



Review

Patient participation in interprofessional learning and collaboration with undergraduate health professional students in clinical placements: A scoping review

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ABSTRACT

Undergraduate students obtaining interprofessional education (IPE) in clinical placements are expected to develop patient- and family-centered competencies; however, the patients' role in IPE requires attention. We explored how patient participation was articulated in the IPE research and literature from 2010 to 2020. 73 articles were eligible for inclusion and were subjected to a two-folded analysis. Characteristics included publication year, country of origin, study design, and varied contexts. Studies were conducted in hospitals, primary care, or a variety of settings (one-third each) and 25 different education programs were represented; however, students from medicine, nursing, physiotherapy, and occupational therapy were on the healthcare teams most often. In 42% (n = 32) of the studies, patient participation was not articulated. Most studies articulating patient participation showed partial participation; for example, how interprofessional students recognized and informed patients. Few studies described extensive patient participation; however, some noted patients' active participation in care planning and treatment and the student-patient relationship. This review provides novel insight into how patients' participation in interprofessional clinical learning is articulated. We believe that acknowledging patients' role in IPE is necessary to improve the provision of healthcare services and to promote IPE as a patient- and family-centered practice. Our results may contribute as an input into the academic discourse in IPE and have implications for future publications within the research field.

1. Background

A variety of Interprofessional Education (IPE) initiatives have been implemented to prepare undergraduate students for interprofessional teamwork. Learning arrangements such as case-based interprofessional discussions in small groups, large group lectures, simulation training, online learning activities,¹ and interprofessional student teamwork in clinical placements²⁻⁴ have been explored.

The different arrangements can enhance students' understanding of their role and the roles of other professionals in relation to themselves, as well as challenge their beliefs and attitudes regarding interprofessional collaboration. While some learning outcomes of IPE can be addressed through learning arrangements based within higher education institutions, e.g., lectures or simulation, others must be addressed in

clinical workplaces. Learning in clinical settings with authentic patients may be "the ideal learning environment for developing skills conducive to collaborative practice"⁵; p. 173). Meeting patients with varied needs and expressions can affect both team dynamics and emotions,² thus contributing to learning. Previous research has synthesized six learning outcomes for IPE⁶—teamwork, roles/responsibilities, communication, learning/reflection, the patient, and ethics/attitudes.

Learning outcomes related to "the patient"¹ encompass "the patient's central role in interprofessional care (patient-focused and patient-centered care); understanding of the service user's perspective (family/caregivers); working together and cooperatively in the best interests of the patient; patient safety issues; recognition of patient's needs, and patient as a partner within the team"⁶; p. 511).

Different frameworks support educators in planning how students

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¹ In this study, "patient" is used in its broadest sense to refer to patients, clients, users, and/or family caregivers.

can “develop the attributes required for them to be effective members of healthcare teams in their future practices”⁷; p. 873). As illustrated in Fig. 1, the IPEC expert panel⁸ suggested four competency domains that were embraced from a community- and population-oriented approach with a patient- and family-centered focus. The patient- and family-centered aspect is implemented in all domains. However, “values/ethics for interprofessional practice” emphasize patients’ cultural diversity, interests, cooperation, and the provider–patient relationship as central.

1.1. Patient-centered care and patient participation

There are multiple definitions of patient-centered care. Epstein and Street⁹ constructed the definitions as follows:

“Deep respect for patients as unique living beings, and the obligations to care for them on their terms. Thus, patients are known as persons in context of their own social worlds, listened to, informed, respected, and involved in their care – and their wishes are honored (but not mindlessly enacted) during their health care” (p. 100).

According to Epstein and Street⁹; patients should be invited to become active participating partners in consultations and meetings regarding their healthcare. Consequently, patients and health professionals can create a personal and individualized care and treatment path. Eldh et al.¹⁰ argued that an invitation to participate is insufficient and emphasized that true patient participation is present when health professionals “recognize each patient’s unique knowledge and respect the individual’s description of [their] situation.” (p. 503). When exploring this from a patient perspective, interviewed patients claimed that it is important for them to be actively involved, that health personnel are attentive, and that there is a connectedness between them and care providers.¹¹

Eldh¹² developed a clinical tool— Patient Preferences for Patient Participation (4P)— based on patients’ views of what they considered participation to be. The 4P-tool was meant to be used for conversations between health professionals and patients so that planning, follow-ups, and evaluating healthcare interventions supported patients’ participation.¹² The 4P-tool includes 12 items:

- (1) Being listened to (by healthcare staff)
- (2) One’s experience being recognized
- (3) Having conditions for reciprocal communication

- (4) Sharing one’s symptoms/issues
- (5) Having explanations for one’s symptoms/issues
- (6) Having explanations for what is done (for oneself)
- (7) Learning about plans
- (8) Partnering in planning of care/treatment
- (9) Phrasing one’s own goals
- (10) Being able to manage one’s symptoms/issues
- (11) Managing healthcare interventions oneself (such as medications)
- (12) Performing self-care (e.g., adjusting diet)

1.2. Aim of this scoping review

We aimed to gain insight into how patients participate when they meet interprofessional undergraduates who undertake learning in clinical settings. The following question was investigated— how is patient participation articulated in research on undergraduate students taking part in IPE in clinical placements? The responses to this question will inform how patient participation can be identified in varied IPE research. This coincides with the global research priorities within the field of Interprofessional Education and Collaborative Practice (IPECP), which calls for a continuous evaluation and integration of “the perspectives and expectations of patients, clients, and caregivers related to IPECP”¹³; p.14).

