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Experiences in Teaching and Learning

Communication and relationship building in pharmacy education: Experiences from a student-patient buddy project

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ABSTRACT

Background and purpose: In order to deliver patient-centred pharmaceutical care, pharmacy students need to develop the appropriate competences and skills. During their regular study program, they have limited long-term patient contact. We therefore implemented a student-patient buddy project to give students opportunity to practice and learn from the patient contact.
Educational activity and setting: A student-patient buddy project was implemented in a 10-week first-year master experiential learning course, including a community pharmacy internship. The pharmacist paired the student with a community-dwelling patient. Student learning activities included: (1) three meetings at the university to prepare and discuss buddy contact moments, (2) three buddy contact moments, (3) discussion with the internship providing pharmacist, and (4) a written reflection report.
Findings: In total, 66 students participated from April to June 2021. Most students found patient contact fun and a useful learning experience. Students mentioned that patients were very open and there was opportunity to build a relationship. The first conversation was experienced as exciting and sometimes difficult. Understanding the person was perceived as important. Internship pharmacists were positive about the project and saw learning benefits for students, as well as added value for the pharmacy, mainly because patients seemed to appreciate the contact.
Summary: A student-patient buddy project is a good way to expand the limited long-term "real" patient care experiences of pharmacy students. This enables them to practice communication and building relationships with patients.

Background and purpose

Due to the ageing of the general population, people are living independently for longer, with more health conditions and a more complex medication regimen to manage. This increases the burden on primary health care.[1] As a consequence, community pharmacists' role in pharmaceutical care has changed, with a shift from the more traditional preparation and distribution of medicines to the provision of cognitive pharmaceutical services, such as medication reviews.

In order to deliver this patient-centred pharmaceutical care, pharmacy students need to develop appropriate competencies and skills, such as eliciting patients' needs with open-ended questions and engaging in focused active listening. Small group training with simulation patients, combined with lectures and electronic learning modules, has shown to be effective for teaching these skills.[2–5] In

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addition, community service learning (CSL), an educational methodology in which students use their academic knowledge and skills in service activities in response to community needs, is considered effective to improve students' social engagement and enhancement of skills and attitudes.[6] Experiences of pharmacy students with community-engaged activities are generally positive.[7] Previous studies focusing on student experiences with CSL were mainly conducted in the United States and included learning activities related to pharmacy practice tasks.[6] In our buddy project we deliberately chose to focus on building a student-patient relationship and thus excluded these pharmacy practice-related activities, such as medication review or counselling. Instead, we provided students with communication tools and opportunities to rehearse conversation skills.

Previous studies showed beneficial effects of student-patient pairing programs on patient-centred communication and attitude. Jefferson et al[8] showed that medical students who were paired with a patient with Alzheimer's disease during a year-long program developed a more positive attitude towards the field of geriatric health care. Another study showed that student-patient pairings decreased social distance between students and patients with mental disease.[9] The focus in many of these studies was on knowledge and understanding of the disease, clinical competences, and practicing clinical skills. However, in order to provide patient-centred care and build a good patient-provider relationship, a holistic view including patients' needs, perceptions, and daily activities is of utmost importance.[10,11] Romme et al[12] described their positive experiences with the "Patient as a Person" educational module, in which pairs of students visited a patient with a chronic condition to gain insight in how disease impacted mental and social-wellbeing. However, in this module, students visited the patient only once.

During their bachelor's and master's program, pharmacy students in the Netherlands have relatively limited possibilities for long-term patient contact, which hampers practice in building a patient-provider relationship. We therefore designed a project using elements from the CSL methodology. We implemented a student-patient "buddy" project for pharmacy students during their first-year master community pharmacy internship. The focus of the buddy project was on building a relationship over multiple contacts or visits, encompassing something different than discussing treatment of disease or use of medicines, enabling students to gain insight in the patient as a person. In this article we share our experiences.

