

RESEARCH ARTICLE

Nursing students' perceptions of the efficacy of narrative photography as a learning method: A cross-sectional study

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Abstract

Although active learning methodologies promote students' creativity and motivation regarding learning objectives, traditional unidirectional teaching methods remain more common. The objective of this study was to determine nursing students' perceptions regarding the efficacy of narrative photography as a learning method, including self-perceived satisfaction. Narrative photography is an art-based technique inspired by Photo-voice that promotes empathy, creativity, and reflection. A cross-sectional study was conducted using a nonprobabilistic sample of 66 nursing students from a public university in Barcelona, Spain. Quantitative and qualitative data were collected anonymously using an electronic tool. Descriptive statistics and thematic analyses were used to analyze the data. Sixty valid questionnaires were returned. The respondents found narrative photography's ability to promote creativity and assist understanding of theory to be its most satisfying aspect (>95% somewhat/totally agree). Narrative photography's usefulness, ability to foster self-criticism, and the associated workload was the least satisfactory aspect (>55% somewhat/totally agree). Significant differences regarding satisfaction levels were found for both age and sex. Narrative photography is a helpful and satisfactory learning method, especially for promoting creativity and understanding theoretical concepts.

Keypoints

- Narrative photography prompts a high level of satisfaction among nursing students.
- Age and gender appear to influence students' satisfaction with narrative photography.
- Workload must be carefully considered in advance to avoid students' fatigue.

KEYWORDS

active learning, efficacy, narrative photography, nursing students, teaching innovation

1 | INTRODUCTION

There is currently a significant gap between the skills students learn at university and the demands of employers (Hayter & Parker, 2019;

Moore & Morton, 2015; Pang et al., 2018). However, despite this, teaching in universities remains heavily based on traditional methodologies such as classic lectures (Lai et al., 2018; Pelger & Nilsson, 2017; Rasool & Chaudhry, 2012). Thus, it has become

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necessary to identify alternative methods of fostering meaningful learning, such as active methodologies that promote students' creativity and motivation regarding the learning objectives (Lai et al., 2018). Active methodologies are defined as teaching strategies that emphasize active learning (Betihavas et al., 2016; Calimeris & Sauer, 2015).

Although several studies have sought to identify active learning methods, few have considered narrative photography (NP); despite this, NP has previously been found to be effective for promoting empathy. Specifically, studies on the use of NP as a teaching method for nursing students have reported that NP is associated with high levels of satisfaction and empathy (Leyva-Moral et al., 2021; Leyva et al., 2014). This shows that the use of innovative and active strategies can be effective not only for improving learning but also for strengthening and maintaining nursing students' motivation and their empathy for patients (Davidson & Candy, 2016; Gómez-Urquiza et al., 2019; Klenke-Borgmann, 2019; Leyva-Moral et al., 2021; Mennenga et al., 2016). The use of narratives and images using books and autobiographical accounts revealed mental health nursing students were able to develop imagination, meaningful interpretations, critical and creative thinking, and empathy (Stone & Levett-Jones, 2014). As shown, available evidence on the evaluation on NP focuses on students' achievement, but few studies examine students' perception of the implementation of NP.

Educators are constantly seeking new ways of promoting learning and motivation among students. Thus, there is a need to identify new nursing teaching and learning strategies. Given the lack of evidence regarding the use of art-based active methodologies among nursing students, the research team proposed to answer the following research question: What are the perceptions of nursing students regarding NP in terms of efficacy and satisfaction? Therefore, this study aimed to determine nursing students' perceptions regarding the efficacy of NP as a learning method, including self-perceived satisfaction.

2 | METHODS

This was a cross-sectional study using a combined approach. All students enrolled in the 2020–2021 Culture, Society, and Health course at a public university in Barcelona, Spain, were invited to participate in this study. In this course, NP was introduced into seven topics: gender, sex, gender identity, sexual orientation, medicalization of the body, biomedical model, and social sciences model. Based on similar teaching experiences available, the students were also asked to watch some videos and read personal stories (Leyva-Moral et al., 2021). The students were taught to read, watch, and experience as if they were the authors of the stories. Then, they were invited to reflect using instructions such as “Think about how you have felt,” “How would you feel if something like this happened to you or to one of your loved ones?,” and “How patients might feel?” Next, the students were asked to write what they felt and to represent it using handmade pictures followed by a short self-reflective text explaining the images. Motivational messages were also provided, such as “Let yourself go,

feel what you are doing and why you are doing it. There are no good or bad answers, just give in to emotions, creativity and learning.” The students uploaded their materials to Moodle, so that the teacher could prepare the face-to-face discussion. Discussions occurred weekly where students presented their pictures, shared their story, and discussed it with the teacher and rest of the group. The teacher facilitated the discussion and help students to draw a final group conclusion. The narrative photography intervention was based on a combination of reflective thinking (Schön, 1983) and techniques based on the use of images, such as Photovoice (Wang & Burris, 1997), and photo-elicitation (Pink, 2003).