2. Methods

2.1. Protocol

The study protocol was initially inspired by Arksey and O’Malley’s¹⁴ framework for scoping reviews and Levac et al.’s¹⁵ recommendations concerning methodology advancement. It was further refined according to the guidance for scoping reviews from the Joanna Briggs Institute.^{16,17} The draft protocol was revised by our research team, including two health educators and researchers in the IPE field. A final version was registered in Open Science Frameworks repository on July 2, 2020.¹⁸

2.2. Eligibility criteria

We considered peer-reviewed primary studies with both quantitative and qualitative methodologies and gray literature. Eligible works had to be written in English or Scandinavian (Norwegian, Swedish, or Danish) and describe an interprofessional learning arrangement in which undergraduate students interacted with patients. This review followed the Preferred Reporting Items for Systematic Reviews and Meta-analysis extension for Scoping Reviews (PRISMA-ScR) guidelines (Tricco, 2018).

2.3. Search strategy

The first author (CBJ) conducted the searches in accordance with the search strategy protocol. The initial and limited search for articles was carried out on the Cinahl+, PubMed, and Scopus databases to identify eligible search terms. Index terms in the different databases were identified and an article on search strategy¹⁹ inspired certain text word terms identified as most used for IPE.

The main search for literature commenced in May 2020 in seven databases— Cinahl+, PubMed, Scopus, Svemed+, PsycINFO, and Web of Science (Appendix 1); further, OpenGrey was used to search for gray literature. A senior research librarian was consulted on several occasions to help validate the quality of the search string. The final search was conducted on June 8, 2020, which resulted in 4903 articles and 44 gray literature items were identified. These were imported to the citation management system, EndNote X9.3.3 (Clarivate), where de-duplication was performed and articles/literature in languages other than English or Scandinavian were removed. Articles outside the time frame (2010–2020) were removed. A total of 2503 papers were included after the screening and selection process.

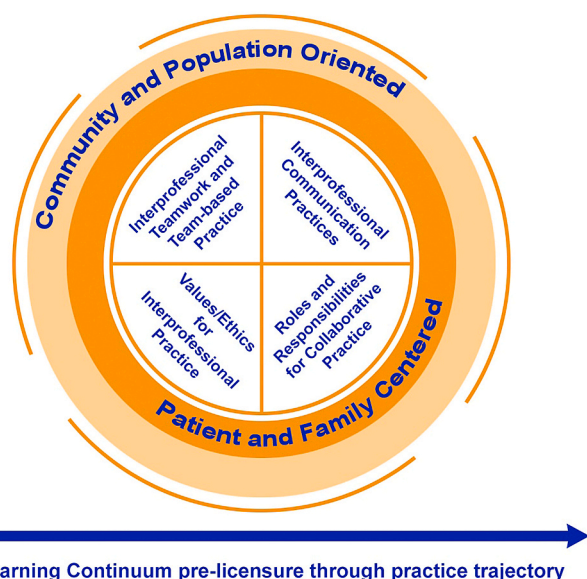


Fig. 1. Interprofessional collaborative practice domains.⁸

2.4. Identification of potential studies and literature

References from articles were exported by EndNote X9.3.3 (Clarivate) to the web application for systematic reviews, Rayyan QCRI.²⁰ Two reviewers (CBJ and AI) blindly screened titles and abstracts in Rayyan QCRI. Reviewers had three planned meetings during the screening process to discuss nuances in the inclusion and exclusion criteria and to synchronize labeling of excluded articles. In cases where abstracts were unavailable in Rayyan QCRI or the scope of study was unclear, full-text papers were retrieved in Google Scholar and skimmed to deduce their eligibility. This screening yielded 49 articles. Minor differences in reviewers' interpretations of article content were resolved through discussion until consensus was reached.

Full-text articles were then assessed for eligibility. Data extraction was performed parallelly with the eligibility assessment. CBJ and AI examined a random sample of five papers to pilot the data extraction form. The remaining articles were screened by one reviewer and data were charted in a Microsoft Excel spreadsheet² that included author name, title, year, country of origin, aim/purpose, population, method/methodology, context, description of student preparation, description of learning arrangement, patient/client/user characteristics, patient participation described (Yes/No), education programs involved, if it was eligible for inclusion (Yes/No), and the reason for exclusion (if not eligible). The extracted data were scrutinized by the research team. Exclusion was owing to one of the following reasons:

- Students did not interact with patients/clients/users
- Patients' encounters or characteristics were not described
- The interprofessional team included postgraduate students or students in continuing education programs
- Could not obtain full-text

Reference lists of eligible peer-reviewed studies were examined to identify literature that had not been included in the main search results. Only titles of gray literature items were screened. We did not examine reference lists for gray literature. Peer-recommended articles were also screened. Finally, 73 articles were included for review. The search process is shown in Fig. 2.

2.5. Deviation from the study protocol

Two deviations were made from the study protocol¹⁸ because of the large volume of initial hits— 1) the time frame was limited to 2010–2020 to ensure that studies published after the strengthened global policies on Interprofessional Education⁹⁸ were included; and 2) all types of review articles were excluded as we wanted to explore primary studies. Review articles obtained in the initial search ($n = 136$) were briefly examined to ensure that the topic of our scope was not previously explored.