Educational activity and setting

We implemented a student-patient buddy project during a 10-week experiential learning course on polypharmacy for first-year master students at the School of Pharmacy at Utrecht University from April to June 2021. This course includes students' first community pharmacy internship and is combined with training at the university. The educational activities were designed using elements and experiences from other student-patient pairing programs described above, such as the study of Romme et al.[12] Although the buddy project focusses on communication and relationship building, it links to other learning objectives during the pharmacy internship (e.g., conducting a pharmaceutical anamnesis and addressing patient's medication questions) and may also benefit the pharmacy.

Before the start of the course, internship-providing pharmacists were informed about the student-patient buddy project by email and asked to select a community dwelling polypharmacy patient aged ≥70 years that they deemed suitable for student contact (e.g., someone who is lonely with not too complex circumstances). There were no formal inclusion or exclusion criteria. The pharmacist

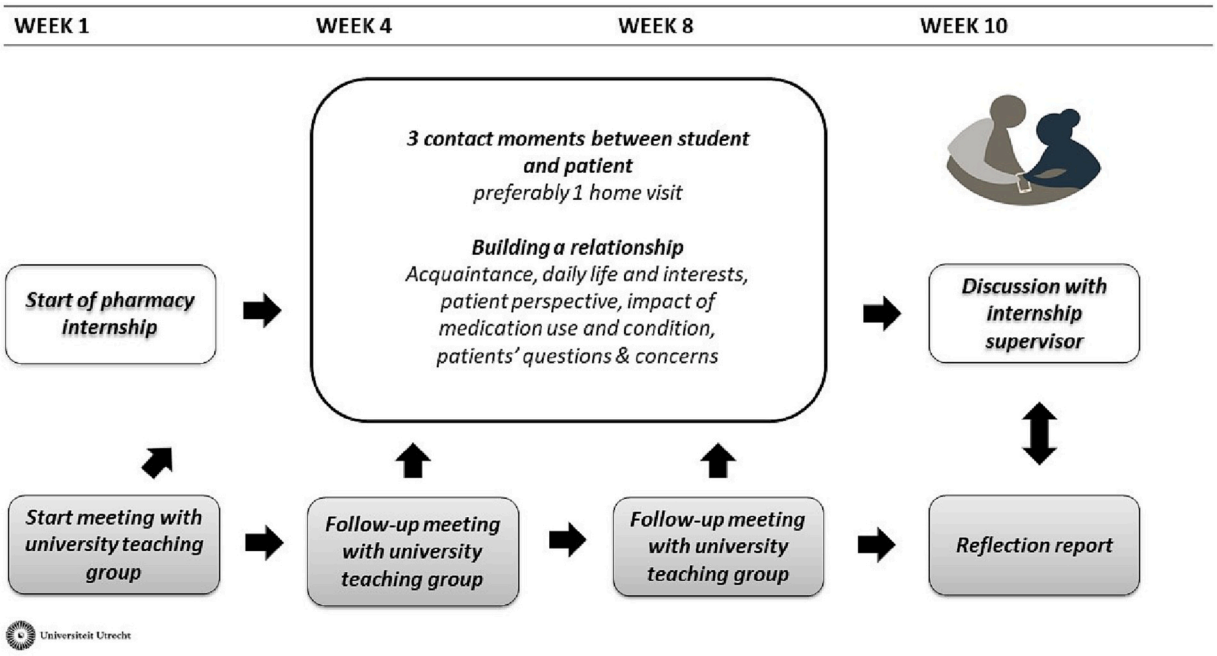

Fig. 1. Educational activities student-patient buddy project.

approached the patient and provided an information flyer about the buddy project. At the end of the course period, students were asked to anonymously complete an evaluation questionnaire and hand in a written reflection report. Students were advised that information in their reflection reports could be used anonymously for dissemination on the project website and to encourage and help future students. The project was exempt from ethical review as it concerned a learning activity and filling out the evaluation was voluntary.

