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Changes in French family medicine residents' perspectives about patient partners' participation in teaching: A qualitative study in co-facilitated practice exchange groups.

Running head: co-facilitated practice exchange groups

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Supplementary file 2: Pre-PEG focus group interview guide

Question 1: How do you see the PTTs' role in your training as a FMR?

Question 2: What could PPTs contribute to your training?

Question 3: How do you see PPTs as partners in your training?

Question 4: What skills do you think PPTs should have?

Question 5: Are there any other comments you would like to make?

Supplementary file 3: Post-PEG focus group interview guide

- Question 1: What was your experience concerning PPTs' participation in the PEG?
- Question 2: What did you learn from the PPTs' participation in the PEG?
- Question 3: How has the PPTs' helped you improve your skills?
- Question 4: What skills do you feel are essential to become a PPT in PEGs?
- Question 5: What do you think are the barriers to PPTs' participation in PEGs? In the pre-
- PEG focus group, FMRs mentioned six barriers (below), what do you think about them after the PEG end? Do you confirm them?
- 1) PPTs' subjectivity
- 2) Disruption of the classic doctor-patient scheme: the doctor is the knower, the patient is the doer
- 3) Communication with PPTs (common language)
- 4) Restricted speech (fear of offending PPTs)
- 5) Limitations of a single PPT (what can a single PPT do?)
- 6) External judgment (loss of the exclusive medical group feeling)

Supplementary file 5: Additional verbatim Perspectives of French family medicine residents about the participation of patient partners in teaching.

A. Strong expectations by FMRs concerning PPTs' participation

1) Strong expectations in a favorable context

'It would be nice to have the patient's perspective. To have their input and then to be able to readjust our practice, and what they think about our approach to them. To know whether there are things we can improve, things like that, and have a little more perspective on our practice.' (R11; F2)

'Patients have a big place, not in theoretical teaching, but rather in teaching the doctor-patient relationship; they also are going to bring us what they expects from us. To have the patients' vision, it's important to have their opinion.' (R1; F1)

2) FMRs' expectations about PPTs' contribution

'I thought it was a good practical application and a good way to convey the skills we can see in general practice.' (R7; F5)

'It really helped to bring something extra into the discussion. And it allows you to get the patient's feedback, which you don't get in medical practice.' (R3; F5)

B. FMRs' perspective changes about PPTs' intervention

1) Profile of the intervening PPTs

'The problem with that is that it's also very dependent on the patient, how they feel and so on. I'm not sure it's very applicable. It depends so much on the individual.' (R2; F1)

'The advantage, compared with what R16 was saying, is that he [i.e. the PPT] was a member of a discussion group, so he was certainly telling us about his experience, but also about the feedback he had from other patients and other members of his discussion group.' (R17; F3)

2) Modalities of PPTs' intervention

'It's kind of silly to exclude the PPT by starting a discussion focused on clinical points. It happened from time to time.' (R16; F6)

"Sometimes I've thought, 'ah here's [PPT's first name], I shouldn't forget to re-launch the discussion." (R16; F6)

C. Barriers to PPTs' involvement in PEG facilitation

1) Some of the barriers initially expressed were removed ...
'I wonder whether our way of talking may be restrained sometimes with a patient-teacher. Things that we wouldn't necessarily say to each other or with a patient next door. Things that we don't want them to hear.' (R9; F2)

'Trying to explain it to her in our words. We didn't have to change them much because she knew a lot of things.' (R14; F4)

2) Other barriers persisted at the PEG end

'We just have to tell her that, maybe, and she should "improve" [her intervention]. In the sense that sometimes there are biomedical issues and we need tips. And she should learn not to be always at the center of the stage' (I22; F6)

'It's true that the PPT's role has not been discussed much. We don't know whose experience he reported, whose opinion. Is it his own opinion or the opinion of several people? Yes, maybe he explained that at the beginning, but we don't know where he was trained

