

**ORIGINAL RESEARCH:
EMPIRICAL RESEARCH - MIXED METHODS**

Transformative learning experience among nursing students with patients acting as teachers: Mixed methods, non-randomized, single-arm study

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Abstract

Aim: To examine the effects of expert HIV patients acting as teachers to Spanish nursing students both on their HIV-related knowledge, attitudes and practices and on their approach to the care model as well as to explore their learning experience.

Design: Non-randomized, single-arm study with quantitative before and after measurements and qualitative data.

Methods: The intervention consisted of five 90-min workshops led by two women living with HIV. Thirty-four nursing students participated, and quantitative and qualitative data were gathered from February to June 2018. We used the Patient-Practitioner Orientation Scale (PPOS) and the KAP questionnaire on HIV/AIDS to collect quantitative data.

Results: Statistically significant differences were found in the global score for care orientation and its two dimensions, caring and sharing. About the changes resulting from the workshops, the quantitative results—more patient-centred care perception and better attitudes towards people living with HIV—match the qualitative findings in all the aspects studied, except in sharing.

Conclusion: Incorporating expert patients as teachers in the nursing bachelor's degree resulted in more patient-centred care and improved knowledge, attitudes and practices. The workshops conducted by qualified expert patients showed transformative learning power, as the participants improved professional and personal aspects.

KEYWORDS

expert patient, intervention studies, nursing, nursing education, patient participation, patient-centred care, people living with HIV

Study Registration: The study protocol was registered retrospectively in The Open Science Framework (OSF) under DOI [10.17605/OSF.IO/Z2AM7](https://doi.org/10.17605/OSF.IO/Z2AM7).

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1 | INTRODUCTION

The current global literature indicates that people living with HIV either receive low-quality care or are discouraged from seeking care due to HIV-related stigma and the negative attitudes of health professionals (Krause & May, 2016). Nursing students also express these conflicting attitudes. Academics concerned by this situation have promoted several strategies to address it, such as the engagement of people living with HIV in teaching specific issues (Spencer et al., 2011). The inclusion of patients in medical education has been defined as a truly patient-centred model (Bleakley & Bligh, 2008).

2 | BACKGROUND

Since the 1970s, there have been initiatives to get patients involved in the education of medical and nursing professionals and social workers (Towle et al., 2010). Spencer et al. (2011) describe two educational initiatives engaging people living with HIV: the first involved patients as educators in the training of medical students about outpatient care and the second, in 2001 at McMaster University, included two people living with HIV in a program that used a problem-based learning methodology. Years later, Feijoo-Cid et al. (2017) published an article about a woman living with HIV in Barcelona who shared her illness narrative with nursing students. Since 2010, the Division of Health Care Communication at the University of British Columbia has engaged expert patients living with chronic conditions (including a person living with HIV) as mentors in the training of healthcare professionals (Towle et al., 2016).

Patients are often invited to get involved in health education by sharing their experiences and answering students' questions (Spencer et al., 2011). Alternatively, they may take on the role of teacher, advising and/or evaluating the communication and clinical skills of students (Bokken et al., 2008) or become their mentors (Towle et al., 2014). The benefits resulting from patients acting as teachers mainly pertain to technical and communication skills, empathetic understanding and the development of an individualized care approach (Spencer et al., 2011). Patients prefer a patient-centred approach as it better serves their interests; in this approach, professionals place patients at the centre of care, recognizing that they are people first, putting down their pen and listening to understand the visible and invisible impacts of living with chronic conditions (Cheng & Towle, 2017). However, it is complex to assess the effectiveness of patient engagement in nursing education or in other programs for health professionals since it is hard to state what kind of patient engagement is most effective and what the outcomes are (Perry et al., 2013; Scammell et al., 2016).

Various pieces of evidence point to the need for longitudinal evaluations on the potential for transformative learning from patients (Scammell et al., 2016; Towle et al., 2010). These studies highlight that qualitative evidence is more abundant, as most have explored the perception of the value of involvement: what students learned, the strategies that were useful for patients to recount their experiences and/or the benefits of their engagement. However,

some research also identifies the need for more longitudinal studies, since most are conducted in the same context—the UK—and present small samples at a single centre, thus making it difficult to generalize results (Scammell et al., 2016; Towle et al., 2010). Furthermore, a systematic review by Scammell et al. (2016) states that more mixed methods research is required to evaluate the impact of patient participation in the person-centred approach.

Taking all this into account, the problem must be approached in a way that paints a comprehensive picture by combining complementary kinds of data. Further experimental research about people living with HIV in nursing education should be conducted to evaluate the impact it has on reducing the bias of professionals, expanding patient-centred care and the learning experience from the students' perspective.