The educational activities included the following (Fig. 1): (1) A kick-off meeting in Week 1 at the university with the teaching group (approximately 12 students and a lecturer), in which students prepared the first buddy contact moment. After a brief introduction by the university lecturer about the scope of the buddy project and refreshment of theory regarding basic communication skills, students worked in small groups and discussed how they could initiate the buddy contact, what questions they could ask, and what they could tell the patient about themselves. This was followed by a plenary discussion to address challenges and solutions. (2) Three contact moments with the buddy during the 10-week course. (3) Follow-up meetings with the teaching group at the university in Weeks 4 and 8. During these meetings different topics regarding the internship could be discussed, including progress or difficulties in the buddy contact. (4) Discussion about the buddy contact with the pharmacist at the end of their internship. (5) A short written reflection about the learning experiences during the buddy project. (See Table 1.)

Student-buddy contact would ideally take place as home visits, but depending on the preference of the buddy and the situation regarding the COVID-19 pandemic, students could also schedule a phone or video call. Students were instructed to focus on listening and building a relationship. It was explicitly mentioned in the instructions and by the lecturer that they should not give pharmacotherapeutic advice.

At the end of the 10-week course, all students handed in a written reflection about the buddy contact by email. They were instructed to describe four aspects: (1) a brief anonymized description of the patient (e.g., gender, age, comorbidities, living environment), (2) a reflection about patient contact, (3) insights gained for future practice as pharmacist during patient contact, and (4) a brief reflection

Table 1
Box Summary of information from reflection reports.

Main theme	Sub theme	Example
First contact moment	Influence of patient situation or circumstances	• Student #46: *I was not aware of the patient's aphasia, so I wasn't prepared for it. It was difficult to connect due to the speech problem.* • Student #58: *I had to get used to just visiting someone I did not know. I was a bit nervous. Getting a conversation started was difficult.*
	Preparing contact moment	Student #6: *I should have formulated a clearer aim before calling.*
	Importance of face-to-face contact	Student #2: *Coincidentally, the patient visited the pharmacy and I spoke to him. After that, communication became easier.*
Relationship building (follow-up contact moments)	Taking the time/patience	• Student #48: *At first, she thought it was too much of a hassle, but in the end, it was very nice. Normally I would stop if someone shows that they don't feel like it. But because the assignment stated 3 encounters, I continued it. This led to very nice conversations. I take from this that you have to be patient with people and they are only open with you when you are with them.* • Student #27: *Contact was difficult at start. I noticed that I did not really know how to behave myself. However, once I let go of the questions I had written down and started talking more like myself with my buddy, I noticed the conversation went much better. During the second phone call I felt much more at ease, and as a result the conversation went a lot easier and the patient became very open.*
	Sharing information about yourself	Student #8: *The first meeting I was struggling. In the beginning I found it difficult to invite my buddy to tell me something about himself. That is why I told him a little bit about my life. After that, he became willing to tell me more about himself.*
(Practice of) communication skills	Active listening	Student #31: *She spoke very easily, so it was not necessary to ask many questions.*
	Unexpected/difficult situations	Student #28: *At the beginning I was nervous and I found it difficult, especially when she told me that she was going to die. That was not a scenario I had considered, and it was tough thinking about how she might not pick up the phone next time.*
	Response to emotional cues	Student #63:*The topics were sometimes heavy. My buddy was feeling depressed, and it was difficult for me to respond to that by phone.*
Attitude towards patients	Insight in patient perspective	Student #3: *Patients do not necessarily do what we advise. Other things are important to the patient.*
	(Awareness of) prejudices	• Student #14: *My prejudice against the elderly has disappeared. By having more intensive contact, you sometimes discover things that are normally not discussed. During the first conversation, my buddy was very positive about the pharmacy, but during the second conversation he mentioned a number of things that he did not like. His therapy adherence was also suboptimal.* • Student #58: *That a patient with many medicines and incurable conditions does not always have a negative outlook on life. The patient I visited was very positive about life and made jokes.* • Student #51: *Before I had contact with this patient, I had looked at her medication list and then I created a certain image about her. When I met the patient, that picture changed completely as she had no complaints at all and was very positive.*