Consolidated criteria for reporting qualitative research (COREQ): 32-item checklist Item Guide questions/description			
Domain 1: Research team and refl			
Personal characteristics			
1. Interviewer/facilitator	Focus groups were conducted by three researchers (E. Allory, A. Maury, P. Hebert). J.Guary was observer during all the focus groups.		
2. Credentials	E. Allory, PhDs, MD P. Hebert, pedagogical engineer A. Maury, MD J. Guary, MD		
3. Occupation	At the time of the study, J.Guary was a resident in family medicine, University of Rennes 1. E.Allory was an associated professor at the department of general practice, University of Rennes 1. A.Maury was a junior lecturer at the department of general practice, University of Rennes 1. P.Hebert was a pedagogical engineer, University of Rennes 1		
4. Gender	J. Guary and P.Hebert are women. E.Allory et A.Maury are men.		
5. Experience and training	J. Guary is a doctor in family medicine. She followed a course by a senior researcher, expert in qualitative research, during her residency. E.Allory, P.Hebert et A.Maury had a strong experience in focus groups animation.		
Relationship with participants			
6. Relationship established	Participants were residents from the same department in the university as the authors and could know the researchers.		
7. Participants' knowledge of the interviewer	Participants were informed about the study prior to the focus group through an e-mail by the principal researcher.		
8. Interviewer's characteristics	Interviewers introduced themselves as students (J.Guary), teachers (E.Allory, A.Maury) or pedagogic engineer (P.Hebert), with the aim to improve the quality of resident's curriculum.		
Domain 2: Study design			
Theoretical framework			
9. Methodological orientation and theory	Researchers used a reflexive thematic analysis as theoretical background.		
Participants' selection			
10. Sampling	Participants were all the students who participated to the practice exchange groups (PEG) between june and october 2020.		

11 M-41 - 1 C 1	Description of the first of the		
11. Method of approach	Participants were invited by e-mail, using the contact		
12.6 1 :	information available at the family medicine department. In total, 26 family medicine residents participated: 25 in		
12. Sample size			
	the pre-PEG focus groups and 23 with the post-PEG		
10.37	focus groups		
13. Non-participation	In total, 30 family medicine residents were initially		
	approached. The reasons for non-participation of the		
	residents were unknown.		
Setting			
14. Setting of data collection	The pre-PEG focus groups were conducted by		
	videoconference, due to the health context related to		
	Covid 19.		
	The post-PEG focus groups were conducted immediately		
	after the last PEG, in the same place (meeting room of a		
	multiprofessionnal health centre (2 focus groups),		
	teaching room at the university (1 focus group)).		
15. Presence of non-participants	Only the interviewer, the principal researcher and the		
	participants were present at the focus groups.		
16. Description of sample	The study sample was residents who were realising the		
	PEG between june and October 2020. More detail is		
	available in table 1.		
Data collection			
17. Interview guide	The interview guide for the pre-PEG focus groups was		
	developed based on a literature review performed at the		
	begining of the study, then adapted after two		
	exploratory interviews with 2 family medicine residents		
	who experienced PEG in the previous internship and		
	finally validated with 2 co-authors (E.Allory, P.Hebert).		
	The interview guide for the post-PEG focus group was		
	derived from the pre-PEG focus group and discussed in		
	the research team.		
18. Repeat interviews	No repeat interview was planned or carried out.		
19. Audio/visual recording	All interviews were digitally recorded with a smartphone		
	and transcribed by the observer (J.Guary)		
20. Field notes	Field notes were made throughout the interviews by the		
	observer (J.Guary)		
21. Duration	The duration of the interviews was between 45 to 66		
	Minutes, with an average duration of 58 minutes.		
22. Data saturation	In reflexive thematic analysis, the saturation is not an		
	issue to discuss. We interviewed all the residents who		
	participants of the PEG.		
23. Transcripts returned	Transcripts were not returned to the participants		
Domain 3: Analysis and findings			
Data analysis			
24. Number of data coders	The principal researcher (J.Guary) and an expert in		
	qualitative research (E.Allory) did the coding. In case of		
	quantum to research (D.1 mory) and the country. In case of		

a conflict, a third researcher (P.Hebert) was participating		
to the resolution.		
Authors met regularly to discuss interviews, coding and		
themes.		
Themes were partly identified from the literature and		
partly derived from the interview data.		
No software was used. The analysis was done manually.		
The Xmind® software was used to help us in the		
treatment of the data and Excel® was used to organised		
the content of the data.		
Participants were not invited to check the analysis		
Quotations from participants were used and assigned		
individual numeric codes to respect the interviewees'		
anonymity (e.g. Ix; Fy)		
There was consistency between data and findings.		
Major themes were generated, presented, and illustrated		
with quotes.		
The main minor themes were analysed, presented and		
illustrated with quotes.		

- 1 Changes in French family medicine residents' perspectives about patient
- 2 partners' participation in teaching: A qualitative study in co-facilitated
- 3 practice exchange groups.