Detailed information regarding this study was provided to potential participants by email prior to the dissemination of the questionnaire. Students could consult the principal investigator if they had any questions. Students were informed that their participation was voluntary with no impact in their final mark. A link to the online questionnaire was sent to each student using the university's virtual campus. Written detailed information about the aim, research team, anonymity, confidentiality, and dissemination of the data was provided again at the beginning of the online questionnaire, including a space to provide informed consent. The data-collection instrument was an online ad hoc questionnaire; this questionnaire has been verified by experts (Aiken's $V > 0.75$) and it has been used in previous studies without issue (Leyva-Moral et al., 2021; Leyva-Moral & Riu Camps, 2016). Students were invited to give assessments of the activities once the course ended; to avoid bias, this occurred after they had received their grades for the course. The questionnaire comprised 12 items (questions displayed in Tables 1 and 2) scored using a four-point Likert scale (1 = “totally disagree”; 4 = “totally agree”) and two open-ended questions: “What did you like most about this learning method?” and “What did you like least about this learning method?” The latter two questions were thematically analyzed (Braun & Clarke, 2012). These open-ended questions were written in Spanish and translated into English by a bilingual native translator. Additionally, six four-point Likert scale satisfaction questions (1 = “totally disagree”; 4 = “totally agree”) were collected (questions displayed in Table 3).

Quantitative data were analyzed using descriptive analysis. To examine the differences, in terms of sex and age, in the proportion of students who “totally agreed” with the different items, chi-square tests were used. Statistical analyses were performed using IBM SPSS Statistics for Windows, version 20 (IBM Corp., Armonk, NY, USA). Ethical approval for this study was obtained from Universitat Autònoma de Barcelona (approval number 3789R). This study was conducted in accordance with the requirements of the Declaration of Helsinki.

3 | RESULTS

Sixty-six students received questionnaires, and 60 valid questionnaires were returned (90.95% participation rate). In accordance with the usual gender proportions for Spain-based nursing studies, most of

TABLE 1 Scores for the perceived efficacy of narrative photography

	Totally/somewhat disagree (%)	Totally/somewhat agree (%)	Valid answers
NP has helped me develop critical thinking	8.3	91.7	60
NP has helped me develop reflective thinking	10.0	90.0	60
NP has helped me to understand other people's feelings	11.9	88.1	59
NP has helped me become self-critical	14.0	86.0	57
NP has helped me eliminate some of my prejudices	8.6	91.4	58
NP has helped me become more tolerant	10.3	89.7	58
NP has helped me consider various points of view	5.2	94.8	58
NP has helped me understand theoretical concepts discussed in class	3.4	96.6	58
NP is more useful for improving attitude than other traditional expository methods	5.4	94.6	56
NP is more useful for acquiring skills than other traditional expository methods	7.0	93.0	56
NP is more useful for acquiring knowledge than other traditional expository methods	12.3	87.7	57
NP has helped me become more creative	3.4	96.6	59

Abbreviation: NP, narrative photography.

TABLE 2 Totally agree answers by age and gender

	Gender		Age (years)	
	Male (%)	Female (%)	18–19 (%)	≥20 (%)
NP has helped me develop critical thinking	16.7	23.1	17.9	25.0
NP has helped me develop reflective thinking	33.3	44.2	45.0	36.8
NP has helped me to understand other people's feelings	40.0	44.2	43.6	42.1
NP has helped me become self-critical	0.0	30.0	29.7	26.3
NP has helped me eliminate some of my prejudices	83.3	56.0	63.2	25.0
NP has helped me become more tolerant	83.3	46.0	47.4	47.4
NP has helped me consider various points of view	66.7	76.0	78.9	63.2
NP has helped me understand theoretical concepts discussed in class	33.3*	72.0*	63.2	73.7
NP is more useful for improving attitude than other traditional expository methods	33.3	52.1	52.8	47.4
NP is more useful for acquiring skills than other traditional expository methods	16.7	42.9	40.5	47.4
NP is more useful for acquiring knowledge than other traditional expository methods	50.0	40.8	35.1*	63.2*
NP has helped me become more creative	66.7	68.6	64.1	84.2

Abbreviation: NP, narrative photography.

* $p < 0.05$ (chi-square test).

the participants were female ($n = 52$); the mean age was 19.8 years (± 3.22).