with pharmacy team. A selection of anonymous quotes from the written reflections were placed on a public website. All reflection reports were stored on a secured server and data were extracted to Microsoft Excel (Microsoft, Corp.). We used an inductive data-driven approach (e.g., coding was performed without trying to fit the data into a pre-existing model or framework). We developed a set of themes that captured the essence of the reflection reports. In addition to the reflection report, an online questionnaire was sent to participating students and internship pharmacists to evaluate the buddy project and learning activities. The survey included questions on the provided educational support during the buddy project, the selected patient for the project, the value of or lessons learned from the project, and suggestions for improvement. Questionnaires were filled out online in LimeSurvey (LimeSurvey GmbH) and data were stored on secure servers of Utrecht University. Questionnaire data were exported to SPSS, version 25 (IBM, Corp.) for analysis. In line with the approach described for analysis of reflection reports, the answers to open-ended questions were explored and categorized by one of the researchers (EK) and then checked by a second researcher (DP).

Findings

A total of 66 students participated in the student-patient buddy project during the period of April to June 2021 and sent in a written reflection about the patient contact. In addition, the evaluation questionnaire about the educational activities and experiences was filled in by 34 students and 32 pharmacists.

In the reflection report, students briefly described their buddy patient (aged 50–96 years). All of them were living at home, with or without a partner, and suffered from multiple conditions. During almost every contact, the impact of the COVID-19 pandemic on patient's daily life was discussed, and often patients felt lonely due to limitations in activities and restrictions in contact with friends and family.

Patient selection and contact

In the evaluation questionnaire, nearly half of the students ($n = 15$) indicated that the pharmacy team selected a patient that they thought would be open to social contact, because he or she always approached the pharmacy in an open-minded and friendly way. Ten students indicated that the pharmacy team thought that the selected patient really needed the contact, as these patients were seen as lonely or known to ask many questions. Another reason for selection was polypharmacy or starting a new medication ($n = 9$). Students mentioned the importance of timely selection of a patient by the pharmacy team, to be able to initiate contact early in the internship.

In total, 23 internship-providing pharmacists mentioned they had evaluated the project with the participating patient; four of these evaluations were performed by the student. Pharmacists mentioned that in general, patients were positive about their participation in the buddy project. All of these patients were pleased to receive the extra attention. However, two patients also provided a critical note. One patient found it strange that medication was barely discussed, and the other patient found it difficult that contact stopped after three meetings with the student. Most pharmacists would not change anything in their approach or guidance of the students during the buddy project. Eight of them mentioned they would select a different type of patient next time, and two of them indicated they would consult a general practitioner linked to the pharmacy for input on which of their patients are suitable for the project.

Based on the evaluation questionnaires, most students ($n = 31$) felt that the patient contact was a useful learning experience, two students mentioned that the patient had no interest in a follow-up contact, and only one student mentioned he had not gained any new insights from participation in the buddy project. Based on both the evaluation questionnaire and the written reflection reports, it appeared that in general, the patient contact went well. For most students, the contact moments were fun, and they found patients to be open to contact and friendly. The Box provides an overview of the main topics or themes mentioned in the reflection reports, including some quotes.

The reflection reports showed that in some cases, the first contact moment was perceived as difficult because, for example, the patient was in a hurry or due to patient limitations or inexperience with the situation. Students also described the first contact moment as exciting and some of them were nervous or did not know how to start the conversation. Follow-up contacts were mostly easier. Listening, taking the time, and also sharing information about yourself fostered the connection. However, responding to emotions of the patient was also described as difficult by some of the students.

Learning experiences and insight

Most students ($n = 31$) were positive about the buddy project. Patient contact was mentioned to be good practice in communication skills such as making contact, taking the time to build a relationship with a patient, and listening and responding to emotional cues. Three students were more negative. They saw limited educational value and indicated there is already sufficient patient contact in the pharmacy.

