction

Empathy is the ability to understand another person's feelings, emotionally connect with them, and provide comfort to them (Carrier *et al.*, 2015). Enhanced empathy has been linked to improved patient adherence, more precise diagnosis and prognosis, and increased patient satisfaction (Hobeika *et al.*, 2020). In addition, healthcare students must possess empathy for others, as it is crucial for their professional development (Hojat, 2009; Neumann, 2011), especially pharmacy students.

Pharmacists and pharmacy students need to possess empathy to enhance patients' quality of life and foster personal connections, especially with older patients (Pratiwi *et al.*, 2022). Chronic disease prevalence is also rising in older adults (Chen *et al.*, 2015). Pharmacy students must be well-prepared to meet the needs of the increasing elderly population. However, because they have not personally experienced ageing-related problems such as disability and disease, students may struggle to comprehend and empathise with older people (Chen *et al.*, 2015; Pratiwi *et al.*, 2022).

Many factors can impact the development of empathy in the curriculum, including a course or subject that discusses the patient's condition, the student's personality, and their surroundings (Pohontsch *et al.*, 2018; Sathaporn & Pitanupong, 2022). Before

formulating an educational approach, it is vital to comprehend the specific requirements of the target and the various factors that relate to the level of empathy among pharmacy students.

Several qualitative studies have been conducted on empathy. For example, Yu and colleagues (2022) investigated factors associated with empathy in healthcare settings, including personal and external factors. However, this study was only limited to healthcare professionals as the focus and not healthcare students. Pohontsch and colleagues (2018) also researched factors associated with medical education, including course of studies, students, patients, and surrounding conditions. In addition, Mikkonen and colleagues (2015) investigated the experiences of nursing students with their teachers' empathy. However, both studies only focus on medical and nursing students, excluding pharmacy students.

Although several studies have been conducted, there has been a lack of qualitative research investigating the factors associated with empathy among pharmacy students toward older patients. To fill this gap, the authors aimed to conduct a qualitative study of the factors associated with pharmacy students' empathy for the elderly and to explore how educators' and practitioners' viewpoints relate to factors associated with pharmacy students' empathy for geriatric patients in their experiences. As a result, their experiences can be used to address curriculum learning goals and develop student empathy for geriatrics. The purpose of this study was to investigate factors related to the pharmacy students' empathy towards geriatrics from educators' and practitioners' perspectives.

Methods

Setting and participants

This study used a qualitative descriptive methodology with a phenomenological perspective. This study was expected to describe specific aspects since it employed in-depth interviews with individuals about their experiences with factors associated with pharmacy students' empathy for geriatric patients. Participants in this study consisted of lecturers (educators) from the Department of Pharmacy, Jenderal Soedirman University and clinical practitioners (pharmacists, doctors, and nurses) from hospitals and health centres. The inclusion criteria were social and clinical pharmacy lecturers in the Department of Pharmacy who were informative and willing to participate in the interview. Furthermore, practitioner participants were recruited from hospitals or health centres and had at least two years of expertise in providing pharmaceutical services to geriatric patients.

The perspective of educators and practitioners to examine the existing conditions of pharmacy students' empathy for the elderly was identified. Participants were asked to share their opinions and experiences regarding factors associated with pharmacy students' empathy for elderly patients. Purposive sampling was used to determine the participants. It was conducted continuously until data saturation.

Data collection

The researchers conducted semi-structured individual interviews with participants from October 2022 to February 2023. The interview schedule was determined according to the preferences of the potential participants. Each participant gave informed consent at the beginning of the interview and was provided with a thorough explanation about the confidentiality of the study, the anonymity of the participants, the necessity of recording interviews, and the possibility of withdrawing from the study. The interviews were done using internet video conferencing (Zoom Meeting). Before the interview, demographic data on the participants was collected.