After full-text screening and data extraction, many of the included studies either lacked or had scarce descriptions of how the patient or family participated in the IPE arrangement. We therefore needed a set of tools to understand what patient participation in IPE could be and how it was elucidated. This gave us the opportunity to look at the studies from a different perspective than the original researchers.

2.6. Analysis of extracted data and full-text items

CBJ acted as the main investigator throughout the analysis process and met the research team once or twice per month during the review period to scrutinize and discuss process and preliminary findings. The process was iterative, and we analyzed extracted data in multiple rounds. We iterated between individual and collective work, between

the different software for analysis (Microsoft Excel and QSR International's NVivo12), and between former theoretical knowledge and the present empirical aspects.

The original data extraction spreadsheet was reduced to a less-detailed version³ including author names, year of publication, country of origin, study design, clinical context, and health education programs. This constituted the basis for a descriptive content analysis where the different characteristics were quantified. The characteristics were selected as they were considered the most relevant to answer our research question.

After quantification, full-text PDF files of included studies were imported to NVivo12²² where a deductive reflexive thematic analysis²³ was conducted. To capture the patients' perspective, the 12 items from the 4P-tool constituted the predetermined codes. An additional item was constructed and labeled item 0— "patient participation not articulated"— which indicated that student-patient interaction was not described.

In the deductive reflexive thematic analysis, paragraphs, sentences, or sections in each article were coded. These had either semantic (explicit) or latent (implicit) content that could be understood within the purview of 4P. For example, if a study explicitly expressed that students listened to a patient in a learning arrangement, this was coded as "being listened to" (item 1). Latent content that underpinned the same item could be articulated through the authors' writing, for instance, that "the student team interviewed patients." Being interviewed could be identified as a situation in which it was possible for the patient to have their experience recognized (item 2) and in some cases, have the opportunity to share their symptoms or issues (item 4). It could also be understood as a condition that facilitated the possibility for reciprocal communication (item 3). Therefore, most articles were coded with multiple items (i.e., only five were coded with a single one).

After conducting thematic analysis, the codes identified in each article from the 4P items were plotted into the Microsoft Excel spreadsheet which made it possible to identify patterns between the unique items (codes) and the characteristics already identified in the descriptive content analysis.

3. Results

3.1. Search results

The searches from the seven electronic databases (including Open-Grey) yielded 4947 records— 2503 titles and abstracts were screened. Then, 2340 articles and 5 gray literature items were excluded in accordance with the eligibility criteria. Next, 158 articles were retrieved in full-text. Of these, 93 articles were excluded. This resulted in 65 potential articles relevant to our scoping review. Subsequently, their reference lists were scanned for articles missed through the search, which yielded 42 potential articles; however, 11 were duplicates and were thus excluded. Thirty-one articles remained after de-duplication, which were assessed for eligibility, out of which 24 were excluded, and seven met the inclusion criteria. One additional article was obtained from a peer recommendation. Therefore, 73 articles were analyzed.

3.2. Characteristics of included studies

Included studies were published between 2010 and 2020 (Table 1). Among the studies, 59% were published between 2016 and 2020. The remaining 41% were evenly spread out over the first five years of the decade.

The 73 included items originated from 11 countries. One-third were published in the US ($n = 23$), followed by Sweden ($n = 13$) and Australia ($n = 12$). The remaining items originated from the UK ($n = 6$), Norway ($n = 6$), Denmark ($n = 5$), Brazil ($n = 2$), Canada ($n = 2$), Germany ($n =$