5 Abstract

- **Purpose:** The patient partner in teaching method is progressively developing for clinical training in
- 7 France. Practice exchange groups (PEG) co-facilitated by patient partners in teaching are used during
- 8 the training of family medicine (FM) residents. This study explored the FM residents' perspectives
- 9 about patient partner in teaching's participation in co-facilitated PEGs and how they changed over
- 10 time.
- **Students and method:** In 2020, qualitative focus groups were carried out with 26 FM residents before
- and after a 5-month intervention based on monthly PEGs co-facilitated by patient partners in teaching.
- A reflective thematic analysis of the focus group interviews was performed according to Braun and
- 14 Clarke's approach.
- **Results:** FM residents supported patient partners in teaching's facilitation role and had high
- expectations concerning their contribution to the development of their skills and competencies. They
- expected patient partners in teaching to bring their individual experience and also a collective
- 18 knowledge. Some limitations mentioned by FM residents disappeared over time, such as the loss of
- the medical group feeling among physicians, while others persisted and required pedagogical support
- 20 targeted to FM residents before PEG initiation.
- 21 Conclusion: This study shows the good acceptance of patient partners in teaching by FM residents in
- 22 the context of PEGs. Attention should be paid to make FM residents aware of patient partners in
- 23 teaching's missions before their introduction.

Keywords: patient participation; medical education; medical student; general practice; qualitative research.

Practice points:

- In France, patient partners in teaching are recent in medical training and few studies evaluated their acceptance by family medicine (FM) residents in practice exchange groups (PEG).
- FM residents expressed strong expectations concerning the participation of patient partners in teaching in PEGs for developing their skills and competencies.

- Before PEG initiation, FM residents appreciated the experiential knowledge contribution by patient partners in teaching; at the PEG end, patient partners in teaching were perceived as real facilitators and full group members.
- The limitations initially expressed by FM residents about the loss of the medical group feeling in the PEG had disappeared at the PEG end, when the patient partner in teaching was seen as a full group member.
- The involvement of patient partners in teaching in FM residents' training requires real pedagogical support before the training session, including clarifying their pedagogical role.

Introduction

Patient partners in teaching: context, definition, and implications in health education

Faced with the increasing number of people living with a chronic disease in recent years, a reorganization of health systems centred on the patients and their expectations is necessary to meet the new healthcare needs (OECD 2021; World Health Organization 2021). In this context, since 2010, Montreal University (Canada) has developed a conceptual model in which a real partnership is established between healthcare providers (HCPs) and patients. By taking into account the patient skills and experiential knowledge acquired by living with a disease, this model strengthens the consideration of the patients' needs by HCPs (Karazivan et al. 2015).

This model has been expanded to include also the healthcare professionals' education.

Many studies have reported the value of involving patient partners in teaching in health education. According to a 2019 systematic literature review, patient partners in teaching are accepted by undergraduate medical students and contribute to develop a patient-centred approach (Gordon et al. 2019). Patient partners in teaching also improve the medical students' empathy and communication with patients, and facilitate the students' understanding of living with a disease. In addition, patient partners in teaching increase the students' assurance and confidence (Dijk et al. 2020) (Lalani et al. 2019). A qualitative study on 28 English medical students found that patient partners in teaching helped students to remember lessons through a better contextualization and application of theoretical knowledge (Jha et al. 2009). Moreover, patient partners in teaching rebalanced the dialogue between patients and physicians, helping students to better take into account the patients' skills.

Integration of patient partners in teaching in the training of family medicine

residents in France

In France, family medicine (FM) residents train for three years and must follow theoretical training courses at university one day per week. Among these courses, practice exchange groups (PEGs) allow anchoring their training in the framework of competence-based learning. PEGs were initially developed for HCPs' continuing education, and consist of collaborative teaching that contributes to skill development (Beyer et al. 2003). PEG main objective is the adoption of a reflective approach by FM residents to integrate collectively produced knowledge into their practice (Brabant et al. 2019). PEG facilitation is usually done by FM teachers. Recently, PEG co-facilitation by patient partners in teaching and FM teachers has been implemented in several

French medical schools. A quantitative study on FM residents' perspective after one year of participation in a PEG co-facilitated by patient partners in teaching and FM teachers highlighted a positive and useful experience, particularly due to the patient partners' specific contributions

76 (Aires et al. 2019).

However, few studies evaluated FM residents' perspective changes concerning the acceptation and integration of patient partners in teaching. Indeed, the introduction of patient partners in teaching as new teaching team members could create resistance and hamper FM residents' knowledge acquisition (Piaget 1971). The objective of this qualitative focus group study was to determine FM residents' perspectives about the participation of patient partners in teaching in

PEGs and how these perspectives changed over time.

