EDUCATION



Photovoice: An active learning tool with community nursing students

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Abstract

Objective: To assess nursing students' experiences of using photovoice as a pedagogical approach to active learning in the community.

Methods: A descriptive design with a cross-sectional mixed-method questionnaire was used with 108 students following an educational activity, in which their communities were photographed and the impact of the pandemic on vulnerable populations was reflected. Descriptive statistics and thematic analysis were used to analyze the data.

Results: Seventy eight percent of the students felt that photovoice was an interesting and useful tool for nurses, 89% affirmed it helped stimulate reflection on social and health inequities in times of pandemic, 82% described that it developed many emotions and feelings and 86% would like to disseminate their photographs directly to stakeholders, citizens, and politicians. Three themes were identified in the data: "stimulate critical reflection", "develop emotional skills", and "encourage action".

Conclusions: Photovoice is a successful active learning pedagogical approach that engages nursing students to develop critical awareness while connecting with their communities, with the real world. It fosters students' sensitivity and motivation and encourages them to take action. Teachers need to introduce new scaffolds for active learning, such as photovoice, to provide innovative academic support that nurtures and develops the next generation of nurses appropriately.

KEYWORDS

active learning, community, nursing students, photovoice, social interaction, teaching and learning

1 | BACKGROUND

Reducing inequalities within and between countries corresponds to Goal 10 in the Sustainable Development Goal Agenda of United

Nations to be achieved by 2030, but the effects of the COVID-19 pandemic intensified income inequality in the population, as well as structural and systemic discrimination related to sex, ethnicity or economic status, among others (United Nations, 2015).

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In these scenarios of health and social inequities, nurses need to emphasize core values the profession, such as compassion and empathy to prioritize the interest of the people they care for (International Council Nursing, 2021; Nursing and Midwifery Council, 2018; World Health Organisation (WHO), 2020).

Since the competency requirements of nurses involve skills such as ethical decision-making, moral reasoning, communication skills and relational skills (Timmins et al., 2022). Therefore, nurse educators must enable learning environments to be spaces that foster future nurses' values, beliefs and feelings (Chen et al., 2019; Jin & Cheng, 2021; Siles & Solano 2017; Ward & Butler, 2019), critical thinking (Spagnol et al., 2019) and provide a greater understanding of the stigma and marginalization of the people they will care for (Demirtas et al., 2021; Habibzadeh et al., 2021).

There are a number of academic research methods that nursing faculty consider in order to achieve these goals. Active learning is a way of fostering and nurturing the core values needed in nursing through problem-solving activities, critical analysis, and reflection activities (Educause Learning Initiative, 2017). Active learning, as a pedagogical approach, includes learning through critical reflection, encompassing the analysis of situations and incidents, and assessing personal beliefs and how they influence and are influenced by social environments (Timmins, 2015). Active strategies have gained ground in recent years in the nursing academic context, bringing students to the center of the learning process (Fields et al., 2021; Ghezzi et al., 2021). Numerous research studies demonstrate the benefits in nursing education of using these participatory methodologies, such as Adánez et al. (2022) who analyzed videos to address gender-based violence, the Greek Chorus as a way to address mental health problems (Donnelly & Frawlev. 2020) or telephone support for the elderly during the Covid-19 pandemic (Gresh et al., 2020).

1.1 | Photovoice method

The photovoice method is framed within the socio-critical paradigm and Freire's conceptualization of participatory pedagogy (Freire, 2005), which state that communication and understanding of reality is the way to involve and empower students in a context of responsible and active learning. Participatory action research aims to get people to identify, represent and develop their knowledge in a given situation, with photovoice being one of the methodologies that best fits these objectives (Abma et al., 2019). This photographic technique was developed to give voice (Wang & Burris, 1997) to politically and socially marginalized populations through photographs they take of their everyday lives and experiences, discussing the meanings behind those images and articulating that they can disseminate their findings directly with stakeholders, supporting local action (Hess et al., 2020; Musoke et al., 2015; Watchman et al., 2020). The method is gaining popularity in the health science (Lindhout et al., 2021; Noor et al., 2022) especially in the field of public health (Budig et al., 2018; Chavez-Baray et al., 2022), as a tool to claim the iii) principle of reaching out to policy makers or influencing policy change.

Some educational activities with photovoice have been developed in the academic context to explore the reality of everyday professional life with social work students (Malka, 2020), to describe environmental sustainability issues with podiatry students (Coronado et al., 2020) or to learn experiences abroad with healthcare students (Biber & Brandenburg, 2020). However, there is a lack of research exploring the opinion of university students of the usefulness of photovoice after an educational activity in the community, explicitly through a questionnaire. Further evaluation seems necessary to establish a stronger basis for its usefulness, and therefore, the aim of this research was to evaluate nursing studentst experiences of using photovoice as a pedagogical approach to active learning in the community.