3 | THE STUDY

3.1 | Hypotheses

Including patients living with HIV as teachers in the undergraduate nursing degree enhance patient-centred care.

Including patients living with HIV as teachers in the undergraduate nursing degree enhance the knowledge, attitudes and practices of nursing students towards those patients.

3.2 | Aims

This study aims to examine the repercussions of expert HIV patients acting as teachers to Spanish nursing students. For this purpose, three specific objectives were developed (1) to assess HIV-related knowledge, attitudes and practices of nursing students before and after the intervention of patients as teachers; (2) to explore changes in nursing students' care orientation after the intervention and (3) to explore students' perception of the impact of the intervention on their knowledge, attitudes and practices. The research questions are (1) What changes can be expected when HIV patients act as teachers in the classroom? (2) From the students' perspective, what impact does the teaching intervention have on their education?

3.3 | Design

This study was co-designed with one of the expert HIV patients who led one of the workshops.

The study protocol was registered retrospectively in the Open Science Framework (OSF) under the registration DOI [10.17605/OSF.IO/Z2AM7](https://doi.org/10.17605/OSF.IO/Z2AM7).

We conducted a non-randomized, single-arm study with quantitative and qualitative data to answer the research questions. Both types of data were given equal emphasis, and both sets of results were included in the interpretation. The intervention for people living with HIV consisted of five workshops led by two women. This intervention

was conceived as a single-arm, mixed methods study with evaluation before and after. For this reason, the protocol available in OSF is described as a mixed methods design. The best nomenclature for the study design is 'mixed methods, non-randomized, single-arm study'.

The philosophical perspective chosen was pragmatism: In the pragmatic approach, we ask 'What is needed to address the research question?' and we look for the best method to respond to the question. That implies that the researched topic is contemplated from all possible angles and uses all available tools to find a complete answer (Hesse-Biber, 2015). The mixed methods format is a result of the pragmatism paradigm (Coates, 2020). Thus, quantitative data from this evaluation aim to answer the first question, whereas qualitative data answer the second. Qualitative data will also contribute to a better understanding of the quantitative data. We used a content analysis approach for the qualitative data and a non-randomized, single-arm design for the quantitative data.

Registration in OSF was done retrospectively because, at the time of the intervention, the protocol did not meet the medically focused eligibility criteria since it was an evaluation of the impact of an educational intervention, and it included a qualitative evaluation process. Following the intervention, we learned of the possibility of publishing the protocol as a registered report hosted in the OSF to improve the consistency and quality of the study.

3.3.1 | Intervention design and level of patient engagement

The intervention consisted of five weekly workshops lasting 90 min each, led by two women living with HIV acting as teachers. Patient

engagement, in this case, corresponds to the fourth degree of the Spectrum of involvement (Towle et al., 2010): 'Patient-teacher(s) are involved in teaching or evaluating students'. The workshop curriculum was developed following the expert patient's criteria and the patient-reported outcome for HIV (Engler et al., 2017). A patient-reported outcome is a report-based measure of patient health status taken directly from the patient without a physician or anyone else modifying or interpreting the patient's response. Additionally, the expert HIV patient suggested using the gender perspective to guide the content given that, worldwide, women are more affected by HIV than men, even though, in our country, HIV prevalence is higher among men who have sex with men. The intervention structure can be found in Appendix S1 and the workshop content is available in Table 1.

The intervention combines in-person teaching with e-learning using Moodle (Modular Object-Oriented Developmental Learning Environment). Before each workshop session, students received instructions to read three papers related to the content of each module (see Table 1), search for more information on their own and upload a topic-related essay (all on the Moodle platform).

3.3.2 | Recruitment of expert patients

Inclusion criteria for the recruitment of expert patients were as follows: being a woman with expertise in her condition or extensive experience in dealing with the healthcare system, experience in group facilitation and the ability to communicate and articulate her experience of living with HIV (Towle & Godolphin, 2015). We used

February 2018	Workshop 1	Impact of diagnosis: Evolution of the impact of diagnosis. Aspects persisting in collective perception; gender-sensitive approach. Importance of the testing. Quick test. Pre- and post-diagnosis counselling: current situation of HIV; what does living with HIV imply; peer support; reliable healthcare team.
	Workshop 2	Self-management of health: Whom to share diagnosis with, when, how. Prevention of transmission and responsibility for one's own health.
	Workshop 3	Long-term treatment: Incorporate treatment in daily life, side-effects management (when medical specialities divide us)
March 2018	Workshop 4	Physical well-being. Emotional well-being: Sexual and reproductive health. Gender-sensitive approach
	Workshop 5	Rights of people living with HIV: core values as basement of human rights: justice, respect, equality, autonomy, universality and participation. Stigma and discrimination. Stigma as a form of violence, symbolic and institutional violence. Power relationships in providing care.
April 2018	Knowledge fair ^a	First Knowledge Fair: Care for and by people living with HIV.