Students and methods

Training context

At Rennes University, FM residents' training includes PEGs (9-11 FM residents per PEG), once a month. Each session lasts 3 hours, during which FM residents take turns in presenting a narrative of a complex and authentic situation (NCAS), inspired from clinical situations personally experienced during their family medicine training. After each NCAS, the group discusses the identified problems, and everyone brings their opinion and experience. In 2019, the first three proposed PEGs were co-facilitated by one FM teacher and one patient partner in teaching. These patient partners in teaching are volunteers with a stabilized chronic disease (n=2) or caregivers of a person with a chronic disease (n=1). They were recruited mainly via networks of healthcare users' associations. The three patient partners in teaching received pedagogical training about their role in the PEG by the FM teacher coordinator. Their expected role was to co-animate the PEG and to offer their experiential knowledge (individual or collective) when they thought it was relevant. The pedagogical objectives of their integration in the PEG were to lead FM residents to consider them as partners in their training and to benefit from their experiential knowledge. A two-hour preparatory teaching session is offered to the FM residents before the PEG start to explain the concept of facilitators and the PEG organization.

Study design

- The consolidated criteria for reporting qualitative research (COREQ) checklist was used to
- prepare our manuscript (supplementary file 1) (Tong et al. 2007).
- 104 Participants

- Focus groups were conducted with 5-10 voluntarily participating FM residents per focus group
- (total n=26 FM residents), recruited from the three co-facilitated PEGs. Their characteristics
- are described in Table 1.
- 108 Data collection
- A pre-PEG focus group was carried out for each PEG (F1, F2, F3) by videoconference (June
- 2020) before the two-hour preparatory teaching session. At these focus groups, FM residents
- did not have any contact with the PEG facilitators. Afterwards, FM residents attended one PEG
- per month for five months. Then, three post-PEG focus groups (F4, F5, F6) were conducted
- face-to-face (October 2020). The focus group facilitators were two FM teachers (AM and EA)
- and an educational engineer (PH).
- The interview guides for the pre- and post-PEG focus groups were developed by three authors
- 116 (EA, JG and PH) following the literature recommendations (Kallio et al. 2016). They were
- written based on a non-systematic review of the literature and two exploratory interviews with
- FM residents who previously participated in co-facilitated PEGs. The interview guide consisted
- of open-ended questions to explore the FM residents' perspectives on the participation of patient
- partners in teaching in their training, their expectations about the contributions and skills of
- patient partners in teaching, and possible barriers to the participation of patient partners in
- teaching. At the PEG end, researchers also asked the FM residents about changes in the main
- barriers they identified in the pre-PEG focus groups (Supplementary files 2 and 3).

Data analysis

- Focus group interviews were recorded using a digital voice recorder with the participants'
- consent, and they were fully transcribed. Each focus group lasted between 45 and 66 minutes
- 127 (mean: 58 minutes). The interview transcriptions were anonymized. A thematic inductive
- reflective analysis was performed following the six steps described by Braun and Clarke (Braun
- and Clarke 2006). After data familiarization and iterative reading of the interviews, two
- researchers (EA and JG) independently and openly coded all transcribed interviews. The coding
- was done in two stages: first the pre-PEG (F1, F2, F3) and then the post-PEG (F4, F5, F6) focus

group interviews. Codes were integrated in an Excel® spreadsheet. At the end of the coding process, virtual maps using the XMind® software were generated to identify themes that were shared and reviewed by the two researchers. In case of conflict, the intervention of a third researcher (PH) allowed its resolution. Then, themes were defined and named. The final phase of the analysis was the production of an analysis report (Kiger and Varpio 2020).

Ethical and regulatory aspects

- The database was declared to the French national commission for information technology and liberties (CNIL) on April 19, 2020. The study project was approved by Rennes university hospital ethics committee on May 10, 2020 (N°20.44).
- 141 Results
- From the analysis of the transcribed interviews, three main categories were identified, each containing two themes (Table 2).
 - Strong expectations by FM residents concerning the participation of patient partners
- in teaching
- 146 Strong expectations in a favourable context
- Before the PEG start, most FM residents had high expectations about the involvement of patient partners in teaching in their training. They said that they had little previous contact with patient partners in teaching and identified gaps in their training that could be filled by their intervention.
- 'It could be very relevant to introduce the patient-teacher much earlier in our education.'
 (R3; F5)
 - However, some FM residents did not have any specific expectation concerning patient partners in teaching and found difficult to imagine their role. A co-facilitator role was mentioned by some FM residents before the PEG start. FM residents wanted patient partners in teaching to evaluate their NCAS and give constructive feedback. This expectation was stable at the PEG end. The positive pre-PEG expectations were in line with the FM residents' patient-centred approach in their practice.
 - 'That's the goal, to stop with paternalistic medicine and move towards a more patient-centred medicine.' (R20; F3)
 - At the PEG end, these perspectives remained stable.