The researchers followed the interview guidelines (factors associated with the pharmacy students' empathy toward the elderly) but were open to any additional lines of exploration generated by the interview interaction. The interviews began with a general open inquiry, followed by probing questions based on the participants' responses and the interview procedure. The process was interactive. Each interview lasted more than 30 minutes until all discussions were completed. The audio recordings and transcriptions are anonymised for each participant and securely stored in a dedicated area specifically built for research data.

Data analysis

Thematic analysis was used to comprehend the perceptions of the participants. The interviews were digitally video-recorded and transcribed verbatim. One researcher (HP) transcribed verbatim all interviews for thematic analysis for two months. Each researcher (HP, SAK, AWW, and YSP) conducted the analysis independently, coded each transcript manually, and discussed their findings until a consensus was reached. Additionally, member checks strengthened data trustworthiness by returning a summary of each interview text to the participant to confirm the accuracy of the researchers' understanding. The codes were sorted into developing patterns to construct subthemes. Subthemes were subsequently merged

into dominant themes. These emerging prevalent themes shaped the findings about factors that related to pharmacy students' empathy for the elderly. The data were entered into a spreadsheet for data management.

Ethical approval

This study obtained ethical approval from The Health Research Ethics Committee, Faculty of Health Sciences, Jenderal Soedirman University (approval no. 895/EC/KEPK/X/2022).

Results

In this study, sixteen participants were interviewed, including eight lecturers (from Pharmacy, Jenderal Soedirman University) and eight clinical practitioners (from Purbalingga, Banyumas, and Jogjakarta). Female participants were 14 while male participants were two. The mean age of lecturers (educators) was 35.5 years, and clinical practitioners were 37.6 years. Twelve of the participants had more than six years of work experience, while four participants had three to four years of work experience.

The following five themes were identified: educational environment, familial environment, advances in technology, interaction with colleagues, and personal factors.

Theme one: Educational environment

Cultivating empathy among healthcare students is crucial. It is necessary to develop educational strategies that not only prevent the decline of empathy but also enhance students' empathy to improve their understanding of patients. The experiences of the participants indicated that the atmosphere of the educational environment can play a role in enhancing the empathy of pharmacy students towards older patients. In this study, the educational environment was divided into five sub-themes such as educational models, interactions with geriatrics in pharmacy education, role modelling, institutional policies, and appreciation and comprehension of lecturers.

Educational models

The process of developing empathy for pharmacy students is influenced by the educational model. The educational approach needs to be carefully developed by the faculty members and the teaching team if they want students who are professional and have a high level of empathy for patients to graduate, particularly geriatric patients.

"In terms of education, institutions can provide new teaching strategies, which can help students develop greater empathy toward the elderly..." (Participant 3)

Additionally, developing empathy must be accomplished continuously rather than just in one course. Each semester, a course related to the significance of empathy for patients is required.

"Continuous education in empathy is necessary. Since it is taught or introduced in the first semester and then repeated in the following semester, it is necessary to first identify needs, difficulties, what is occurring to the students, and the type of education model..." (Participant 4)

Interaction with geriatrics in pharmacy education

Pharmacy education is designed to equip students with the knowledge, behaviours, and skills necessary to provide competent and compassionate patient care. Experience can alter an individual's empathy toward others, especially geriatrics.

"In my perspective, students who have participated in internships have greater empathy and a better understanding of how to communicate with elderly patients. Therefore, it plays a significant part if students have ever interacted with elderly patients..." (Participant 5)

Role-modelling

One of the most significant factors in developing pharmacy students' empathy is role modelling. Pharmacy lecturers believed that being a role model in education was the most effective and right way to transmit professional experiences and empathy, particularly for the elderly. Various aspects contribute to role-modeling. Students intentionally and knowingly observe their lecturer's communication behaviours and attempt to imitate them.

"Lecturers cannot expect students to have good communication skills, ethics, and empathy if the lecturer does not teach them, and the lecturer cannot be a role model..." (Participant 4)

"The lecturer or institutional factor has a significant impact on the atmosphere of the campus. For example, if the lecturer expresses care, the students will be influenced by their sense of concern and empathy..." (Participant 7)

Students might accept clinical practitioners as role models as well; clinical practitioners were regarded as positive role models, as were non-cognitive characteristics such as interpersonal interaction.