Almost all participants perceived NP as having high efficacy for all aspects assessed in the questionnaire. Most participants perceived NP as a helpful and satisfactory learning method, especially for promoting creativity (96.6% totally or somewhat agree) and assisting the understanding

of theoretical concepts (96.6% totally or somewhat agree; the latter item showed statistically significant differences for gender). Significant differences were found in terms of age for the item “NP is more useful for acquiring knowledge than other traditional expository methods”; this was also one of the items with the lowest level of “totally agree” responses (87.7%). The item with the lowest level of “totally agree” responses was

TABLE 3 Satisfaction scores

	Somewhat/totally disagree (%)	Somewhat/totally agree (%)	Valid answers
I am satisfied with the NP method	5.2	94.8	58
NP should be applied in other subjects, given its usefulness	23.2	76.8	56
NP generates a high workload for students	37.9	62.1	58
NP requires more dedication than other teaching methods	41.8	58.2	55
I have learned more with NP than with traditional lectures	16.1	83.9	56
I would recommend the NP approach to other teachers	11.1	88.9	54

Abbreviation: NP, narrative photography.

“NP has helped me to become self-critical”; however, the percentage of respondents who totally agreed was nevertheless quite high (86%). The complete details for the responses are shown in Tables 1–3.

A thematic analysis of the open questions indicated that the aspects that students liked most about the NP learning method were that it is a new way of learning, that it is a dynamic methodology that encourages creativity, that it affords the integration of theoretical concepts learned in the classroom, and that it assists the expression of emotions and contemplation of different perspectives, as well as the development of empathy. Examples of participants' responses to this question (i.e., “What did you like least about this learning method?”) are presented next.

[NP] represents a novel way of interpreting theoretical knowledge, and helped me to combine this knowledge with my own experiences.

(Participant 5, female, 19 years old)

NP's usefulness for understanding theoretical and abstract concepts; I think that it is a good tool for gaining a better understanding of a topic.

(Participant 34, female, 18 years old)

It helped me see things from more perspectives, and to better visualize the concepts studied in the theory-based classes.

(Participant 48, female, 19 years old)

In contrast, students also identified several aspects that could be improved, and these should be considered in future studies. The difficulties participants mentioned related mainly to a lack of time to prepare materials, the associated increase in workload, the difficulty capturing images that accurately represented the thoughts, concepts, etc., they wanted to express, and the lack of examples to serve as a reference.

NP presentations require much more work than regular presentations. You must think about how, where, and with whom you will do it, and must also ensure that it portrays the correct meaning. Regarding suggestions for improvements, I would only ask for more time between seminars.

(Participant 16, female, 18 years old)

Not being used to [NP], in the first sessions it seemed like extra work. We are too accustomed to the “old school” methodology.

(Participant 20, female, 20 years old)

Another “problem” I found was that in seminar two we were not given any examples or guides to follow when taking these photos; thus, although we learned a lot and enjoyed the assignments at times, it was frustrating not to know if we were doing what we were expected to do.

(Participant 33, female, 19 years old)

4 | DISCUSSION

The present results indicate that NP is a learning method that elicits a high degree of satisfaction among students, an outcome that was also reported in previous works (Leyva Moral et al., 2019; Parker, 2021). This study also found that NP helps students assimilate existing theoretical concepts and also promotes their creativity. Again, previous studies have reported similar findings, as the use of art in education, especially when addressing issues with a high social impact, has been shown to be effective for consolidating theoretical training and developing critical, empathetic thinking and creativity (Murillo-Zamorano et al., 2019; Parker, 2021). In general, the use of active and innovative methodologies, which differ from traditional teaching methods, is associated with high rates of satisfaction among students (Freeman et al., 2014; Peterson, 2015), who perceive them as dynamic methods that encourage creativity, afford the representation of emotional aspects, improve their communication skills, and reinforce theoretical learning. Additionally, such methods have been shown to be associated with improvements in academic performance across a wide variety of fields (Chan, 2013; Gargallo et al., 2015; Meltzer & Thornton, 2012).

