

REVIEW ARTICLE

Photovoice as a research method in health education: an integrative review

Photovoice como método de pesquisa para educação em saúde: uma revisão integrativa

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ABSTRACT

Photovoice is a research method in which participants register their experiences as photographs and analyze them in reflection, evaluation, and action cycles. The objective of the present study was to examine publications that report the use of photovoice by nurses in health education. An integrative literature review was carried out by searching and analyzing data available in the following databases: the Medical Literature Analysis and Retrieval System Online, the Cumulative Index to Nursing and Allied Health Literature, the Latin America and Caribbean Center of Health Science Information, Scopus, *Índice Bibliográfico Español en Ciencias de la Salud*, *Banco de Dados em Enfermagem*, and the Coordination for Improvement of Higher Education Personnel. Twenty-seven studies published between 2007 and 2018 were selected, in which two subject areas were identified: health-illness transition and creation of health-enabling environments. The studies have guiding resources for research in health education using photovoice, both to understand and act in different circumstances of the health-illness process and to develop educational strategies that enable healthy environments. A scarce production by Brazilian nurses on photovoice shows the lack of knowledge of the possibilities the method offers in nursing studies, which encourages the authors of the present study to emphasize the need to disseminate it among nursing researchers, stressing its useful research features.

Descriptors: Photograph; Health Education; Nursing Research.

RESUMO

Photovoice é um método de pesquisa onde o participante registra por fotografia suas experiências, analisadas em ciclos de reflexão, avaliação e ação. Objetivou-se analisar publicações que relatem a utilização de *photovoice* por enfermeiros na educação para saúde. Procedeu-se a uma revisão integrativa da literatura nas bases de dados Medline[®] CINAHL[®], LILACS[®], SCOPUS, IBECs, BDENF, CAPES. Foram selecionados 27 estudos, publicados entre 2007 e 2018, identificando-se duas áreas temáticas: Transição saúde-doença e Criação de ambientes favoráveis à saúde. Estudos trouxeram subsídios norteadores de pesquisa em educação para a saúde usando *photovoice*, tanto para compreender e atuar em diferentes circunstâncias do processo saúde-doença quanto para criar estratégias educacionais favoráveis a ambientes saudáveis. Escassa produção dos enfermeiros brasileiros acerca de *photovoice* demonstra o desconhecimento das amplas possibilidades do método nas pesquisas de enfermagem, motivando-nos a enfatizar a necessidade de divulgá-la entre os pesquisadores da enfermagem, destacando seus úteis recursos investigativos.

Descritores: Fotografia; Educação em Saúde; Pesquisa em Enfermagem.

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How to cite this article: Fernandes CS, Carvalho JN, Feitosa ES, Costa NP, Moraes TM, Rodrigues ARS, et al. Photovoice como método de pesquisa para educação em saúde: uma revisão integrativa. Rev. Eletr. Enferm. [Internet]. 2019 [cited on _____];51434. Available at: <https://doi.org/10.5216/ree.v21.51434>.

Received on: 02/09/2018. Accepted on: 05/02/2019. Available on: 09/20/2019.

INTRODUCTION

Photovoice is a research method which has been used in health education. In the 1990s, the researchers Wang, at the University of Michigan, and Burris, at the University of London⁽¹⁾, joined efforts to develop the theoretical-methodological approach of photovoice, focusing on the triad health promotion, community development, and dialogic-critical education, applying the principles of the Brazilian educator Paulo Freire.

The purpose of the method is to have access to other people's world, making it more accessible to the participants and researchers. The participants' world is portrayed by themselves using their photographs, which are interpreted by them, creating opportunities for different perspectives for researchers. The images and associated stories are worked on through group dialogue, which helps to share experiences of changes in people.

Photovoice is a participatory research-action method based on the understanding that people are specialists in their own lives⁽¹⁾, allowing to create competences based on reflections on the records, which may be related to positive or negative points of the photographs. The process helps people grasp and share community questions that concern each participant, which confers the method the role of agent of personal and social change⁽²⁾.

The method basically shows people's subjective experiences, the individual representation of their own reality, and the empowerment of excluded, underrepresented, and silenced groups⁽¹⁻³⁾. One of the possible consequences of this empowerment is a higher level of participation of people in solving problems experienced in their own community. Photovoice allows researchers to combine the old method of capturing "a moment" in a photograph and the new concept of using pictures to "give a voice"⁽⁴⁾ to the participants.

According to the creators of the method⁽¹⁾, photovoice is an inclusive and qualitative approach, oriented toward developing in three essential steps: allowing that people register facts and reflect on the key strengths and concerns of the community; allowing participants to create photographic records that depict the nuances and characteristics of the problematized challenges, socializing the meanings attributed to the produced images, which contributes to increasing the knowledge of the questions and problems under discussion; and allowing to design intervention strategies regarding the given question, reaching out to political decision-makers^(1,5).

This method has specific importance to nursing as a dialogic, participatory, and problem-posing process in health education.