2 | METHOD

2.1 Design

Within the framework of the socio-critical paradigm (Freire, 2005), a participatory educational activity was carried out using photovoice as a method (Wang & Burris, 1997). Following this activity, a descriptive design with a cross-sectional mixed method questionnaire was used to collect the students' assessment of the photovoice method as a pedagogical tool for active learning. In this type of mixed-method design, the data come together in this way: (i) it simultaneously collects quantitative and qualitative data in response to the research questions, (ii) it analyses and connects the two forms of data and their results, (iii) it frames the research procedure and results in theory and philosophy (Creswell & Clark, 2011; Doyle et al., 2009).

2.2 | Participants and settings

In the 2020–2021 academic year, undergraduate nursing students from University of León (Spain), University of Alicante (Spain), and University of Southampton (the United Kingdom (UK)) participated in an educational activity. They were enrolled in the modules of Global and Public Health (1st year, University of Southampton), Culture of Care, Development Education and Critical Thinking (4th year, University of Alicante), and Health Cooperation and Humanitarian Aid Projects (4th year, University of León). Convenience sampling was used for inclusion (Elfil & Negida, 2017).

The educational activity (three sessions) consisted of exploring how vulnerable populations experienced the COVID-19 pandemic, using photovoice as a method (Andina et al., 2022). In the first session, an introduction to vulnerable populations and photovoice was explained to the students. In session two (photo-documentation) (Figure 1 "Alone", Figure 2 "In search for food", Figure 3 "For sale", Figure 4 "Charity" and Figure 5 "Last song", of some students, as visual evidence of the educational activity), the students visited their communities, took three photographs and filled in the SHOWED template, specific for photovoice (Supplementary information 1 with an example of this

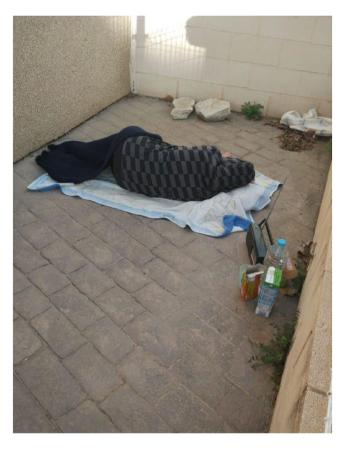


FIGURE 1 Alone (P108). [Color figure can be viewed at wileyonlinelibrary.com]

guide filled in by a student) (Wallerstein & Bernstein, 1988). In the third session (photo-elicitation), the students discussed their photographs and narratives in groups and made a photo gallery. The photo exhibition was hosted for 1 month at the faculty.

2.3 Data collection

At the end of the educational activity, a 22-item questionnaire was administered to the students to determine their perceptions of photovoice as an active learning tool.

The questionnaire consisted of the following items: eight sociodemographic items and fourteen items related to perceptions of the photovoice method. Quantitative data were collected in eleven 5point Likert-type scale items (from strongly agree to strongly disagree). Qualitative data were collected with three open-ended reflection questions. The questionnaire was created ad-hoc, based on a questionnaire used in a previous exploratory study (Andina, 2020). The items were pre-checked by three nursing experts from both countries with experience in teaching, innovation and pedagogical quality assessment (professor, senior lecturer, and lecturer) for clarity, coherence and relevance. The questionnaire was tested with six students and the results were included in the analysis.



FIGURE 2 In search for food (P11). [Color figure can be viewed at wileyonlinelibrary.com]



FIGURE 3 For sale (P45). [Color figure can be viewed at wileyonlinelibrary.com]



FIGURE 4 Charity (P39). [Color figure can be viewed at wileyonlinelibrary.com]

2.4 Data analysis

Quantitative data (as primary data) were analyzed using descriptive statistics. Socio-demographic characteristics of participants and student perceptions were presented in counts and percentages. The qualitative data were analyzed using thematic analysis to ensure that the analysis was conducted in a stepwise and reproducible manner, and to complement and enhance the understanding of the quantitative questionnaire results. The phases of thematic analysis proposed by Braun and Clarke (2006) were followed, in line with other research based on mixed method questionnaires (Leyva-Moral et al., 2021;

Lucas et al., 2020). These phases consisted of: (i) initial code generation and theme search: two of the research team members (EAD, NSF) coded data features, collating the codes into possible themes and subthemes; (ii) theme review and themes naming: EAD and NSF reviewed the themes in relation to the coded extracts and the dataset, generating a thematic map of the analysis; and (iii) report writing: all researchers in the team wrote the academic report of the analysis, selecting some vivid and compelling accurate examples, and relating the back of the analysis to the research question and the bibliography.