TABLE 1 Content of workshops facilitated by two expert women living with HIV as teachers

^aProgram knowledge fair (see Appendix S1).

the term expert HIV patients, following the term 'experts by experience', acknowledging the extensive work and knowledge involved in living with and managing chronic disease (Towle et al., 2014). Since we already had an expert patient, she oversaw the selection of new expert patients from among the women she had worked with for over 20 years. She chose another woman living with HIV willing to be engaged in the teaching program. After over 20 years of working in peer-support groups, thus having gone over a long process of learning about self-care, both women were clear about the importance of putting their own experience at the service of future health professionals' training. The funds required to carry out the project, including compensation for the participation of expert patients, came from a grant (see Funding).

3.4 | Participants and sampling

The study population included the 82 students enrolled in the Module of Nursing and Medical Anthropology taught during the fourth year of the Bachelor's Degree in Nursing at the Universitat Autònoma de Barcelona. Participation in the patient teaching activity was voluntary since students could opt-in as an alternative to another assessable assignment.

For the quantitative study, 33 subjects were necessary to recognize a difference of ≥ 0.3 units on the Patient-Practitioner Orientation Scale (PPOS) as statistically significant. The standard deviation was assumed to be 0.5. A dropout rate of 10% was anticipated. The alpha risk accepted was 0.05, and the beta risk was 0.1 in a two-sided test. Finally, 35 people participated in the focus groups and completed the questionnaires. The qualitative study sampling was intentional, so the students who agreed to participate in the workshops were invited to the learning experience assessment in focus groups after each workshop session.

3.5 | Data collection

Data collection took place between February and June 2018. Both quantitative and qualitative data were collected simultaneously.

3.5.1 | Quantitative data collection

All participating students completed an anonymous, self-reported questionnaire before the first workshop and after the last. The questionnaire contained the PPOS, with permission granted (Krupat et al., 2000), as well as the KAP questionnaire on HIV/AIDS, designed by IPPF International Planned Parenthood Federation (2008) and validated in Spanish to assess HIV-related knowledge, attitudes and practices.

The PPOS offers a total score, ranging from patient-centred to physician-centred care, plus two secondary scores (Sharing and Caring). The Sharing subscale, with nine items, reflects the extent

to which the respondent believes that patients want information and should be part of the decision-making process. The Caring subscale—also containing nine items—reflects the extent to which the respondent sees the patient's expectations, feelings and life circumstances as crucial elements in the treatment process. The PPOS was culturally adapted to the Spanish context but not validated.

The KAP questionnaire on HIV/AIDS consists of 52 questions, including items related to attitudes towards people living with HIV (18 items), HIV knowledge (31 items) and practices (three items). Responses included true/false, multiple-choice and Likert scale options. We grouped each KAP variable into subscales. Knowledge comprised five subscales as follows: knowledge about reducing the risk of HIV infection, HIV myths, knowledge about mother-to-child transmission, knowledge of antiretroviral treatment (ART) and with whom the diagnosis is shared. Attitudes also included the following four subscales: confidentiality of diagnosis, attitudes towards people living with HIV, fear of contracting HIV and worries about secondary stigma. Practices comprised one subscale: extra measures to care for people living with HIV, that is use of double disposable gloves. KAP subscale variables were dichotomized using an a priori threshold. The threshold for each KAP subscale was considered adequate when all responses were correct, except in 'knowledge about reducing the risk of HIV infection', in which the threshold allowed one wrong answer.

3.5.2 | Qualitative data collection

Two focus groups were held after each workshop session to collect qualitative data. All students participating in the workshops agreed to participate in the evaluation groups following each session. We developed a semi-structured interview guide that covered the following questions: (a) Can you explain what you have learned and what have you reflected on? (not just at the level of knowledge but also attitudes and practices) (b) Can you explain what have you learned or re-learned? (c) Can you talk about your learning experience in this session? and (d) What would you change in your practice as a student nurse and future nurse? (Including attitudes, practices and care). In the last workshop, we also asked about expectations and suggestions for improvement. Qualitative data collection lasted between 25 and 45 min and was audio-recorded. Data saturation was established by 'repeated responses' across groups (Saunders et al., 2018).

3.6 | Ethical considerations

Ethics committee approval was obtained from the University. To ensure that patients do not become overly anxious, we met before the workshop to clearly explain the purpose of the study, the importance of their involvement and the possibility they could disengage at any moment. As consent and confidentiality might represent major concerns for patients (Towle et al., 2010), we fully explained that they could decide what medical information they would share with the students that were relevant for their learning, and we

provided students with guidelines about patient's confidentiality, dignity and respect.