The process of this research method usually includes data analysis and collection in simultaneous activities, involving

reflection and critical dialogue in three steps: selecting one's images that have personal meaning; contextualizing them, describing the meaning of the chosen images to the other members of the group; and identifying questions, themes, or theories that emerge from the reflection.

The acronym SHOWED is one of the possible ways to describe the meaning of the images, integrating the following questions that help describe the photographs: What do you See here? What is really Happening here? How does this relate to Our lives? Why does this condition Exist? What can we Do about it?^(1,6,7). However, this analysis is not the only one that can be applied. The simple codification process through image or attributed meaning similarity stands out, among other alternatives⁽¹⁾.

The relative newness of the approach motivated the authors to question which the application of the photovoice method is in nursing studies, which led to the development of a literature review aiming at knowing and analyzing publications that reported the use of photovoice by nurses in health education.

METHODS

The present literature review was carried out in 2018 according to the following steps^(8,9):

- Definition of the research question;
- Sample selection in the following databases: Scopus (SciVerse Scopus Author), the Latin America and Caribbean Center of Health Science Information (LILACS), the Medical Literature Analysis and Retrieval System Online (MEDLINE), the Cumulative Index to Nursing and Allied Health Literature (CINAHL), the The Spanish Bibliographic Index of the Health Sciences (IBECS), the Brazilian Nursing Database (BDENF), and the Coordination for Improvement of Higher Education Personnel (CAPES);
- The descriptors and/or keywords were chosen according to the search strategies applied in each database; for LILACS, MEDLINE, and CINAHL databases: *Photovoice* AND *Health* AND *Nursing* (the initial search attempts in LILACS using the expressions *research method*, *education* were unsuccessful); for IBECS: *Fotografia* AND *Salud* (the initial search attempts applying the expressions *enfermería*, *enfermero* were unsuccessful); for Scopus: *Photovoice* AND *Nurses* OR *Nurse* OR *Nursing*; for BDENF: *Photovoice* AND *Saúde*; *Photovoice* AND *pesquisa* (the initial search attempts using the expressions *enfermagem*, *enfermeira(s)* resulted in a negligible number of publications); for the database of theses and dissertations of CAPES, searching the word *Photovoice* provided a list of works, which were filtered to select those linked to nursing graduate courses.

The descriptors *Photovoice* AND *Health* AND (*Nursing* OR *Nurses* OR *Nurse*) were used;

- Inclusion criteria were: studies published in English, Spanish, or Portuguese; research, review, experience report, or essay/reflection articles published between 2007 and 2018 whose authors were nurses. Theses and dissertations produced in the Brazilian nursing context were also included, given that in Brazil innovative studies usually begin to be developed in graduate courses;
- The selected pieces of literature were analyzed and classified by grouping the publications into subjects found in health education glossaries. Themes related to the two main focuses of the present study stood out: health-illness transition and creation of health-enabling environments. In the sphere of the health-illness transition focus, the studies examined the meaning attributed to the experiences of undergoing morbidity and to health situations that require a difficult coping process. In the scope of the creation of health-enabling environments focus, the studies had the objective of identifying conditions that promote health.

The study selection process involved different steps, according to the PRISMA diagram⁽⁹⁾ (Preferred Reporting Items for Systematic Review and Meta-Analyses), shown in Figure 1. Initially, 134 publications were identified, of which 17 were excluded because of duplicity and six because of lack of access to the full text.

Consequently, 111 publications were selected for thorough reading. Among them, 84 were rejected for not meeting the criteria. The remaining 27 publications were thoroughly read and answered the research question. These 27 works were the sample of the present literature review.

The research team, consisting of four nursing professors and researchers, one bedside nurse, master of nursing, and three nursing master's students, carried out the search and selection of publications according to the established criteria. Each selected study was independently evaluated by two referees, with each one registering their evaluation on a previously designed form, taking into account the research question and the principles of literature integrative reviewing. The pairs of evaluations were compared and discussed until a consensus was reached in case of divergence.

To assess the quality of the present review, the selected studies were classified according to the seven hierarchical levels of evidence for best practices, suitable to production of scientific knowledge in nursing using a quantitative or qualitative approach⁽¹⁰⁾. Level 1 evidence originates from a systematic review or metaanalysis of randomized controlled trials; level 2 evidence is obtained from at least one randomized

controlled and well-designed trial; level 3 evidence originates from a well-designed non-randomized controlled trial; level 4 evidence is reported in well-designed cohort or case-control studies; level 5 evidence comes from systematic reviews or descriptive or qualitative studies; level 6 evidence originates from a single descriptive or qualitative study; and level 7 evidence is obtained from the opinion of authorities and/or expert committee reports⁽¹⁰⁾.

RESULTS

Chart 1 summarizes the studies included in the present review with information on authors, publication year, main objectives, design, sample, method, study design, results, subject/focus, and level of evidence.

Regarding the publication year of the articles, which ranged from 2007 to 2018, the collected data were distributed over the examined period, showing a scarce production, with a slight increase in the last three years. A similar fact occurred in the

Figure 1. Flow chart showing the process of identification and inclusion of studies addressing the use of photovoice by nurses in investigations on health education published from 2007 to 2018 according to the PRISMA model⁽⁹⁾.