A data management package (MAXQDA2020®) was used to manage this analysis process.



FIGURE 5 Last song (P87). [Color figure can be viewed at wileyonlinelibrary.com]

2.5 | Ethical considerations

Students received a consent form, with voluntary participation and the possibility to drop out without negative consequences. They received information regarding the study and gave their consent. Regarding the dignity and privacy of the subjects, they had to be informed, receive a participant information sheet and sign a public consent form. In addition, no personally identifiable data (e.g., street names, faces or IDs) were allowed to be captured. The Ethics Committees of the University of León (ULE-039-2020), University of Alicante (UA-2020-12-04) and University of Southampton (ERGO number 62375) approved the study.

3 | RESULTS

One hundred and eight questionnaires were collected (100% participation of nursing students). Table 1 shows the socio-demographic characteristics of the participants.

Seventy-four percent (n=80) of the students found photovoice to be an interesting (original) tool, 71% (n=77) found it to be a useful tool for students and 78% (n=84) found it to be useful for nurses (Table 2). Other benefits of the photovoice tool were to enable creative thinking (81%), improve communication skills among students (79%), and learning in an enjoyable way (57%).

Eighty-nine percent (n = 96) of students stated that this method helped to stimulate reflection on social and health inequities in times of pandemics. Regarding the latter, in the open-ended reflection ques-

tions (Table 3), students explained that taking photographs in their community, writing narratives and discussing in class, allowed them to be aware of the reality beyond the mass media information:

To be aware of those vulnerable groups that are very close to us, of how this pandemic is seriously affecting them. To be able to show through an image (which is worth a thousand words) the situation they are living through. In this way everyone can "feel" the reality (P14)

In a way, it forces us to reflect on a very important issue when dealing with patients (at hospital and primary care level), and to know how to present and explain our point of view about it. I repeat that it is not the same to have notions or to be aware that there are vulnerable groups that are having a bad time, as it is to face this reality and dedicate a few minutes to them (P35)

It also allowed them to appreciate what they had and increased awareness of *how privileged* they were during the pandemic. Some of the students had no problems eating, no problem heating their homes, their parents did not lose their jobs and they were able to follow their classes online, for example:

I have felt very lucky for what I have, for having food on my plate every day and for having a job. I have seen, for example, the soup kitchen, which was quite full at lunchtime, and this has made me think about these things (P39)



TABLE 1 Socio-demographic characteristics of the participants.

Socio-demographic characteristics of the			
Variables		n	%
Gender	Female	90	83
	Male	18	17
Age	18-24	99	92
	25-34	4	3,5
	35-44	4	3,5
	45-54	1	1
I live in	Population more than 200,000 inhabitants	31	29
	Population 100,000-200,000 inhabitants	11	10
	Population 10,000-100,000 inhabitants	43	40
	Population 1000-10,000 inhabitants	16	15
	Population less than 1000 inhabitants	7	6
Nationality	Spanish	104	96
	British	3	3
	Indian	1	1
Ethnicity	White	104	96
	Black/African/Caribbean	1	1
	Gypsy	1	1
	Hindu	1	1
	Latinoamericana	1	1
I invest my time in	Studying	77	71
	Studying and working	31	29
Belong non-governmental organization/voluntary	No	92	85
organization	Yes	16	15
Religious orientation	Christian	56	52
	Atea	38	35
	No religion	10	9
	Agnostic	3	3
	Muslim	1	1

It made me realise how privileged I have been, but also how the closure has affected us all differently (P107)

Eighty-two percent of students (n=89) described that going outside to take photographs and discussing what they photographed helped them to develop many emotions and feelings. In the data obtained from the open-ended questions, the most frequently mentioned feeling was *empathy* for understanding the emotions of others:

This activity helped me to empathise with vulnerable groups, especially those groups that we do not usually take into account (because they are close to us). For example, immigrants. In my town in the Canary Islands, there is a considerable increase of immigrants (during the pandemic) who are looking for a better life. I know a lot of people who think that they come to "steal" work from us when they really come to look for a better life (P47)

I have become more empathetic to those who are affected by the closure. I have realised that some have been really affected, such as artists, small business owners, families that have had to split up and those living with a disability (P107)

Some of the nursing students mentioned *discomfort*, *anxiety* and *fear* of visiting some disadvantaged neighborhoods and asked for photographs of vulnerable populations:

The day I went to take photographs in the Colonia Requena neighbourhood, I felt fear, very fear... No doubt that fear diminished when I began to engage in conversation with these people (P1)

Personally, photographing disadvantaged and vulnerable people caused me stress and discomfort. After a while, I felt better, as I established a relationship with them (P92)

TABLE 2 Nursing studentst' perceptions with the photovoice tool.