"Students are the foreshadowing of future health care providers, so how a practitioner's role-model behaviour is important. If students only receive knowledge transfer through theories, they will never see us in the real world and cannot sense us as deeply..." (Participant 16).

Institutional policies

Institutions offer an environment where pharmacy students can experience formal and informal expressions of student empathy. Institutions influence departmental and disciplinary policies shaped by available resources and constraints. Institutions have a crucial role in facilitating the development of learning facilities, managing expenses, and fostering collaboration with practice partners to promote compassionate learning.

"Institutional policies on costs are also desperately needed, particularly for learning, practitioner honoraria, simulated patient honoraria, and so on...." (Participant 2)

"The institution's role was to develop several policies that facilitate the learning process, such as determining the workload of the teaching team, schedule, determining ideal conditions for learning, and facilitating experiences with other stakeholders for internship practice..." (Participant 5)

Lecturers' appreciation and comprehension

Participants believed that in every setting, a good lecturer should inspire and motivate their students while also showing concern, support, and generosity with appreciation.

"Lecturers must recognise that some graduates are in healthcare service and others are not, so they must plan everything and apply it to the learning process..." (Participant 1)

"Maintaining empathy requires lots of effort on the part of the lecturers, it can be traumatising when there is student empathy but no positive feedback from the lecturer..." (Participant 7)

Theme two: Familial environment

Participants agreed that families may assist pharmacy students develop empathy.

Parenting style

Some participants believed that empathy could not be developed directly when students were in college. The parenting style of parents since students were young is tremendously influential. Parenting style is a comprehensive pattern of childcare methods, values, and behaviour in which how parents care for their children influences their personality and social development.

"It is challenging to cultivate empathy in students only through academic learning and much easier to foster it when students are raised with a strong sense of compassion for others..." (Participant 4)

"Empathy is a characteristic that must be developed, cultivated, and become natural. The family setting is one of the influencing variables." (Participant 6)

"The factors to consider are family exposure and environmental exposure, which is highly influential, how they are accustomed to it from childhood, and then they instantly have a sense of empathy, possibly in general, with everyone...." (Participant 15).

Family illness experiences

In addition, some participants believed that if a student's family member was elderly or seriously ill, the student would have more empathy because they were directly exposed to the conditions in the family.

"Students show greater empathy after experiencing things connected to sick families, illnesses, or limitations due to becoming older, which is noteworthy..." (Participant 5)

Theme Three: Technological advancements

The development of technology affects interpersonal interactions. The first change has been the continued expansion of reference-information communication channels, from the traditional practice of reference conversations conducted face-to-face or through the phone to virtual chat reference to blended communication involving a combination of both online and in-person interaction toward collaboratively formulating, specifying, and resolving information. Of course, this situation has an impact on how pharmacy students are taught about developing empathy for elderly patients.

"Student empathy decreases since communication no longer requires face-to-face interaction; instead, students utilise the gadget and can obtain anything, even if not everything on the gadget is real..." (Participant 2)

"Exposure to the internet, social media, and other forms of media will have an impact on students' empathy for geriatrics; additionally, pharmacy

students have already experienced pandemic learning, so most of the interaction was done online, which differs from direct interaction…." (Participant 3)

"The intensity of student communication is currently relatively low; people have empathy towards other people, and this is in the context of communication, specifically one-on-one interaction. Because of technological advancements, student communication has started to deteriorate..." (Participant 4)

"Nowadays, TikTok or other social media significantly influences the way people behave and think. If they have been accessing exploitative content that is merely entertaining but doesn't pay attention to behaviour or etiquette, students cannot develop their empathy, with anyone in general, not just the elderly..." (Participant 15)

Theme four: Interaction with peers

Participants stated that interaction with peers has an impact on students' ability to demonstrate empathy. Good peer communication was supposed to foster empathy by allowing peers to notice and identify each other's emotions and tune into each other's emotional experiences.