FM residents' expectations about the contribution of patient partners in teaching

First, before the PEG start, FM residents expressed the wish to hear about the experiential knowledge of patient partners in teaching.

'Patients are going to live with the disease for a long time, therefore they understand it and know it better than we do." (R1; F1)

FM residents also expected patient partners in teaching to improve their skills in accompanying patients, including knowledge about community resources, such as patient organizations. Besides experiential knowledge, FM residents validated the patient partners in teaching's input to develop their skills. First, FM resident thought that patient partners in teaching could strengthen their patient-centred practice. By promoting patient empowerment, working on empathy, and improving communication skills, patient partners in teaching could be an asset in learning the doctor-patient relationship.

'For many things, they bring the patient's point of view to us. They especially teach us to refocus on the patient.' (R20; F6)

Second, FM residents expected patient partners in teaching to contribute to better understand their role in the community. FM residents thought that the participation of patient partners in teaching would promote the development of a more ethical medical approach and help them to define their professional role.

"I would love to have the patients' perspective first, and know what they expect, what they want...what we can bring to them [as healthcare providers]." (R4; F1)

At the PEG end, these perspectives remained stable. In addition, FM residents reported that patient partners in teaching contributed to develop their reflexivity and stimulated their desire to continue their training. FM residents whose pre-PEG expectations were mainly related to the provision of experiential knowledge were the least satisfied.

'We don't have to take everything she [i.e. the patient partner in teaching] said. We can criticize what she says. And then it makes us think and it makes us do some research.'
(R9; F6)

FM residents' perspective changes about the intervention of patient partners in teaching

Background of the patient partners in teaching

In the pre-PEG focus group, FM residents questioned several dimensions of the patient partners' background on which their legitimacy as teachers was based. For some FM residents, the knowledge brought by patient partners in teaching was subjective and incompatible with a credible teacher's role. FM residents expected patient partners in teaching to express collective knowledge on the behalf of a group of patients. At the PEG end, these perspectives remained stable, but some FM residents were disappointed when patient partners in teaching spoke less about their personal experience. Some FM residents referred also to their own experience of living with a disease as a way of weighing the contribution of patient partners in teaching.

'The patient side, I had it myself. So there were many things that the patient partner in teaching brought to you, but not necessarily to me. [...] Indeed, I expected other things from the PEG, not just the patient-doctor relationship and putting patients in their context.' (R19; F6)

Second, at the PEG start, FM residents defined the patient partners' background also in function of their skills that were mostly pedagogical. FM residents expected patient partners in teaching to be caring, communicative, listening and open-minded, and also engaged in a constructive educational process. They were expected to discuss their own experience and not to judge the FM residents' work or attitudes.

At the PEG end, FM residents seemed to have become aware of the different roles of patient partners in teaching in their training. Previous experiences of interventions by patient partners in teaching (e.g. testimonials) were mentioned by some FM residents. The initial expectations of some FM residents were rooted in the perspective of an expert teacher who would teach something that they needed to learn by heart. At the PEG end, FM residents appreciated and broadened their perspective on the specific role of patient partners in teaching (more as facilitators).

"I think she was trained to facilitate a patient education group. Because she also had some mastery of group facilitation. (R17, F6)

Modalities of the intervention by patient partners in teaching

Before the PEG, most FM residents did not see them as the main PEG facilitator, rather as a partner to the FM teacher (the lead facilitator). This opinion remained stable after the PEG. At the PEG end, FM residents identified factors in favour of patient partners' integration in their teaching, particularly the PEG pedagogical method. The debates within the PEG allowed everyone to find their place and the knowledge was co-constructed within the group.

'There was no hierarchy, no doctor-patient dichotomy in the PEG, so much that I forgot he was a patient. To me he was a PEG teacher.' (R1; F5)

In addition, most FM residents felt that structuring the sessions with NCAS presentations helped to better integrate the patient partner in teaching. The problems identified by FM residents in the NCAS were first related to clinical issues and then to relational or communicational issues, which made relevant the participation of a patient partner in teaching. FM residents felt that when the emphasis was on clinical aspects, the patient partner in teaching's participation was hindered. Overall, FM residents highlighted the PEG collective responsibility in integrating the patient partner in teaching.

Barriers to the involvement of patient partners in teaching in PEG facilitation

Some of the barriers initially expressed were removed...