TABLE 2	Nursing studentsť perceptio	ns with the photo	ovoice tool
Perceptions	s	n	%
Interesting	(original)		
Strongly	agree	80	74
Somewha	at agree	25	23
Disagree		3	3
Useful (for s	students)		
Strongly	agree	77	71
Somewha	at agree	30	28
Disagree		1	1
Useful (for r	nurses)		
Strongly	agree	84	78
Somewha	at agree	24	22
To enable cr	reative thinking		
Strongly	agree	87	81
Somewha	at agree	16	15
Disagree		5	4
To improve	communication skills		
Strongly	agree	85	79
Somewha	at agree	23	21
To learn in a	n enjoyable way		
Strongly	agree	62	57
Somewha	at agree	39	36
Disagree		7	7
To stimulate	ereflection		
Strongly	agree	96	89
Somewha	at agree	10	9
Disagree		2	2
To develop	emotional skills		
Strongly	agree	89	82
Somewha	at agree	19	18
	to disseminate their photograph and politicians)	s directly to stake	holders
Yes		93	86
Maybe		11	10
No		4	4
	ination of their photographs wit r awareness	h the stakeholders	could
Strongly	agree	83	77
Somewha	at agree	25	23
	ination of their photographs wit nem in supporting local actions	h the stakeholders	could
Strongly	agree	77	71
Somewha	at agree	29	27
Disagree		2	2

Note : Strongly agree: 5 points on the Likert scale; Somewhat agree: 3; Disagree: 2.

TABLE 3 Themes and sub-themes identified from the open-ended reflection questions.

,	
Themes	Sub-themes
Stimulate critical reflection	To be aware of the reality
	To appreciate how privileged they were during the pandemic
Develop emotional skills	Empathy
	Discomfort, anxiety, fear
	Anger, sadness, grief
Encourage action	Would like to disseminate their photographs as a part of a community engagement activity
	To feel the need to do voluntary works

Another feeling described was *anger* at seeing people living in certain situations that were difficult to cope with, with no resources. Some also expressed *sadness* and *grief* at not being able to help them:

Yes, many emotions are aroused in me. Sometimes even certain helplessness. Today during the exhibition, I thought if I were a millionaire, I would buy masks and give them to all the people in need (who says masks say food, clothes...) (P54)

Above all, it made me very angry to investigate the economic inequalities and inequalities of opportunities simply for having been born into a certain social role... the great indifference of the institutions when it comes to protecting these groups (P61)

The emotion that I would highlight would be sadness. It was very hard for me to see some situations (P91)

In addition, the nursing students felt that photovoice encouraged them to take action. 86% (n=93) of the nursing students would like to disseminate their photographs directly to stakeholders, citizens, and politicians. Some of the proposals put forward by the students were to display the work as part of a community engagement activity at the university, in the city center, on social media or directly with politicians:

Where it can cause more impact is in the university community. It is a large group, and replicating the panels in our faculty to take them to the other faculties can be more impactful and have better results (P9)

Hold an open-air exhibition in a busy place. On Ordoño Street or Calle Ancha (P45)

Nowadays, I think that the communication channel with the greatest impact is the social networks. Moreover, they are tools in which the dissemination of information is very quick and easy. Although it is often necessary to filter to see if the information is true or not (P96)

Send them by email to the local councils and organise a meeting to discuss with MPs and councils (P108)

Seventy-seven percent (n=83) of the students thought that disseminating their photographs to stakeholders would be a way to draw attention to some local problems caused by the pandemic and to raise awareness among them. This could engage them in supporting local actions 71% (n=77). In this sense, some students expressed that after the activity, they felt the need to do voluntary work:

Yes, it has helped me to realise that if we all do our bit, we can achieve great things. We can help even if we are a bit inexperienced, for example, in the project that is being developed at the university (P29)

It definitely encourages you to get involved in volunteering or any other humanitarian aid activity (P48)

4 | DISCUSSION

This study evaluated students' experiences of using photovoice as a pedagogical approach to active learning in the community.

Nursing students found photovoice to be an interesting (original) and useful tool, enabling creative thinking, communication skills (such

as communicating diverse viewpoints in class) and enjoyable learning. This is in line with the findings of Christensent's et al. (2020) and Wass et al. (2019), who explore the opinion of social science students after an educational photovoice activity, as well as Andina's research (2020), who assessed the perceptions of nursing students after a photovoice activity.