Pharmacists thought students learned different things from the buddy contact, such as practicing communication skills, including listening and staying in control during the conversation ($n = 12$). Gaining more insight in the patient behind all the medicines, and the daily reality of medication intake and living with a chronic condition ($n = 19$) were also stressed as important learning outcomes. One pharmacist mentioned that taking the time for a patient is a specific learning goal on its own. Pharmacists described the importance of looking beyond guidelines and of including patient characteristics and individual needs in treatment decisions. Furthermore, pharmacists mentioned benefits for the pharmacy, mainly related to better contact with the patient and providing an additional service for patients.

In their reflection reports, students mentioned that it was good to find out what someone is like as a person and to gain insight in the

needs and perspectives of older patients (e.g., the impact of a chronic condition and often daily medication use). In addition, some students mentioned they became aware of the prejudices they had, such as not expecting elderly patients to still be able to have a very active lifestyle (Box).

Educational activities

The majority ($n = 33$) of students were positive in their evaluation of the educational activities. It was mentioned that instructions were clear and the kick-off meeting to prepare patient contact was useful. Only one student mentioned that there were not enough education activities to properly prepare for the buddy contact. Two students mentioned the purpose was not immediately clear and some mentioned that they would have liked to have more suggestions for questions or topics for the second and third patient encounter. Some pharmacists ($n = 5$) also mentioned that students should be better informed about the aim of the buddy project and the encounters.

Students indicated that it was nice that the contact had already been rehearsed during the kick-off meeting and that it was useful to discuss with other students which questions could be asked. Three students discussed the buddy contact with the pharmacist before initiating contact.

Discussion

Listening to patients' experiences increased students' awareness about the impact of chronic illness on daily life. Evaluation of the implemented student-patient buddy project suggests that a project like this helps students gain a better understanding of the patient perspective towards chronic medication use. It influences students' attitudes about treatment and helps them in making contact and building a relationship with elderly patients. Based on information in both students' and pharmacists' evaluations, patients seemed to appreciate student contact. Thus, the project yields benefits for the patients themselves as well as the pharmacy, in the sense of having a better relationship with patients.

Students expressed that the buddy project allowed them to understand what patients were experiencing and how their lives changed because of their condition(s) and treatment. It helped them to see patients more as a person and not only as someone who uses medication or has a disease. This is in line with findings from Cumberland et al[13] who described how a Parkinson's disease buddy program helped medical students to become better acquainted with patients living with a neurological disease. As the main objective of the project was to let students gain more insight in the patient perspective, we deliberately did not instruct them to collect information about medical problems or drug-related problems (DRPs). However, they were instructed to notify the pharmacist in the case of alarming situations.

Students were able to practice communication skills such as active listening, responding to sometimes unexpected emotional cues, and building a relationship with a real patient. Different teaching tools can be used to train empathy and compassion skills.[14] Often role play with simulated or standardized patient (SP) interactions is used.[2,15] This SP may be a volunteer, teaching assistant, actor, or fellow student instructed to play a particular role. SPs offer benefits, including the ability to adjust the level of challenge in the scenario or to align scenarios with curriculum goals, the provision of feedback, and opportunity to practice skills without risk to patients.[16] For learning, practicing and assessment of communication skills including simulation is necessary,[17] but simulation is not always able to completely recreate real-life situations.[15] Therefore, a student-patient buddy project using elements from CSL methodology, is a good add-on during experiential learning courses or internships to deepen insight into the impact of disease and medication use for an individual patient. This is supported by Bokken et al[18] who reported patient-centred learning and high patient satisfaction as advantages of real patients as educational resources. In addition, a systematic review by Gonzales et al[6] showed that CSL is beneficial in pharmacy education. In their study, student and patient experiences were positive. For students, the activities enhanced knowledge and for patients it resulted in improved health outcomes. Furthermore, Mohammed et al[19] described experiences with student-run clinics and learning yield for students, including improvement of patient interviewing and health screening skills, working in an interprofessional team, and obtaining leadership skills.