² Available on request from the corresponding author

³ Available on request from the corresponding author

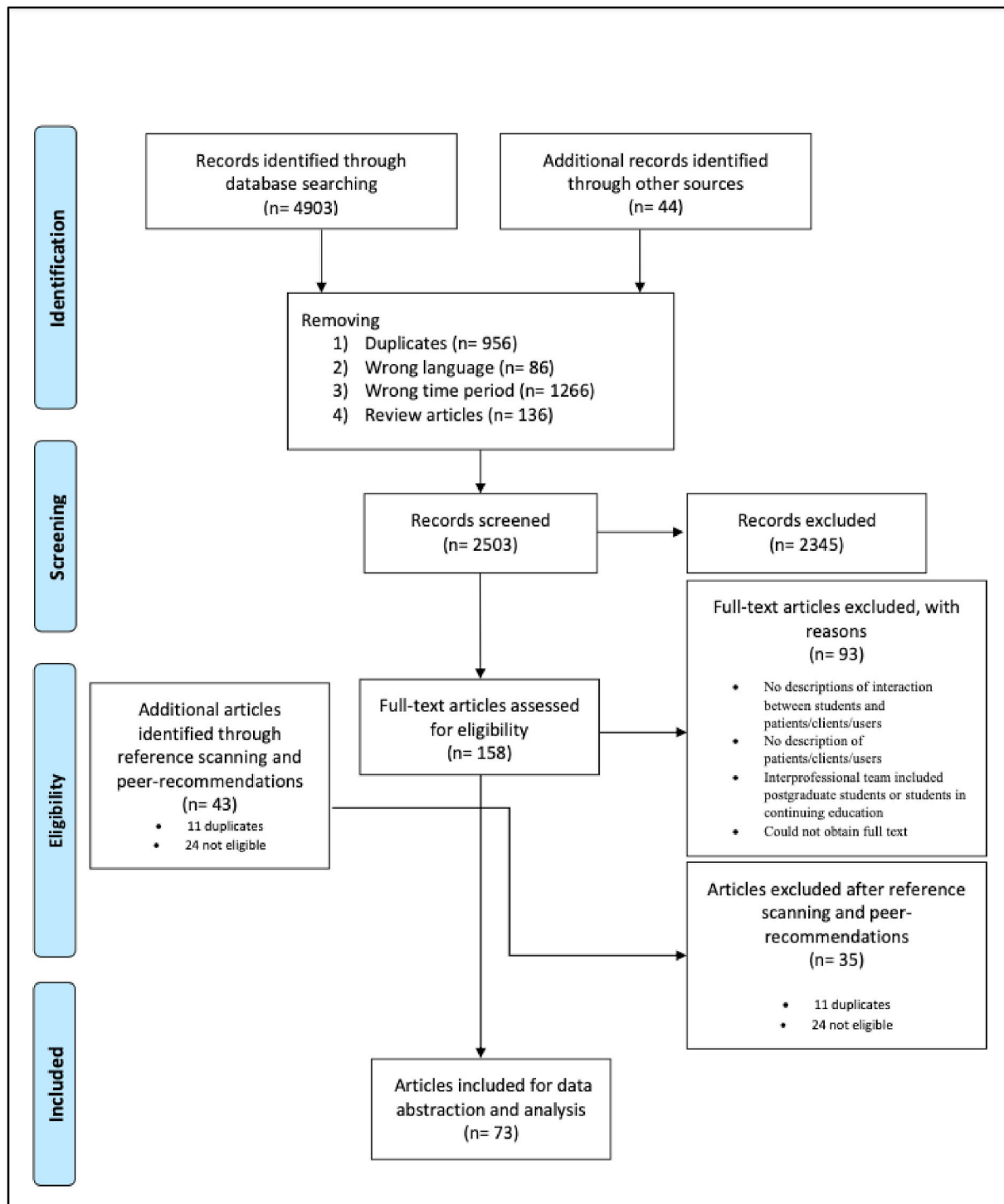


Fig. 2. PRISMA Flow diagram for study selection.²¹

2), New Zealand ($n = 1$), and South Africa ($n = 1$).

3.2.1. Types of methods and study design

Three types of study designs were utilized— 32 items used quantitative methods including validated questionnaires like the Readiness for Interprofessional Learning Scale, Interprofessional Attitudes Scale and/or Collaborative Healthcare Interdisciplinary Relationship Planning to measure (changes in) students' attitudes or questionnaires or registered data to investigate patients' outcomes or students/patients' perceptions of an IPE intervention; 33 used qualitative methods including focus groups, ethnographic approaches and case study designs (8 of these

were labeled as "descriptive reports"); and 8 used mixed-methods including the abovementioned questionnaires combined with focus groups.

3.2.2. Education programs involved in the clinical learning arrangements

In all, 25 different education programs were represented in the included studies (Table 2)⁴. Members of the interprofessional student

⁴ Other students included: Early childhood education, Pedagogy, Child and youth care, Bachelor in Interprofessional Healthcare, and Osteopathic medicine.

Table 1
Overview of year of publication.

Year	Number of publications
2010	6
2011	8
2012	3
2013	5
2014	7
2015	1
2016	12
2017	3
2018	12
2019	8
2020	8

Table 2
Frequency and percent of professional students included in the reviewed literature (2010–2020; n = 73).

Health profession	Frequency	Percentage
Medicine	53	72.6
Nursing	49	67.1
Physiotherapy	38	52.0
Occupational therapy	29	39.7
Pharmacy	19	25.7
Social work	13	17.6
Speech and language pathology	9	12.2
Nutrition/dietetics	9	12.2
Other students	8	10.8
Exercise physiology	6	8.1
Physician assistant	6	8.1
Psychology	5	6.8
Public health	5	6.8
Podiatry	4	5.4
Dentistry	4	5.4
Bio-analytics	3	4.1
Dental hygiene	2	2.7
Dental therapy	1	1.35
Paramedic	1	1.35
Radiation therapy	1	1.35

teams were typically medical (n = 53) or nursing (n = 49) students. Physiotherapy students (n = 38) and occupational therapy students (n = 29) were also commonly represented. Other students included those studying pharmacy (n = 19), social work (n = 13), speech and language pathology (n = 9), and nutrition (n = 9).

3.2.3. Context of studies

Included articles presented studies from a variety of settings. Approximately one-third (34%) of the included studies were conducted in a hospital setting. Most were interprofessional learning arrangements organized as interprofessional training wards (IPTW), often in orthopedics. Other studies in hospital settings were conducted within the context of acute care, pediatrics, or psychiatry.

One-third (34%) of the studies were conducted in primary care settings; for example, in-home visits or interprofessional arrangements in nursing home facilities. The remaining 31% were conducted in a variety of settings, such as interprofessional student clinics or charitable community clinics, schools, or low-security residential institutions.