Students explained that photovoice helped them to develop critical reflection on social and health inequities, to become aware of reality and to appreciate how privileged they were during the pandemic. In the same vein, Luescher et al. (2021) proposed a photovoice activity in which undergraduate health and social science students reflected on issues of violence and well-being issues, and Woods-Jaeger et al. (2020), with health equity issues. The development of critical consciousness is an aspect that needs to be worked on with nursing students, as they will face increasingly complex societal challenges in the future (The World Economic Forum Report, 2016), including social inequities and the consequences on health (WHO, 2021). Some authors point out that interaction with marginalized populations is recommended to increase social justice awareness with nursing students (Doyle, 2023).

In addition, most nursing students described that photovoice enabled them to develop emotions and feelings such as empathy, discomfort or sadness. Some authors point out that recognizing and stimulating these concepts is basic to sensitize future nurses (Bauchat et al., 2016; WHO, 2020), as high levels of empathy in professionals

Diario de León



Una iniciativa de la ULe cambia corazones de tela por alimentos para familias



🐧 Alumnos de Enfermería posan con una bolsa llena de corazones de tela. UNIVERSIDAD DE LEÓN

FIGURE 6 Press report "An initiative of the University of Leon exchanges cloth hearts for food for families". [Color figure can be viewed at wileyonlinelibrary.com]

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seems to be linked more efficiently as to the fulfilment of their role in bringing about therapeutic change (Moudatsou et al., 2020). Jackman et al. (2020) and Solano et al. (2021) worked along these lines, encouraging nursing students to cultivate feelings about issues such as the COVID-19 outbreak and violence against women in their photovoice

Our results captured how the students described this activity, encouraging them to take action in their communities. They expressed that they would like to disseminate their photographs to citizens and politicians, in the hope of raising awareness and engaging them to support local actions. This educational activity encouraged the students of the University of Leon to volunteer. They organized a successful food collection campaign, which was supported by other community members of the community (Diario de León, 2021) (Figure 6 Press report "An initiative of the University of Leon exchanges cloth hearts for food for families"). In this sense, no literature has been found that links university photovoice nursing activities with this stimulus to action.

The photovoice method places students at the center of the learning process in an active way, as well as encouraging them to act in the real world, specifically with health inequities in vulnerable populations. This is an important point, as there is a need to expand efforts to empower future nurses as leaders to achieve goals such as reducing social and health inequalities in population (Osingada & Porta, 2020). It appears to be a convenient, simple, accessible, and cost-effective method compared to other nursing active learning strategies such as dramatization (Van Bewer et al., 2021), simulation (Haddeland et al., 2021; Hovland et al., 2021; Johnsen et al., 2018), flipped classroom (Dehghanzadeh & Jafaraghaee, 2018; Nes et al., 2021), peer learning (Havnes et al., 2016), photo-essay (Stupans et al., 2019), or problem-based learning (Ding & Zhang, 2018), which seem to need more preparation of the actors involved and structural organization to be effective (Ghezzi et al., 2021).

4.1 | Limitations

The results have some limitations and should be viewed with caution. On the one hand, the sample was selected by convenience, so the students may have had some predisposition to learn by this method. On the other hand, the majority were female and the number of participants was smaller in the UK. Therefore, these results have been written in relation to the commonalities found between the two countries. Finally, the questionnaire used was not validated.

On the contrary, one of the strengths of this study is that it provides extensive qualitative data to explain the quantitative results, and that there is a large research gap in this field. Therefore, we consider our results to be an excellent basis for presenting the photovoice method as a successful active learning pedagogical approach.

Future research could further evaluate students' opinions by introducing random assignment, as well as through more heterogeneous samples and settings.

5 | CONCLUSIONS

Photovoice is presented as a successful creative active learning pedagogical approach that engages nursing students in developing critical awareness while connecting with their communities, with the real world. The method fosters students' sensitivity and motivation and encourages them to take action in their cities to reduce social and health inequalities of vulnerable populations. Faculty need to introduce new scaffolds in active learning, such as photovoice, to provide innovative academic support that nurture and properly develop the next generation of nurses.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest. All authors have read and agreed to the published version of the manuscript.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ETHICS STATEMENT

Ethical approval has been granted for this study: Ethics Committees of the University of León (ULE-039-2020), University of Alicante (UA-2020-12-04) and University of Southampton (ERGO number 62375) approved the study. The authors declare that the present manuscript has not been published or submitted to any other journal.

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