Most of the barriers initially stated by FM residents about patient partners in teaching disappeared at the PEG end. Sometimes, during the post-PEG focus group, FM residents did not even remember that barriers were discussed during the pre-PEG focus group. First, FM residents reported the good integration of the patient partner in teaching in the PEG. The apprehension about the medical group feeling loss initially expressed disappeared in favour of the perceived pedagogical contribution. Initially, FM residents were worried that they would have to restrain their speaking for fear of offending the patient partner in teaching. This disappeared over time while a relationship of trust and partnership was established. According to FM residents, this partnership was facilitated by the absence of a care relationship between patient partners in teaching and FM residents. The PEG became a separate unit in which patient partners in teaching were considered like any other participant.

'He's part of the group, so he's not an outsider, he's like us. [...] He is included in the group that we have built." (R4; F5)

Also, FM residents initially expressed the fear of not finding a common language for discussing with patient partners in teaching. Its disappearance at the PEG end could be explained by several factors. First, the health literacy level of patient partners in teaching was appropriate for their full participation in the PEG. Also, the FM residents' efforts to facilitate communication with the patient partner in teaching was seen as an opportunity to develop a patient-centred approach.

'I think patient partners in teaching can completely change the way we talk to each other. [...] It's going to force us to better explain medical data and try to make the whole audience understand, including the patient.' (R17; F3)

Finally, FM residents who were initially concerned that patient partners in teaching would disrupt their usual patient-doctor relationship scheme found that patient partners in teaching made them better understand the patient's experience of living with a disease and move towards a care partnership.

'When it is in the context of a chronic disease where patients are very expert in their illness... the usual patient-doctor relationship is disrupted. You have to be able to adapt to the new relationship.' (R21; F3)

Other barriers persisted at the PEG end

First, the FM residents perceived that the role of patient partners in teaching as PEG facilitators was not well defined. They cited the recent development of PEG as a reason. Depending on the PEG, patient partners in teaching seemed to have taken either a leadership role in the facilitation, an equal role with the FM teacher, or a more secondary role. Therefore, FM residents thought that the lack of a precise definition of the patient partner in teaching's roles could lead to disappointment. For instance, some FM residents did not like when the patient partner in teaching was the main facilitator because they expected a more biomedical approach in the PEG.

'Because sometimes [the FM teacher] had very interesting answers but we had run out of time or were cut [by the patient partner in teaching] who wanted to go back to the relationship. Whereas sometimes what we're looking for is just little tips and tricks about medical things.' (R18; F6)

A second barrier that persisted after the PEG was the fear that the 'genuine naivety' of the patient partner in teaching might disappear by coming into contact with medical students, or by receiving training for their participation in the PEG.

'But she must not be trained too much on the medical side. So that she stays... They must continue saying their little things. Indeed, these little things may seem silly little questions to them, but we put them all in perspective.' (R18; F6)

Discussion

Overall, this qualitative focus group study found that the interviewed FM residents had favourable perspectives about the integration of patient partners in teaching in PEGs. FM residents 'expectations concerning patient partners in teaching's participation were strong and focused on developing their skills. FM residents wanted patient partners in teaching to speak on behalf of all patients, with a dedicated time in the PEG. Many of the initial perceived barriers about the integration of patient partners in teaching had disappeared at the PEG end (e.g. the group feeling loss). Conversely, others persisted, especially the patient partner in teaching's place as facilitator, thus requiring pedagogical adjustments.

Discussion of the results

- The development of the patient-partnership in teaching seems easy
 - Our study shows that the intervention of patient partners in teaching was considered as a learning opportunity by FM residents. FM residents reported improved communication skills, empathy and patient-centeredness, consistent with previous literature reviews (Gordon et al. 2019; Lalani et al. 2019; Dijk et al. 2020). A factor that facilitated the acceptance of patient partners in teaching was the FM residents' awareness of the importance of the patient partnership in care. Thus, experience with care seems to be a factor that facilitates the acceptance of patient partners in teaching. Faced with the change in learning paradigms, FM residents showed a shift in their perspectives about the role of patient partners in teaching. Initially, FM residents expected to receive experiential knowledge in the form of a testimonial by patient partners in teaching about their life with a chronic disease. This corresponds to level three (out of six) in the taxonomy of patient engagement in teaching proposed by Towle and colleagues: patient partners in teaching share their experience in the framework a facultydirected curriculum (Towle et al. 2010). As the sessions progressed, FM residents discovered that patient partners in teaching could also be real group facilitators, moving to level four of this taxonomy: patient partners in teaching are involved in teaching and evaluating. Thus, the perceived and desired level of commitment and partnership of patient partners in teaching by FM residents increased over time.
- 309 Barriers to changes and levers for teaching improvement
- Before the PEG, FM residents described a preference for teaching carried out only by medical community members. The group feeling in PEGs has been described as necessary among peers (Brabant et al. 2019). After the PEG with a patient partner in teaching, FM residents'