3.3. Patient participation identified with the 4P-tool

The most striking result to emerge from the data was that patient participation was not articulated in 42% of the studies (n = 32). However, 40% of the studies did describe aspects related to recognition of the patient (items 1–4). One-fifth of the studies articulated situations in which interprofessional student teams informed and explained issues or their plan of action to the patients. Table 3 illustrates what studies were related to which 4P-item(s), including the constructed item 0. As

Table 3
Patient participation in interprofessional learning arrangements through the lens of 4P.¹²

Item number and description	Studies in which item was identified	Representative examples from included studies
0. Patient participation not articulated	24–55 (n = 32)	“The dental student identifies tobacco users, advises the tobacco users to quit, and connects them with a pharmacy student in the clinic who provides tobacco cessation education, including education on medication options.” ⁴⁵ ; p. 54) “Student clinicians are expected to lead the patient care visits by reviewing the patient’s medical history, discuss an appropriate plan of care with the licensed healthcare supervisor, provide the direct patient care and document all relevant information after the medical or therapy patient visit.” ⁵¹ ; p. 560)
1. Being listened to (by healthcare staff)	2,3,56–78 (n = 24)	“All responding patients were very satisfied with the visits and felt that they had been listened to and treated with respect by the students.” ⁷⁵ ; p. 4) “The team listened to her discuss her pain and asked relevant questions. The team asked her to rate her pain and emphasized the importance of being honest, according to the nursing student’s instructions. The patient rated her pain as 10, meaning the ‘worst possible pain.’” ²
2. One’s experience being recognized	2,3,56–77,79–84 (n = 29)	“Participants also had the opportunity to explain why they might, or might not, consider a change in lifestyle, eating, or activity. This dialogue provided students with valuable education and practice in therapeutic communication.” ⁷¹ ; p. 127) “One thing we did well was listening to her and letting her speak whatever was on her mind and using an open-ended question, so she could talk about what she wanted.” ⁶⁷ ; p. 4)
3. Having conditions for reciprocal communication	2,3,56–77,79–85 (n = 30)	“The patients tells the students what they have never told us” ⁵⁹ ; p. 499) “I learned that it is not always about coming up with the best pharmacological recommendations, but sometimes all it takes is talking to the participant

(continued on next page)

Table 3 (continued)

Item number and description	Studies in which item was identified	Representative examples from included studies
		to figure out what really is best for them." ⁶³ ; p. 319)
4. Sharing one's symptoms/ issues	2,3,56-59,61,62,65-73,75,79,80,82-84 (n = 22)	"Students screened each patient using a semi-structured interview covering mobility, diet, function, continence, falls, mental health, social status, and foot care." ⁷¹ ; p. 124)
5. Receiving explanations about what is done	56,58,61,66,69,71,80,81,86-88 (n = 11)	"IP teams showed admirable creativity in communicating therapeutic, diagnostic and rehabilitative procedures to patients and their families. For example, IPTW teams started to write short-discharge reports in lay language for patients and their families besides the usual medical discharge report to enable patients to better understand their hospitalization, surgery, planned adjuvant treatment and rehabilitation." ⁸⁸ ; p. 7) "Patient care included repeat clinical assessments, making and enacting management and disposition plans, including either making specialty unit referrals, with the lodging of inpatient or SSU bed requests for patients being admitted, or delivering appropriate information to those being discharged." ⁸⁷ ; p. 428)
6. Receiving explanations about one's symptoms/ issues	56,61,63,66,71,72,78,80,87-89 (n = 11)	"The 60-min student consultations were appreciated by patients. The extended consultation provided opportunities to ask students for information about existing conditions and discuss management options." ⁷¹ ; p. 127) "By adding all this information together and by providing the pharmacy information it really helped the participant have a big picture of their disease state as well as their improvements in their physical activities." ⁶³ ; p. 319)
7. Learning about plans	56,61,66,71,81,88,90 (n = 7)	"Weekly conferences were held with each team to ensure that the care and treatment were well planned and well coordinated. To further support this aim, the conferences were attended

Table 3 (continued)

Item number and description	Studies in which item was identified	Representative examples from included studies
		by permanent staff, the patient, and his or her family during hospitalization" ⁸¹ ; p. 3) "During the spring semester the teams present their projects to the family, and the last home visit is to determine the effectiveness or acceptability of the project from the family's perspective." ⁶¹ ; p. 5)
8. Partnering in care/treatment planning	61,67,70-73,81,84,91-95 (n = 13)	"The student teams worked with patients to set goals at each encounter and modified the plan longitudinally as needed on subsequent visits." ⁹² ; p. 3) "All of the patients noted improvement in the goals they set with the team" ⁶⁷ ; p. 5)
9. Phrasing one's own goals	67,96,83,92 (n = 4)	"The collaborative work process was then activated for the construction of the diagnosis and of the integrated care plan to be developed with the family or a specific member of it. This plan was reviewed every two weeks by the student team together with the family/ individual." ⁹⁶
10. Managing one's symptoms/ issues	70,89 (n = 2)	"Translated comments from the patients included the following: 'Now, I know why my teeth bleed;' 'No more sugared gum;' 'Great talk;' 'I received information to prevent cavities;' 'It was helpful and educational;' 'I appreciated it;' 'I would come again to hear it;' 'Information was helpful;' 'It is better to teach people how to protect their teeth;' 'I understood what I was told;' 'I learned that our teeth need to be clean;' and 'Keep taking care of people; keep teaching people how to take care of their teeth.'" ⁸⁹ ; p. 1095)
11. Managing healthcare interventions independently	59,89 (n = 2)	"Asks about how the patient monitors her blood sugar levels. Satisfied with the answer the patient demonstrates the use of the blood testing home kit. The student then asks about compliance with medications and is satisfied." ⁵⁹ ; p. 500)
12. Performing self-care	None	None