"The influencing factors are environmental factors, such as the interaction between students and their friends in class and at the boarding home, which has a significant impact on their behaviours later in life if they become healthcare professionals..." (Participant 7)

Theme five: Personal factors

Students' knowledge about the characteristics of Geriatrics

The roles of students' knowledge about ageing as factors promoting empathy for elderly people. According to the participants' opinion, improving students' awareness of ageing is regarded as critical to developing good empathy. Individuals must understand the ageing process to reduce ageism, increase empathy, improve attitudes toward older people, and reduce ageing anxiety.

"Students understand what happens to the elderly; when they understand the situations that occur in the elderly, it means they have basic knowledge about what older people experience; this could mean that students do not empathise because they do not know what the real condition of geriatric patients is like..." (Participant 3)

Future career preference

Some pharmacy students are considering careers in industries outside of the clinical setting, as well as careers completely unrelated to healthcare services. Participants also explored how passion or future career preference increases student empathy.

"If students are interested in working in health care and have a passion for it, it is simple to encourage them; simply give them a story about geriatric conditions and they will feel empathy..." (Participant 5)

"This is also related to pharmacy students who have a passion and future career preference. If students lack passion in the clinical setting, when they practice, their empathy is low, because they don't understand, maybe their passion in the industry, not in the healthcare setting..." (Participant 10)

Discussion

Empathy in pharmacy students toward the elderly appears to be influenced by factors such as their educational environment, familial environment, advances in technology, interaction with peers, and personal factors. The ability of pharmacy students to empathise with the elderly allows educators and practitioners to concentrate on factors that will influence the development of empathy in pharmacy students. This makes it possible to analyze specific requirements related to enhancing student empathy for patients in general as well as geriatric patients. Identifying these factors can lead educators to better educational methods

The first theme identified was the educational environment, which included five sub-themes such as education models, interaction with geriatrics in pharmacy education, role modelling, institutional policies, and lecturers' appreciation and comprehension. The educational environment has a significant impact on students' increased empathy (Winter *et al.*, 2020). Consequently, it is essential for the health professional to prioritise the inclusion of empathy in the curriculum and to thoroughly assess academic achievements aimed at enhancing students' empathy levels. The results of the study indicated that fostering empathy towards the elderly in students necessitated the use of appropriate educational strategies. The findings suggest that integrating educational strategies into the institution's curriculum is crucial. It is in line with a comprehensive review by Batt-Rawden and colleagues that found educational

interventions can help undergraduate medical students maintain and develop empathy (Batt-Rawden, 2013).

The study found that an important factor in enhancing pharmacy students' empathy for the elderly is the implementation of an educational model. As empathy is a skill that students should possess for a long time (Herrera *et al*., 2018), participants suggested the educational model ought to promote empathy every semester. Interaction experiences were also noted in this study; it allowed students to meet the elderly of the community, and it is believed that will result in greater empathy and attitudes. Students had the opportunity to experience empathy as they attentively observed the physical and psychosocial needs of older people and gained an understanding of their difficulties.

According to this study, participants expressed that pharmacy students need role models and tend to emulate their role models' behaviour and empathy. Students may be able to imitate positive behaviour and empathy after observing the behaviour of their role model (Ahmadian Yazdi *et al*., 2019). In addition, other factors that enhance pharmacy students' empathy for the elderly are institutional policies and the appreciation and comprehension of their lecturers.

The study highlights several policies that are required to support empathy learning, such as funding for training. Furthermore, lecturers' inspiration and motivation are necessary for students to learn to be more empathetic. such as understanding their work preferences and realising that empathy is one of the primary components of the therapeutic interaction between caregivers and their patients, and its contribution has been demonstrated to be vital to improving health outcomes.