As for the students, the study was clearly explained, emphasizing the importance of confidentiality aspect when dealing with the patients' personal experiences. Students were also informed that they could withdraw at any time, with no need to offer explanations and no academic consequences. Confidentiality, the anonymity of quantitative data and pseudonymity of the qualitative data were guaranteed. All nursing students gave written informed consent on the same day the study was explained.

3.7 | Data analysis

3.7.1 | Quantitative analysis

Data obtained from the quantitative study were managed and analysed using SPSS version 20. The differences in KAP before and after intervention were analysed using McNemar's test. The differences in PPOS were analysed using the Wilcoxon test.

3.7.2 | Qualitative analysis

All qualitative data were managed using Atlas-ti software and analysed using qualitative content analysis. MF and RG read and re-read the transcripts and notes. Then, MF coded the first two transcripts, which were discussed with the other author until a consensus was reached. The rest of the transcripts were coded based on the shared criteria developed previously. For cases that were unclear, we discussed how to apply the coding criteria. The data were refined and grouped hierarchically into themes (Graneheim et al., 2017). The final analysis was discussed with the rest of the team (see Appendix S1).

3.7.3 | Integration of data

First, the qualitative and quantitative data were analysed separately and independently. Then, the findings of both methods were triangulated by the first, second and last authors during the interpretation phase of the study. For this purpose, the quantitative and qualitative findings were brought together on the same page, and, after that, convergences, discrepancies and complementarities were identified (O'Cathain et al., 2010). The gathering of all the information allowed the integration of the data using a narrative approach in the Discussion section (Creswell & Plano Clark, 2017; Fetters et al., 2013).

3.8 | Validity and reliability

We followed Lincoln and Guba (1985) to ensure the rigour of our qualitative method. To reinforce credibility, we shared a working draft

of the paper with one participant for feedback. Constant reflection encouraged us to consider our positionality and we also discussed our findings with researchers who did not participate in the interviews or the analysis, thus enhancing confirmability. We carried out an ongoing review and provided a detailed description of how we collected, analysed and interpreted the data, thus strengthening dependability. Moreover, we were exhaustive in our data collection and provided a thorough description of participants and the involvement of patients to allow comparison with other contexts.

About the quantitative study, the sample size ensures correct statistical power, and the data were obtained from valid and reliable questionnaires, which were adapted using a process of translation and back-translation to ensure they were culturally adequate.

4 | RESULTS

4.1 | Participant characteristics

One student out of the 35 enrolled withdrew following the first workshop. All in all, 34 students provided the requested information both in the pre- and post-intervention stages; 27 were female. Age ranged from 21 to 36 years old (median 22). The majority had no family members living with HIV and 82% had met a person with HIV in their nursing practice (see Table 2).

4.2 | Assessment of teaching intervention outcomes: Quantitative data

4.2.1 | Knowledge, attitudes and practice

Table 3 summarizes the results from the KAP questionnaire. McNemar's test suggests a significant improvement in knowledge of risk factors of HIV transmission, knowledge about mother-to-child transmission, knowledge of ART, attitudes about the confidentiality of diagnosis, fear of HIV, worries of secondary stigma and use of extra

TABLE 2 Characteristics of student respondents

Gender	Women (n = 27)	Men (n = 7)	Total (n = 34)
Age M (SD)	22.5 (3.1)	22.6 (2.9)	22.5 (3)
Study nursing as the first option			53%
Pass all subjects in last semester			100%
Career paid by parents or relative			50%
With steady partner			62%
No experience as a healthcare professional			65%
No relative or friend living with HIV			91%
No previous specific training in HIV			71%
Know a person with HIV/AIDS			82%

Abbreviations: M, mean; SD, standard deviation.

TABLE 3 KAP initial results and pre- and post-intervention changes

	Positive KAP at the beginning	KAP pre-post-intervention positive change/Total changes*	McNemar (binomial test <i>p</i> -value)
Knowledges			
Risk factors of HIV transmission	21/34 (62%)	9/10 (90%)	.021
Strategies to reduce HIV risk infection	19/34 (56%)	5/13 (38%)	.581
Myths associated with HIV	14/34 (41%)	4/14 (26%)	.180
Mother-to-child transmission	2/34 (6%)	19/19 (100%)	<.001
Antiretroviral treatment (ART)	9/34 (27%)	18/21 (86%)	.001
Whom to communicate the diagnosis to	0/34 (0%)	–	–
Attitudes			
Confidentiality of diagnostic	13/34 (38%)	12/15 (80%)	.035
Contact with people living with HIV	12/34 (35%)	9/11 (82%)	.065
Fear of contracting HIV	2/34 (6%)	14/14 (100%)	.001
Secondary stigma	7/34 (21%)	16/17 (94%)	<.001
Practices			
Extra measures to care people living with HIV	11/34 (32%)	17/17 (100%)	<.001

Note: Total changes* = Total number of changes between pre and post in each criterion.

preventive measures. However, no statistically significant differences were found in strategies to reduce HIV risk infection, myths about HIV, attitudes towards people living with HIV and to whom the diagnosis should be communicated (they failed in communicating the diagnosis to the Ministry of Health since HIV is a disease that must be reported).