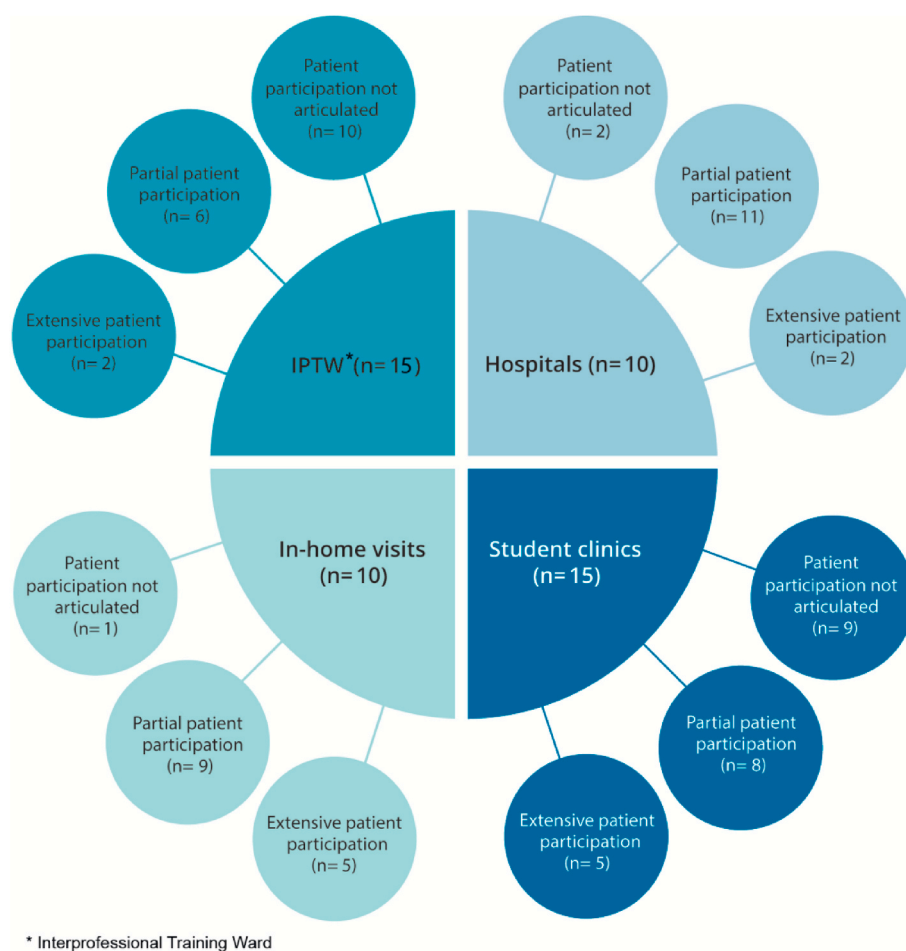


Fig. 3. Patient participation in the four dominating contexts.⁵

illustrated in the bottom part of Table 3, few studies articulated how patients were actively involved in their care and treatment (items 10 and 11) or planning with students (item 9). None of the included studies articulated how students interacted with patients to perform self-care (item 12). Taken together, these findings show a variation from not articulating patient participation through partial patient participation to more extensive patient participation.

3.4. Patient participation in different learning contexts

As mentioned above, the different interprofessional learning arrangements occurred in a variety of contexts, including IPTWs, student clinics, hospital settings, and in-home visits. In 19 studies in which learning arrangements took place in the context of either an IPTW or student clinic, patient participation was not articulated (Fig. 3); 14 studies articulated how patients were recognized and informed by students; and 7 studies articulated how patients took part in planning. In learning arrangements within the hospital setting that were not organized as IPTWs, only two studies did not articulate patient participation. In the latter context, most studies described patients being recognized or informed by students. For in-home visits, recognition of and informing the patient was recurring. In this context, patients seemed to participate

more in planning or goalsetting with student teams than in the other contexts.

3.4.1. Patient participation in the three dominating countries of origin

The US ($n = 24$), Sweden ($n = 13$), and Australia ($n = 11$) were the most represented countries in our review. Almost half of the studies ($n = 11$) from the US did not articulate patient participation; this also applied to studies from Australia ($n = 5$). Of the articles originating from Sweden, 75% ($n = 9$) did not articulate patient participation.

In summary, findings from the descriptive content analysis showed that included studies were published throughout the whole decade (2010–2020), with a slight predominance between 2016 and 2020. There were variations in country of origin, study design, and students' discipline. In 42% of the included studies, patient participation was not articulated. Of the studies that articulated patient participation, most described how interprofessional students recognized and informed patients while some studies showed how the patients participated in planning of treatment. Only two studies gave example of how patients were an active part in care and treatment.

4. Discussion

The aim of this scoping review was to answer the question "How is patient participation articulated in research on undergraduate students taking part in IPE in clinical placements?" The results showed a variation in year of publication, country of origin, research methods used,

⁵ As mentioned in the analysis, many articles were coded with several 4P items; thus, the numbers provided in the small circles will not always equal the number of articles per context.

and interprofessional learning context. Our findings revealed that research within this field, despite strategic calls,^{97,98} was not patient-focused. Nearly half of the included studies did not provide insight into how patients participated in interactions with interprofessional students. The studies that did provide insight articulated how student teams recognized the patient but rarely noted student-patient partnerships concerning goal setting and health management. The results also showed that certain contexts like IPTWs and student clinics were less likely to articulate patient participation than others.