Parenting style is one of the factors that influence students' development of empathy. Parenting style affects children's emotional control, which leads to their developing empathy (Abdullah & Mini, 2020). Parents have the power to cultivate attitudes, beliefs, and abilities in their children that have a significant impact on their behaviour, social standing, and the communities they become a part of (Álvarez-García *et al*., 2019). Empathy is associated with parental warmth (Boele *et al*., 2019) and parenting style (Mesurado & Richaud, 2017). Additionally, it is important to emphasise that students have the potential to develop strong relationships with their elderly family members. Their experiences and empathy appeared to be influenced by their extensive previous experience with the elderly.

The third theme investigated the effect of technology advancements on the empathy of pharmacy students. Social media and smartphone use can have positive and negative effects. It has been discovered that students showed less empathy because they engaged with others largely online rather than in person. The excessive use of smartphones is associated with several detrimental effects, including difficulties with social relationships (Griffiths *et al*., 2018). However, technological advancements can help pharmacy students develop empathy. For example, virtual games with patients are instances of learning activities. Virtual reality technology enables users to take on the perspective of others and perceive their actions as their own.

Interaction with peers was the fourth theme. Socialisation among peers may foster attitudes and social tendencies that last and influence conduct throughout one's life—even after education, decades of experience, and life circumstances have altered (Baugh *et al*., 2020). Greater student empathy may be associated with diversified relationships formed during the critical teenage period of empathetic malleability (Miklikowska, 2018). Functional peer relationships encompass the ability to perceive and identify the feelings of one's peers as well as tune into one's own emotional experiences; in other words, empathy abilities (Tikkanen *et al*., 2022). The institution's peer counsellor program is one example of how it might assist students to build empathy.

Additionally, the knowledge of students regarding the characteristics of the elderly and their preference for a future career are personal factors that are associated with pharmacy students' empathy for elderly patients. The roles that students' understanding of ageing plays in encouraging compassion for the elderly. To reduce ageism, foster greater empathy, enhance attitudes toward the elderly, and lessen ageing anxiety, students must have a basic understanding of the ageing process (Yao *et al*., 2021). The career preferences developed throughout training may be indicative of future professional decisions and actions. The preferences for working with older people can be influenced by several factors, including demographics, experiences before and after education, educational interventions, attitudes, knowledge, and perceptions of the work and patients' characteristics (Yao *et al*., 2021).

The strength of the study lies in its ability to comprehend perspectives from a sample that includes not only educators but also clinical practitioners. Findings are thus not strictly constrained to a single group, as is common in qualitative research. In addition, the results have provided a detailed explanation of the factors associated with the empathy of pharmacy students. Institutions might consider all these factors when developing programs that cultivate

a greater sense of empathy among students for the elderly.

Limitations

This study has several limitations that need to be considered: 1) this study had a small number of participants; 2) the consistency in participants' responses to the questions indicates data saturation; consequently, further interviews would not have added additional data. Although participants were selected from educators and practitioners by purposive sampling, self-selection bias and social desirability could still exist; 3) For the lecturers or educators, the data is similarly limited to one institution. Further studies should aim to broaden the scope of the study to increase the generalisability of these findings; 4) furthermore, a qualitative study on the factors related to pharmacy students' empathy for elderly patients is required from the viewpoint of the students to obtain a more comprehensive viewpoint from educators, practitioners, and students.

Conclusion

This study investigated factors related to pharmacy students' empathy for the elderly. According to our qualitative study findings, several factors, such as educational environment, familial environment, technological advancements, interaction with peers, and personal characteristics, are associated with empathy among pharmacy students. An educational environment includes five subthemes: education models, interaction with geriatrics in pharmacy education, role modelling, institutional policies, and lecturers' appreciation and comprehension. The familial environment includes parenting style and family illness experiences. Additionally, personal factors include students' knowledge about the characteristics of geriatrics and future career preferences. Further studies should aim to broaden the scope of the study to increase the generalizability of these findings. Furthermore, a qualitative study on the factors related to pharmacy students' empathy for elderly patients is required from the viewpoint of the students to obtain a more comprehensive viewpoint from educators, practitioners, and students.

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