4.2.2 | Orientation of care

Table 4 shows the PPOS scores (mean, standard deviation and median). Wilcoxon's signed-rank test indicates a statistically significant increase in the preference for more patient-centredness after the intervention. The most significant change was in Sharing, with five statistically different items, compared with only one in the Caring subscale (see Table 5).

The impact of the teaching intervention from the students' perspective: qualitative data

From the students' perspective, the learning experience is mainly based on transformative learning and rebuilding the humanization of HIV care.

Transforming attitudes and one's practice. Students believed the workshops transformed their attitudes towards and practice involving people living with HIV in two main ways: critical reflection on one's own practice and engaging in self-examination of one's attitudes.

Critical reflection on one's practice. Students criticized the paternalistic model in which they were educated and reproduced as trainees. They identified the need to become more human as professionals and develop the art of asking and listening to patients' real concerns. They criticized the fact that there is no time dedicated to establishing a deeper relationship with patients.

And the issue of not asking [...] I see it as, perhaps, the fear of becoming human [...] That's what it's about, breaking the barrier that we have within the health-care system: it is about doing, doing, doing; and so in order to avoid "wasting" five minutes, we do not ask; pausing and taking some weight off something [asking and listening] can do as much good as medication, or a procedure or... (man, focus group 5).

Engagement in self-examination of one's attitudes. In this transformation, students engaged in self-examination of their attitudes. They saw changes in themselves related to HIV stigma and the fear of contracting the virus, both having been reinforced in their clinical practice. A discourse of commitment to non-discrimination emerged.

[...] and in the end, we [healthcare professionals] stigmatize the most. Well, changing that in ourselves as healthcare providers, looking at ourselves and seeing what we are doing (woman, workshop 2).

The importance of the humanization of HIV care. In the analysis, a need to reconstruct the humanization of the care of people living with HIV comes up as a relevant issue and is reflected in two main ways: putting a human face on the disease and being aware of the suffering associated with living with HIV.

I had never met [someone living with HIV] before and in order to make it more real [...], putting a human face on the disease helps change one's idea about it (man, focus group 5).

	Pre-intervention		Post-intervention		Z ^a	p-value
	M (SD)	Mdn (IQR)	M (SD)	Mdn (IQR)		
Sharing	4.19 (0.54)	4.33 (0.69)	4.69 (0.58)	4.78 (0.92)	-3.89	<.001
Caring	4.77 (0.41)	4.89 (0.69)	4.97 (0.58)	5.06 (0.94)	-2.47	.014
PPOS	4.48 (0.41)	4.58 (0.49)	4.83 (0.53)	4.92 (0.83)	-3.60	<.001

Abbreviations: IQR, interquartile range; M, mean; Mdn, median; SD, standard deviation.

^aWilcoxon Signed Ranks.

Students identified three main issues in this reconstruction: emotions as core to caring, embodying empathy and listening and trust-building.

Emotions as core to caring. Students consider emotions a priority in the humanization of care even though that was not their behaviour during clinical practice.

I believe that caring means understanding that, well providing the type of care based on listening, i.e. emotional care, not just the capacity to give shots or know about different diseases (woman; focus group 4).

They described certain life circumstances, such as receiving an HIV diagnosis or being discriminated against, as crucial scenarios for nurses to provide emotional care. Emotion is critical when accompanying a newly diagnosed person. They acknowledged the importance of working with their emotions as professionals. Occasionally, they do not explore patients' emotions because they do not know/have the tools to face their own. They realized that they had not been trained to manage their emotions in the act of caring.

Because I felt very bad [about the suffering of one person living with HIV], but I did not know what to do, I just took her hand and said "everything will be OK"; now I understand what the patient needed and felt at that moment and now [after the workshops] I know what to do (woman; focus group 5).

Empathy. Empathy has been discussed over the course of their studies and they thought they understood its meaning. After the readings and discussions with HIV educators, they became fully aware of the real meaning of this concept.