4.1. Extent of patient participation

Patient-centered care and patient participation are two closely related concepts. Both include deep respect for patients, caring for patients on their own terms, recognizing patients' wishes in a responsible manner, and considering patients as resourceful individuals.^{9,10} The 4P-tool originally illustrates different patient preferences for participation in example being listened to, sharing ones symptoms or being empowered to take control over one's own healthcare.¹² In some of the articles, it was articulated how students listened to patients telling their "stories" (e.g., items 1–4). Other examples showed how they involved the patient in care conferences or in managing their own healthcare interventions (items 7 and 11, respectively). Whether this was in accordance with the patients' preferences in the interprofessional learning arrangements are yet to be explored.

In our study, we used the 4P-tool analytically and thereby considered the items as a continuum that progresses from *non-participation* to *partial participation* to *extensive participation*. In the studies that articulated patient participation, students listened to patients, recognized their health issues, and explained these issues in detail. In some cases, patients articulated their own goals; however, overall, more extensive participation was required. We recognize that what was articulated does not necessarily represent the whole picture of what happened in the learning arrangements; but these findings suggest that IPE researchers focus on other aspects than patients' presence when writing up their research. Nevertheless, we found it uplifting that we could identify patient participation, even if only partially; however, the lack of more extensive participation is a bit worrisome, especially since both are expected learning outcomes of IPE.⁶

4.2. Variation in articulated patient participation in different contexts

Here, the term "context" was understood as the different settings in which interprofessional learning arrangements occur. Interprofessional learning arrangements happen in a variety of clinical contexts, which may imply that there is a potential for interprofessional learning in many settings. Some contexts already have an established collaborative practice (e.g., primary care teams), while others are specifically constructed with a purpose to promote learning about interprofessional collaboration (e.g., in-home visits or IPTWs). Four contexts— IPTWs, student clinics, other hospital sites and in-home visits— dominated the included articles. The differences in how patient participation was described in these contexts was interesting and unexpected. We wish to elaborate on the unanticipated finding that articles originating from certain contexts seemed to articulate interactions with patients to a lesser extent than their counterparts. This especially applied to the contexts of IPTWs and student clinics.

IPTWs were created to enhance the opportunity for interprofessional learning and "collaborative and interprofessional competences in a realistic milieu"⁹⁹, p. 127. Student clinics were also established to benefit interprofessional students with "an increased understanding of both their own and other professionals' roles in an interprofessional

team, how to practice within that team, improved patient-centered care, and individual benefits to the students such as improved communication skill.¹⁰⁰ A recent review on IPTW suggested that the goals of establishing these learning arrangements have been reached and that both student learning and patient outcomes were enhanced by this organization.⁴ It is therefore surprising and striking that articles regarding IPTW paid so little attention to the nature of interaction between students and patients. In both contexts, patients were only briefly mentioned— often related to diagnosis and not how the interprofessional students interacted with them.^{25,28,34,38–41,43,48,79,85,88}

There are several possible reasons for this. One could be that authors expect readers to know what traditional treatment and care represents and that students and patients obviously interact. However, the conditions for patients admitted to, for example, an orthopedic ward, may vary. A patient could be a young man with a complex injury from a motorcycle accident or an elderly lady who fractured her hip by falling out of bed in her nursing home. This would force different approaches from the interprofessional student teams and challenge how patient participation was enacted in the given situation, thus making articulating this information important.

We recognize that many contextual factors may play a role in the interactions between students and patients. For instance, patient participation is sometimes not possible or even wanted by the patient. There also might be practical or logistical issues for not inviting the patient to participate. However, such factors would be interesting to read more about in IPE research and could give a fuller picture of the complexity that students are facing in interprofessional clinical learning, regardless of context.

4.3. Implications for educational design

Our findings raise questions that have implications for how educators design learning arrangements for interprofessional students.

"The object of medical work is the patient, with his or her health problem or illness. This is what in the end gives rise to continuity and coherence to both the actions and the scripts. Without the patients the activity would cease"¹⁰¹; p. 964.

The patient is the overarching reason interprofessional skills and competencies need to be addressed, improved, and disseminated throughout the course of a healthcare education. Health educators are responsible for ensuring that students see patients as complex beings rather than just subjects.¹⁰²

Our findings suggest that researchers and educators need to have two thoughts in mind concurrently. First, it is fully understandable and still necessary that IPE focuses on students' learning— how they learn about each other's professions, how team members communicate with each other, and how the different health professionals complement each other's competencies.¹⁰³ Second, it is necessary to document how interprofessional student teams experience, reflect on, and learn how to create partnerships with patients. Patients provide key information for healthcare providers and express a distinct point of view and thus should be involved in decision-making. This shift in mindset may create care provision that is patient-focused and closely intertwined with IPE learning objectives.

We also believe that a more conscious and active inclusion of patients in IPE coincides with the issues raised in the quadruple aim.¹⁰⁴ These issues are actions to improve individuals' care experiences, improve the health of populations, reducing healthcare costs, and ensure a sustainable work life for healthcare providers. More attentive and approachable interprofessional students may lead to greater satisfaction among

patients and their families. Improved patient outcomes may also improve students' satisfaction and facilitate further collaboration with other professionals and patients. Health educators need to prepare future professionals on how to collaborate and have positive patient encounters, as opposed to what was noted two decades ago: "too often, caring for chronic illness features an uninformed passive patient interacting with an unprepared practice team, resulting in frustrating, inadequate encounters"¹⁰⁵; p. 1775). This can and should be addressed in profession-specific programs, but we believe there is added value in promoting this in multidisciplinary contexts.