perspectives evolved about this barrier. Thus, more than professional identity (physician or patient partner), it was the identity as PEG participants that prevailed. However, other barriers persisted at the PEG end. For example, FM residents were unconvinced about the legitimacy of patient partners in teaching as teachers/facilitators, and expected them to be trained in pedagogy and other areas. The importance of the teacher's credibility to enable pedagogical input has been previously highlighted (Renard and Roussiau 2007). Thus, providing pedagogical training to patient partners in teaching and let FM residents know about it at the PEG beginning could help to integrate patient partners in teaching as full-fledged teachers. Fiquet et al proposed to provide clear information to patient partners in teaching on the pedagogical objectives and the modalities of their intervention, as we did in our study (Figuet et al. 2022). This recommendation, also made by Romme et al, could take the form of collective peer-to-peer support to enhance their participation (Romme et al. 2020). Mentoring by 'patient coaches' could also be considered for training new patient partners in teaching (Karazivan et al. 2015). Indeed, mentoring by experienced patient partners in teaching could help to maintain the authenticity of patient partners in teaching (Cheng and Towle 2017). In addition, FM residents linked the legitimacy of the intervention by patient partners in teaching to their capacity to represent a group and to transmit collective knowledge. This was also described by Gardien who spoke of 'a recurrent doubt as to the relevance or usefulness of experiential knowledge. This mistrust regularly takes the form of questioning their objectivity' (Gardien 2019, p. 105). In our focus groups, FM residents confirmed a contradiction observed also in other HCPs (Renedo et al. 2018). In this previous study, HCPs wanted patient stories that promoted the development of their professional knowledge. However, after listening to personal stories, they devalued them and said they were looking for patients who spoke less about their own experience. The interviewed FM residents also devalued personal stories and considered their own experience of the healthcare system as valuable as that of patient partners in teaching. Overall, the difficulty in visualizing the patient partner in teaching's role may be explained by the fact that the identity of this new function remains ambiguous in the literature (Codsi et al. 2021). Nevertheless, two levers for improvement emerged. First, FM residents thought that PEG co-

Nevertheless, two levers for improvement emerged. First, FM residents thought that PEG co-facilitation should be improved. According to Bleakley and Bligh, the patient-centred approach cannot be developed with students without the 'mirror' or role model presented by the patient (Bleakley and Bligh 2008). In this context, the FM teacher-patient partner in teaching pairing is presented as a learning facilitator. FM teachers would be the leader facilitator in the PEG,

while patient partners in teaching would bring their own expertise. On the basis of our findings, optimization would also require a better preparation of FM teachers and patient partners in teaching. For instance, joint training of patient partners in teaching and FM teachers before the PEG could improve the facilitator roles' distribution (Romme et al. 2020). A second lever may be to improve FM residents' knowledge about the role of patient partners in teaching before a PEG. Educational science authors agree on the importance of communicating well at the beginning of a course module about its pedagogical objectives and modalities (Biggs 1996). By making the pedagogical intentions explicit, learners will give meaning to the teaching, which is a motivational factor (Viau et al. 2004). However, this communication step needs to be precisely organized. Indeed, after an intervention focused on health democracy, French FM residents said that they could not understand well the purpose of PEGs that included patient partners in teaching (Gross et al. 2017). The patient partner in teaching concept represents a profound cultural shift and its integration by all FM residents will take time.

Strengths and Limitations

This study increases the available data on the FM residents' perspectives about the role of patient partners in teaching in their training. The study longitudinal approach allowed assessing the perspective changes over time of FM residents who had little or no previous contact with patient partners in teaching before the pre-PEG focus group. Previous contacts with patient partners in teaching's in the framework of their medical training seemed to influence the initial perspectives of some FM residents about the involvement of patient partners in teaching in their training.

This study has several limitations. First, the pre-PEG focus groups were by videoconference due to the COVID-19-related public health measures, and this may have limited the contribution by some interviewed FM residents. Second, data collection by focus groups, some of which were facilitated by an FM teacher, may have limited the expression of negative perspectives by FM residents. The final richness of the focus groups allowed weighing this limitation. On the other hand, FM residents showed a memory bias, especially during the post-PEG focus groups. Indeed, the barriers to the integration of patient partners in teaching mentioned in the pre-PEG focus groups were summarized to the FM residents at the post-PEG focus group, but they did not remember mentioning them. Lastly, this study was carried out in a context of double novelty for FM residents: patient partners in teaching's integration in their training and PEGs that are based on competence-based learning. Indeed, in France, medical student training is mainly

based on traditional large group teaching. Therefore, the changes in their perspectives at the PEG end could be explained by this specific situation.