If I learned something from MariJo it is that empathy is not what we were told in class, something like "to put oneself in another person's shoes" or something like that; if I am asked what empathy is, what I learned from her is that it is about listening (woman, focus group 2).

From the workshops, they understood what it means for a person living with HIV to share or hide their diagnosis. Understanding why

people hide their status from family members or health professionals led to an exciting debate about ethics, morals and legal aspects of sharing HIV serostatus or not.

Listening and trust-building. Students rediscovered the essential role of listening and they considered it a critical skill for humanization. Before attending the workshops, they were unaware of the importance of listening when accompanying people, its real impact on people or its effectiveness. The art of asking and listening became one of the pillars of humanization. They realized that listening enhances empathy and contributes to building a trustful relationship with the patient.

I think that one of the reasons why we are not aware, or maybe why we do not put so much effort [into listening] is because we are not very aware of the risk involved in not doing so [listening]. If I get a shot wrong, then there is the risk of infection, or so (woman, focus group 3).

TABLE 4 Patient-centred scores and pre- and post-intervention changes (n = 34)

5 | DISCUSSION

This study aimed to introduce educational intervention in which people living with HIV act as teachers in a university nursing degree. Patients were involved in the design, teaching and evaluation of this initiative, making it one of the few efforts to date to conduct an experimental assessment of the repercussions of actively involving patients in student nurse training. Our findings suggest that the engagement of expert HIV patients as teachers is a transformative learning experience that addresses stigma and promotes patient-centred care.

Firstly, this study is unique because the influence of patient-teachers in patient-centred care, and HIV-related knowledge, attitudes and practices in students were assessed using qualitative and quantitative data. Since experimental studies assessing the impact of patient involvement in university teaching are scarce, we compare our results with the existing literature assessing patients as teachers or other interventions engaging patients in any other healthcare field. We offer explanations of the findings from both quantitative and qualitative data.

Secondly, evidence shows that when HIV education is provided to nursing students, they overcome their negative attitudes

TABLE 5 Patient-centred items and pre- and post-intervention changes ($n = 34$)

	Pre-intervention		Post-intervention		Z^a	p -value
	M (SD)	Mdn (IQR)	M (SD)	Mdn (IQR)		
Sharing						
The health professional is the one who should decide what gets talked about during a visit.	4.47 (0.93)	4.0 (1)	5.21 (1.09)	6.0 (2)	-2.94	.003
It is often best for patients if they do not have a full explanation of their medical condition.	4.79 (1.34)	5.0 (2)	5.09 (1.06)	5.0 (2)	-0.86	.388
Patients should rely on their health professionals' knowledge and not try to find out about their conditions on their own	4.38 (1.30)	4.0 (1)	4.94 (1.10)	5.0 (2)	-2.30	.021
Many patients continue asking questions even though they are not learning anything new.	4.12 (1.37)	4.0 (1)	4.88 (1.04)	5.0 (2)	-3.00	.003
Patients should be treated as if they were partners with the health professional, equal in power and status.	4.32 (1.72)	5.0 (3)	5.65 (0.69)	6.0 (0)	-3.88	<.001
Patients generally want reassurance rather than information about their health.	3.18 (1.59)	3.0 (3)	3.41 (1.40)	4.0 (2)	-0.98	.327
When patients disagree with their health professional, this is a sign that the professional does not have the patient's respect and trust.	3.82 (1.14)	4.0 (1)	3.62 (1.71)	4.0 (3)	-0.66	.512
The patient must always be aware that the health professional is in charge.	5.74 (0.71)	6.0 (0)	5.85 (0.50)	6.0 (0)	-1.41	.157
When patients look up medical information on their own, this usually confuses more than it helps.	2.91 (1.11)	3.0 (2)	3.53 (1.28)	4.0 (2)	-2.75	.006
Caring						
Although healthcare is less personal these days, this is a small price to pay for medical advances.	4.74 (1.11)	4.5 (2)	4.88 (1.37)	5.0 (2)	-0.73	.463
The most important part of the standard visit is the physical exam.	4.76 (1.07)	4.5 (2)	5.12 (1.07)	6.0 (2)	-1.43	.153
When health professionals ask a lot of questions about a patient's background, they are prying too much into personal matters.	4.74 (0.99)	5.0 (1)	4.76 (0.78)	5.0 (1)	-0.09	.933
If health professionals are truly good at diagnosis and treatment, the way they relate to patients is not that important.	5.35 (1.07)	6.0 (1.25)	5.35 (1.23)	6.0 (1)	-0.32	.748
If a health professional's primary tools are being open and warm, the health professional will not have a lot of success.	5.44 (0.89)	6.0 (1)	5.38 (1.10)	6.0 (1)	-0.21	.834
A treatment plan cannot succeed if it is in conflict with the patient's lifestyle or values.	4.97 (1.19)	5.0 (2)	5.48 (0.76)	6.0 (1)	-2.22	.027
Most patients want to get in and out of the health professional's office as quickly as possible.	3.85 (1.37)	4.0 (2)	4.26 (1.33)	4.0 (1.25)	-1.82	.069
It is not that important to know a patient's culture and background to treat the person's illness.	5.53 (0.86)	6.0 (1)	5.71 (0.94)	6.0 (0)	-1.23	.217
Humour is a major ingredient in the health professional's treatment of the patient.	3.56 (1.16)	4.0 (2)	3.76 (1.21)	4.0 (2)	-1.04	.300