Several lessons were learned during implementation of this buddy project. First, timely selection – before or at start of the internship - of a suitable patient by the pharmacist is important to make sure students have sufficient time to schedule the three contact moments during their 10-week internship period. This is also important in order to benefit most from the education sessions at the university, in which students have the possibility to discuss the buddy contact with fellow students and a teacher.

Second, pharmacists should be advised to avoid selection of complex patients, such as patients in the end-of-life stage. There is undoubtedly value in learning from actual patient encounters with these complex patients, but this needs more supervision, guidance, and regular teaching sessions in which students reflect on these cases, which are beyond the scope of a buddy project that we propose for first-year master students.[20,21] These more complex cases might be suitable for projects in advanced internship courses. We did not provide pharmacists with strict inclusion or exclusion criteria; for future projects it is important to provide the pharmacists with examples of suitable patients and patients that should not be selected. Patient selection could also take place in collaboration with the general practitioner. This may also stimulate interprofessional health care education which is also important for the future.[22]

Third, it is best to talk to the patient in their home environment. Due to the COVID-19 pandemic and government guidelines enforcing social distancing and the advice for vulnerable people with health issues to stay at home, this was not always possible. Some students mentioned this as a disadvantage when building a relationship with the patient, especially at the start. Indeed, for students who were able to visit the patient at home, making a connection seemed easier. Thus, we advise to include at least one contact moment as a home visit, preferably the first one. Romme et al[12] also showed that the home context of a patient is an appropriate place to start

learning about the impact of illness. This helps students to look at the patient holistically.

Fourth, it is important to provide aftercare for students if necessary and have sufficient time during educational meetings to discuss the patient contact with peers or lecturers. Some students mentioned the goal of the project was not really clear to them, which hampered making contact with the patient. Indeed, the kick-off educational session in which the first contact moment was prepared was valued. Some students mentioned they needed more preparation or input for the follow-up contacts.

Lastly, we learned that the written reflection reports of students were a rich source of information and provided good insight in their learning yield. This was previously described by Karnieli-Miller et al[23] who showed that medical students' reflective narratives provided comprehensive information about their experiences with both positive and negative behaviours that shaped the students' perceptions of the profession and its values. Also, Rabow et al[24] described experiential and reflective processes and use of personal narratives as key elements to support the moral and professional development of students. Thus, this is a good way for students to examine more fully the things they learned. Although we do believe our educational approach during the student-patient buddy project is in line with CSL approaches, elements regarding providing peer feedback could increase learning yield. Students did discuss the buddy contact during education sessions in Weeks 4 and 8 with fellow students and a teacher, and briefly with their internship provider in the pharmacy. During these moments they received feedback. This feedback was not documented, and we did not provide pharmacists with instructions for providing the feedback. This part of the project could be improved, as high-quality feedback is also important for students to ensure a rich learning experience.

Though the lasting effect of a buddy project on students' long-term professional behaviour is not known, it seems important to repeat educational activities for a sustainable effect. We do recognize that these types of projects may require an increase in resources and support, as students must be provided with opportunities for reflection, and mentorship on how the experience links to practice, as well as meaningful discussion for optimal future application to patient care. However, the buddy project fits with learning objectives during pharmacy internships and may also benefit the pharmacy. In follow-up buddy projects, for example during the second and third years of the master's program, students may focus more on supporting patients in medication use or identification of DRPs, thereby directly relieving the pharmacy team workload by providing them with additional patient information.

Summary

A student-patient buddy project is a good way to expand the limited long-term “real” patient care experiences of pharmacy students. This enables them to practice communication and building a relationship with patients and gives them the opportunity to see the patient as a whole person.

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CRediT authorship contribution statement

E.S. Koster: Conceptualization, Methodology, Formal analysis, Writing – original draft, Funding acquisition, Visualization, Supervision. **D. Philbert:** Methodology, Visualization, Writing – review & editing, Project administration.

Declaration of Competing Interest

None.

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