Conclusion

Our study illustrates the FM residents' interest in the participation of patient partners in teaching in PEGs. Most of the barriers mentioned by FM residents before the PEG disappeared after the involvement of patient partners in teaching. To address the barriers that remained after the PEG, the PEG format might be adjusted, particularly the co-facilitation and the contribution by patient partners in teaching during the PEG. A longitudinal follow-up of FM residents would allow better understanding the long-term impact of patient partners in teaching in their training.

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Disclosure statement

Disclosure of interest

The authors report no conflicts of interest. This study was not funded and was conducted by researchers employed through the university of Rennes 1.

Data availability statement

All data generated or analysed during this study are included in this published article and its supplementary information files.

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Tables

Table 1: Participants' characteristics

Pseudonym	Gender	Age (years)	Year of residency in June- October 2020	Focus groups
R1	woman	24	1	F1 F5
R2	man	25	1	F1
R3	man	27	2	F1 F5
R4	woman	26	2	F1
D.5	woman	25	1	F5 F1
R5	woman	25	1	F5
R6	woman	26	1	F1 F1
R7	man	25	1	F5
R8	man	25	1	F2 F4
R9	man	26	2	F2
			_	F4
R10	woman	25	1	F2 F4
R11	woman	25	1	F2 F4
R12	woman	27	2	F2 F4
R13	woman	25	1	F2

			F4
Women	26	2	F2
R14 woman	20		F4
R15 woman	25	1	F2
woman			F4
man	25 2	2	F3
mun	23	2	F6
man	26	2	F3
111411	20	-	F6
woman	25	2	F3
,,,		_	F6
woman	26	2	F3
			F6
woman	25 1	1	F3
			F6
man	25	1	F3
woman	26	2	F3
,,,			F6
woman	27	2	F3
			F6
woman	24	1	F3
R24 woman		-	F6
woman	26	1	F2
5-1441-	_~		F4
man	26	1	F4
	woman woman woman	woman 25 man 26 woman 25 woman 26 woman 25 man 25 woman 26 woman 27 woman 24 woman 26	woman 25 1 man 25 2 man 26 2 woman 25 2 woman 26 2 woman 25 1 man 25 1 woman 26 2 woman 27 2 woman 24 1 woman 26 1

Table 2: Categories, themes, sub-themes and their changes after the PEG

Categories	Themes	Sub-themes before the PEG	Changes after the PEG
Strong expectations by	Strong FM residents' expectations	Strong positive pedagogical expectations	Stable
		Comparison with the patient-centred approach in their care	Stable
FM residents		Experiential knowledge	Stable
concerning the participation of patient partners in teaching		Skill enhancement	Stable
	Contribution of the patient partners in teaching	Better understanding their role	Stable
			The patient partner seems to improve the FM residents' reflexivity
FM residents' perspectives about the intervention of patient partners in teaching	Background of patient partners in teaching	Individual subjective knowledge is expected	Stable, expectation of more personal experience by the patient partner in teaching
			Some FM residents valued their own experience as patients
		Expectation of collective knowledge	Stable
		Expectation of pedagogical skills by the patient partner	Stable. Discovery of their different potential roles in their training.

		Teacher as an expert	Teacher as a group facilitator
	Modalities of the intervention of patient partners in teaching	FM teacher as the lead facilitator	Stable
			Factors that promote integration: - Discussions within the PEG - NCAS structuring the PEG - Collective responsibility of the PEG in the patient partner's integration
Barriers to the involvement of patient partners in teaching in PEG facilitation	Removed barriers		No memory of the barriers discussed in pre-PEG focus group
		Medical group feeling loss	Patient partner in teaching considered as member of the group
		Restrained language	Relationship of trust and partnership with the patient partner in teaching
		No common language between FM students and patient partner in teaching	Appropriate literacy level of the patient partner in teaching and development of a patient-centred communication
		Disruption of their patient-doctor relationship scheme	Move towards a care partnership
	Persisting barriers	Teaching role not well defined	Stable
		Expectations of a biomedical approach in the PEG	Stable. The presence of a patient partner in teaching limited the biomedical input
		Genuine naivety might disappear	Stable