Abbreviations: IQR, interquartile range; M, mean; Mdn, median; SD, standard deviation.

^aWilcoxon Signed Ranks.

(Pickles et al., 2009). Moreover, when this training is conducted by people living with HIV, it helps personalize the experience of living with HIV and educate and destigmatize the disease (Frain, 2017). The intervention we propose in this study goes beyond testimonials: expert HIV patients discuss the knowledge they shared in the classroom with students via Moodle. A recent systematic review showed that contact interventions between nurses and patients have been carried out in other contexts (Feyissa et al., 2018, 2019), showing a significant reduction in HIV-related stigma. This reduction is higher when combined with education about HIV. Contact interventions have proved effective in reducing stigma in other environments such as mental health or disability (Spencer et al., 2011), and the need for experimental and longitudinal studies has been suggested. The repeated measurements taken in this study address this need in some ways. The quantitative results—improved attitudes—reinforced by qualitative data—engagement in self-examination of one's attitudes—show improvement in the ability of future nurses to be critical of their practice and attitudes. Thus, patient involvement enhances critical, reflective thinking (Feijoo-Cid et al., 2017; LeBlanc, 2017). Reflection has previously been connected with transformative learning in student nurses in clinical practice at mental health services (Rush, 2008). Transformative learning is the process by which students' outlooks are transformed, enabling them to become more open, emotionally receptive to change and reflective so that they can generate more genuine or more reasonable beliefs and opinions to guide action (Mezirow, in Rush, 2008). Rush (2008) highlights the importance of the learning context: in the classroom, the student learns from the patient; in clinical placements, students learn about the patient. In the classroom, students begin to acknowledge people living with HIV as ordinary people who are 'just like them', while in clinical placements patients become 'the other', guilty of being infected and the object of the fear of contracting HIV.

Thirdly, our findings show that workshops led by people living with HIV can potentially shift students' orientation towards the care model to a patient-centred one. Previous studies have noted that patient engagement allows students to capture the essence of person-centred care as opposed to professionally focused care because the interaction with 'real' patients offers an opportunity to look at problems from the patient's perspective not available elsewhere (Scammell et al., 2016). Our after-workshop results are comparable to those found in Portuguese nursing students (PPOS mean = 4.96; Sharing mean = 4.94 and Caring mean = 4.98) (Grilo et al., 2014) but higher than those found in the English context (PPOS mean = 3.90; Sharing mean = 4.14 and Caring mean = 3.65) (Rosewilliam et al., 2019). The mean of our fourth-year students before the workshops was like first-year Portuguese students (PPOS mean = 4.31), but identical to Portuguese nurses (PPOS mean = 4.48). This can all be explained by differences in the school curriculum and mentoring in the mandatory internship. In Portugal, the school curriculum encompasses social sciences with an increased focus on patients' experience of illness and on communication skills (Grilo et al., 2014), while in Spain, it does not focus specifically on illness experiences, and social sciences are included to a limited extent (UAB, 2019).

Additionally, fourth-year Spanish students spend more than 2000 h at mandatory internships in a clinical setting not particularly accepting of patient-centred care, its primary focus being on procedures and task performance (Rosewilliam et al., 2019).

Fourthly, the qualitative analysis of the mixed design, through the category 'The importance of the humanization of HIV care', shows the importance of students according to caring. Qualitative and quantitative results are congruent with care being the basis of the nursing curriculum and practice. In the quantitative data, students started with a high score (4.75) in Caring, and just one variable—'Treatment cannot succeed when it is in conflict with patient's lifestyle or values'—showed a significant change. This variable focuses on the instrumental caring behaviour, specifically on what nurses do in therapeutic procedures (Austgard, 2008), while the qualitative data—'The importance of the humanization of HIV care'—matches the expressive dimension of caring in which compassion, trust and communication play a crucial role (Austgard, 2008). In caring theories, the emotional dimension of caring is a relevant element (Austgard, 2008; Dobrowolska & Palese, 2016). Several authors advocate the need to consider emotional dimensions in the nursing curriculum rather than focusing solely on knowledge and skills (Brown et al., 2011), and nursing students appreciate expressive rather than instrumental caring (Dobrowolska & Palese, 2016).