Creativity is especially important in healthcare professions such as nursing, as such professionals often face unexpected situations that require effective, quick, flexible and, ultimately, creative responses (Dumitru, 2019; Ma et al., 2018). It is a necessary skill for problem-solving and the strengthening of creative and, in turn, critical thinking; thus, it is important to apply teaching methods that promote its development. Methods such as those described in this study, which have proven effectiveness for students from both the humanities and the arts domains, represent teaching approaches that have a high potential for facilitating the achievement of these educational goals (Collins et al., 2018; Tay et al., 2017). However, this study found that participants' gender and age influence their learning. For male participants, the perceived benefits of NP relate to the fostering of tolerance in certain situations and the elimination of previous prejudices; both of these benefits concern elements of perspective and social awareness. However, female participants highlighted more academic aspects, particularly concerning NP's ability to assist the learning of theoretical concepts. Similarly, several previous studies have also noted gender differences regarding the effectiveness of teaching approaches,

reporting disparities in terms of motivational variables, skills used, and learning strategies (Lopez-Aguado, 2011; Torrano & Soria, 2017). Although the influence of gender on teaching has not yet been clearly established (thus representing an aspect that must be analyzed in more depth in future research), our results indicate concrete differences between genders regarding the perceived benefits of NP.

The present research also found participants' age to have some influence, although this effect was less significant than that for gender. Younger students (18–19 years old) said that NP helped them dispel certain prejudices, whereas older students (20 years or older) reported that NP helped increase their creativity. This difference could be related to the participants' prior knowledge and lived experiences, which are often influenced by age and which place their learning needs at different points (Lopez-Aguado, 2011).

Despite the benefits obtained and the high perceived satisfaction, two of the most reported disadvantages were a lack of time to prepare the materials and the increased workload. This result contrasts with other study (Leyva-Moral & Riu Camps, 2016) in which participants' reported satisfaction with the method as a result of the low associated workload. However, other study findings accord with the present results, reporting that, although innovative methods such as problem-based learning improve learning outcomes, they also increase students' workload (Ruiz-Gallardo et al., 2011). Thus, although the results relating to the time and dedication required by students are not conclusive and require further analysis, given the need to implement new teaching styles, designers of university curricula should ensure that the necessary resources and time required for the appropriate implementation and use of these new methodologies are provided. Otherwise, students' acceptance of these methods could diminish, as indicated in Chan et al. (2018).

Students' satisfaction with and acceptance of learning methodologies not only represent an added value in teaching but have become a basic element for analysis of the quality of education (Razinkina et al., 2018). Greater satisfaction and acceptance are also associated with better academic performance (Lee, 2011); thus, identifying new forms of learning that are associated with high satisfaction and acceptance has become imperative in today's education systems. Methods such as the one proposed in this study can foster such qualities and can also encourage elements such as motivation, group work, creativity, and reflection (Awidi & Paynter, 2019).

Changes in the current education system are needed; aspects such as commitment, innovation and creativity are becoming essential values that must be incorporated into classrooms (Freeman et al., 2014; Innovating Education and Educating for Innovation, 2016; OECD/Eurostat, 2018; Saliceti, 2015). In particular, innovation is becoming a necessity for education systems to advance and negotiate the new challenges posed by today's societies (Serdyukov, 2017). Therefore, the constant transformation that is occurring across professional sectors must be reflected in education, which must be able to adapt to new social demands through innovative teaching methods such as NP.

This study featured several limitations that must be considered. First, the participation rate was low, which could have influenced the

results. Additionally, as we used a self-administered questionnaire linked to a course module, the results could have been affected by social desirability bias, even though this was minimal given the appropriate Aiken's V value. Future research should include both experimental and multicenter designs.

5 | CONCLUSIONS

This study indicates that NP produces high satisfaction rates among students. The most prominent impact of this method is an increase in creativity. Innovation in education is a core requirement in today's societies, and this necessitates the adoption of new educational methods that encourage creativity, critical and reflective thinking, teamwork, and a commitment to learning. This study observed gender (male: social aspects; female: academic aspects) and age (younger: social aspects; older: academic aspects) differences in NP-based learning. If such differences continue to be found in future studies, teaching methods should be adapted to accommodate these characteristics. Finally, the workloads associated with innovative methods must be considered, and curricula must be designed that accommodate such time and resource requirements, encourage students to adopt these methods, and help students benefit from the positive aspects these methods promote.

Other courses of the nursing degree in which empathy, self-knowledge, reflection, humanization of care, person-centered care, and creativity are worked on, could benefit from art-based methodologies such as NP. This is the case of therapeutic communication, community nursing, mental health nursing, palliative care, critical care, geriatric nursing, and maternal and child nursing. Finally, future research must evaluate the effectiveness of NP in the academic performance of nursing students, especially in aspects such as critical thinking and soft skills.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

Study design: Juan M. Leyva, Cinta Folch; Data collection: Juan M. Leyva, Mariela Aguayo, Sabiniana San Rafael, Rebeca Gómez; Data analysis: Juan M. Leyva, Cinta Folch; Drafting the article: Juan M. Leyva; Manuscript writing: Juan M. Leyva, Mariela Aguayo, Cinta Folch, Sabiniana San Rafael, Rebeca Gómez

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.

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