4.4. Implications for future research

Our findings raise questions concerning what researchers tend to focus on in IPE research, on what competencies health educators provide future practitioners with, and thereby also the quality of IPE. Paradis and Reeves (2013) found that the term "patient" was increasingly used in IPE research. This was linked to the rising trend in healthcare related to patient-centered care, user involvement, shared decision-making etc. However, from our understanding, this tells us nothing more than the frequency of the term used in research articles. Our findings showed that even if the patient was mentioned and somewhat described, this did not always provide a base for understanding how he or she was actually a part of IPE. One could go as far as asking if just by mentioning the term "patient," authors succeed in ticking off the box on a checklist. Meanwhile, is the patient actually considered the object of health education, treatment, and care, like Engeström¹⁰¹ claimed? When research concerning IPE in clinical settings omits a patient-centered focus, we must investigate what short- and long-term consequences this could have.

Lastly, from our experience, the publication norm within a research field constitutes how studies are being written. To have an article accepted, the author must, in many cases, "slavishly follow the demands formulated"¹⁰⁶; p. 206. Researchers lean on historical elements; for example, how former articles in their field are structured or what terminology is used, to adapt to the academic discourse in the field. The "academic discourse is not just an entity but a social, cognitive, and rhetorical process and an accomplishment, a form of enculturation, social practice, positioning, representation, and stance-taking". We recognize that adapting to the academic discourse in many ways is necessary to become a member of the research community; however, this adaptation may be a way to preserve a certain mindset. If publishers accept publications because they fall within the norms, they may also contribute to preserve the focus of the research that is being conducted. Our findings raise intriguing questions regarding the nature and extent of patient participation in IPE, but they also raise questions concerning publication norms and who holds the power to change directions and the discourse within our research field.

We anticipate that by encouraging more focus on patients and patients' role in IPE research, the knowledge base can expand and possibly lead to innovative developments in interprofessional clinical learning arrangements in the future. By giving more space to patient-student interactions, researchers may contribute to a necessary development

for better quality in both IPE and future healthcare services.

5. Study strengths and limitations

This scoping review was based on 73 articles that described patients' interactions with undergraduate students in interprofessional clinical placements; thus, not all student-patient interactions were included. We are aware that our search was not exhaustive; however, through reference list screenings and peer-recommendations, we strived to fill possible gaps. Moreover, studies were not examined for methodological rigor; however, we followed the framework of the Joanna Briggs Institute. The main part of the analysis was conducted by one reviewer; however, the research team was closely involved throughout the whole process and contributed to a great extent in interpreting and scrutinizing the findings. The 4P-tool that was used for analysis was originally developed to thematize interactions between health professionals and patients and not between patients and students. Our use of 4P as an analytical tool is a development of the intended use with patients. One might assume that patients would have different expectations when interacting with students than professionals; however, using this tool may represent a new and innovative approach for understanding patient participation in IPE. Nevertheless, the aim of this review was to offer initial insight into patient participation in IPE and outline possible ways forward for research and practice.

6. Conclusion

This review was undertaken to show how patient participation was articulated in research on interprofessional learning arrangements for undergraduate students. The key findings from the thematic analysis showed that patient participation was not articulated in almost half of the included studies. When articulated, students only facilitated partial patient participation in which patients were recognized and listened to; but they were invited to participate more extensively only to a small extent. We also found that studies performed in specially designed environments like IPTWs and student clinics articulated patient participation less often than those in other settings.

We argue that a greater focus on patients' role in research on IPE is necessary. We also reflect on how the patient dimension is thematized in clinical interprofessional learning arrangements. IPE researchers must be conscious about how patient participation is articulated to ensure the evolution of a solid knowledge base. This could lead to the creation of innovative learning arrangements in which patients have a central role. In the long run, this could contribute to fulfilling the quadruple aim.

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Appendix 1

Example of Search strategy CINAHL (EBSCO)

- 1 N interprofessional N3 education OR N interprofessional N3 learning OR N interprofessional N3 training OR N interprofessional N3 attitudes OR N interprofessional N3 studies OR N interdisciplinary N3 studies OR N interdisciplinary N3 education OR N interdisciplinary N3 learning OR N interdisciplinary N3 training OR N multiprofessional N3 learning OR N multiprofessional N3 training
- 2 N multiprofessional N3 training OR N multidisciplinary N3 education OR N multidisciplinary N3 studies OR N multidisciplinary N3 learning OR N multidisciplinary N3 training OR team* OR N collaborative N3 studies OR N collaborative N3 practice OR peer-learning OR professional learning OR joint learning OR joint training
- 3 shared learning OR shared training OR MW education, interdisciplinary
- 4 1 or 2 or 3

(continued on next page)

(continued)

5 N clinical N3 placement OR N clinical N3 education OR placement OR N student N3 placement OR N clinical N3 training OR ward
 6 (MH "Student Placement")
 7 5 or 6
 8 health professional student* OR health professions education OR professional
 students OR undergraduate* OR health occupation students OR student AND health
 9 (MH "Students, Health Occupations+")
 10 8 or 9
 11 4 and 7 and 10

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