Finally, the mixed data also show that sharing was the dimension with the most significant changes, while no related qualitative results were observed. The starting score for Sharing was high (4.19), given that both healthcare education—an integral aspect of patient-centred care (Forbes & Mandrusiak, 2020)—and the communication process are addressed in the degree (UAB, 2019). Basic communication skills, such as information exchange tailored to the patient's preferences and values (Forbes & Mandrusiak, 2020), are promoted as an essential part of Sharing. The PPOS defines Sharing as the extent to which the respondent believes that patients want information and should be part of the decision-making process. Despite the initial high score resulting from the previous curricular training, the items that showed the most remarkable change after the workshops were related to 'Self-management of health' and 'Justice, respect and equality', issues addressed in workshops 2 and 5, respectively. These aspects are associated with decision-making and are consistent with the fact that neither the curriculum of the education centre nor the clinical setting place value on shared decision-making. The absence of qualitative results related to sharing suggests that (a) change is still unconscious—it is not expressed if not specifically asked about—(b) students have little experience in the practice of shared decision-making and the patient's right to information. We should remember that the traditional prevalence of the biomedical model, which is still mainstream in Spanish clinical practice (Feijoo-Cid, 2013; Feijoo-Cid et al., 2017) does not promote patient involvement. The socialization of nursing students in those spaces, especially in later stages of their training, when care is more hands-on, might have adverse effects, such as the progressive desensitization to human needs or less empathetic (Neumann et al., 2011; Traynor

& Buus, 2016) or compassionate (Sinclair et al., 2016) behaviours. It is difficult for nursing students to focus on shared decision-making processes when most of their clinical training occurs in this biomedical model.

5.1 | Limitations

To our knowledge, this is the first study assessing pre-/post-intervention change using quantitative and qualitative methods to explore the orientation of care in nursing students in Spain. However, we must also acknowledge some limitations. First, the lack of a control group does not allow us to ensure that changes are solely a result of the intervention, as the Hawthorne effect or the regression towards the mean cannot be ruled out when measuring the same variable a second time. However, the creation of a control group and the randomization of participants was not ethically acceptable in the context of the study since it would mean that a group of students would not benefit from an enriching intervention. Second, we stand by one of the limitations identified by previous evidence: it is a single-institution study with a small sample (Scammell et al., 2016). However, according to the calculations made, the sample is big enough and it has been implemented in a different environment from that of the UK, thus offering contextual variability to existing evidence. Third, the PPOS was culturally adapted to the Spanish context but was not validated. We use the term health professional instead of nurse and this could initially look like a limitation given that the study group might not feel directly concerned. On the other hand, it may have allowed the students to answer the questionnaire placing the patient at the centre, rather than the healthcare professional. Fourth, the lack of literature on assessing patient involvement in nursing teaching using experimental designs was a challenge, not allowing us to compare the results with similar experiences.

6 | CONCLUSIONS

This study contributes to reducing the shortage of mixed data on evaluating patient engagement in nursing education. An intervention based on workshops facilitated by expert HIV patients is a transformative learning experience that shows excellent potential to improve HIV-related stigma and foster patient-centred orientation. Nonetheless, it is important to note how students rediscover the emotional dimension of Caring (the importance of the humanization of HIV care); reinforce one basic instrumental guideline in all nursing curricula by systematically adapting the treatment to the patient's lifestyle; rediscover the patient's right to information, and visualize the need to engage patients in decision-making.

In light of these findings, patient engagement should be considered a worthwhile educational strategy to bring to the classroom. Participatory design and evaluation dynamics, such as those proposed here, are complex and will only be sustainable when all

the actors involved in university policies accept them and commit to both promoting and funding them. For patients to be involved in these activities, they must meet certain criteria that must be reported in the evaluations published on these educational strategies, as was the case in this study. The quality of the involvement of the patient-expert concept proposed here would benefit from including patients as regular collaborators in a content-integrated way with support from teachers. Future studies allowing the addition of equivalent control groups and randomization could reinforce the findings of this research. In this vein, longitudinal studies would verify the impact of the intervention of patients as teachers on the quality of nursing care.

AUTHOR CONTRIBUTIONS

All authors have agreed on the final version and meet at least one of the following criteria (recommended by the ICMJE): (1) substantial contributions to conception and design, acquisition of data or analysis and interpretation of data; (2) drafting the article or revising it critically for important intellectual content.

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CONFLICT OF INTEREST

No conflict of interest has been declared by the author(s).

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Data available on request due to privacy/ethical restrictions

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