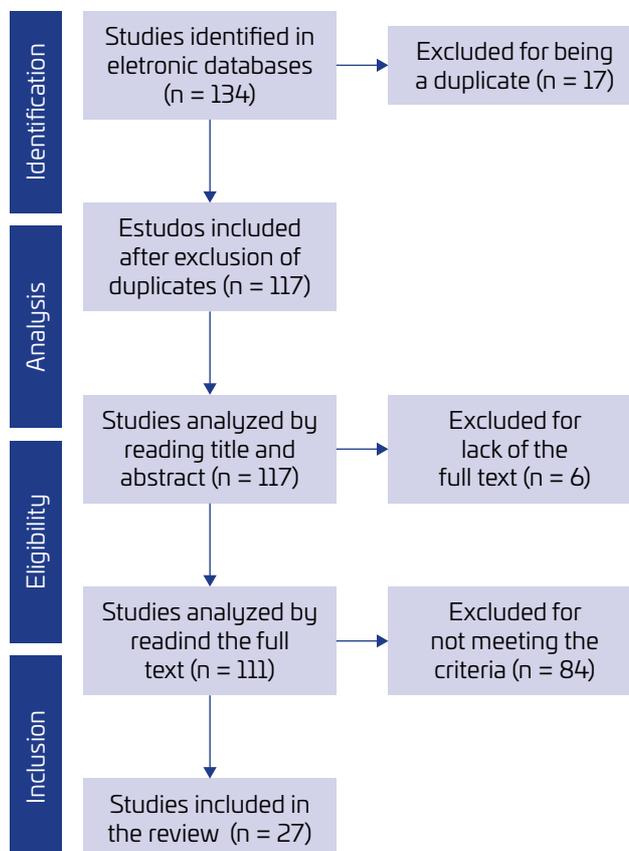


Chart 1. Summary of the studies with their objective, methodology, results, subject/focus, and level of evidence.

Cod.	Reference	Objective(s)	Methodology	Results	Subject/ Focus**	LE* (Level of evidence)
S1	Stegenga K, Burks LM. Using Photovoice to explore the unique life perspectives of youth with sickle cell disease: a pilot study. <i>J Pediatr Oncol Nurs.</i> 2013; 30(5):269-74 ⁽¹¹⁾ .	To examine the life perspective of children and adolescents with sickle cell anemia.	Qualitative study with 12 participants whose ages ranged from six to 14 years. They were encouraged to think about what type of photograph would help other people understand the perspective of living with sickle cell disease the most. The study was complemented with interviews to explore the perspectives of living with sickle cell disease.	The main subjects that emerged from content analysis were: the importance of friends; the importance of controlling the symptoms; and the importance of follow-up. The children and adolescents with sickle cell disease proved capable of managing their complex symptoms despite their young age. Photovoice was considered a useful methodology to children and adolescents with chronic conditions, such as sickle cell disease.	1	VI
S2	Duffy LR. Hidden Heroines: lone mothers assessing community health using photovoice. <i>Health Promot Pract.</i> 2010; 11(6):788-97 ⁽⁶⁾ .	To carry out a participatory evaluation of the community health of a group of single mothers.	A convenience sampling was performed, resulting in a sample with seven single mothers. They were asked to take pictures in the context of their life and that they considered important to their health, health promotion, and quality of life.	The photographs representative of the participants related to eight themes: finances; place; stress; public services; transport; support; personal development; and abuse and violence. The methodology was seen as the best way to give voice to the participants and, in a posterior step, help policymakers to understand what is important to single mothers in the community.	2	VI
S3	Evans-Agnew R. Asthma management disparities: a Photovoice investigation with African American youth. <i>J Sch Nurs.</i> 2016; 32(2):99-111 ⁽¹²⁾ .	To describe and compare the bronchial asthma management disparities speech in African-American adolescents in Seattle.	The focus group with 20 adolescents met in three sessions to discuss the participants' asthma experiences and practice the handling of a camera. Subsequently, the pictures taken were shown to the group and a discussion about them was encouraged. In the last step, three photos were selected to be shown in a political meeting to be used as a resource for the new asthma state plan.	The adolescents drew up a document with a new proposal and showed it to the school managers and health team as a contribution to restructuring the asthma management policy in the school setting.	1	III

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Chart 1. Continuation.

Cod.	Reference	Objective(s)	Methodology	Results	Subject/ Focus**	LE* (Level of evidence)
S4	Arestedt L, Benzein E, Persson C, Rämngard M, Midwifery B. A shared respite: The meaning of place for family well-being in families living with chronic illness. <i>Int J Qual Stud Health Well-Being</i> . 2016;11(1):1-10 ⁽¹³⁾	To explore the meaning of well-being in families that live with chronic diseases.	Data were collected using photovoice during an interview with ten families that experience living with a chronic disease. Hermeneutic phenomenological analysis was applied to interpret data.	Data analysis originated a subject represented by "shared respite". This main subject encompassed three subthemes: "a place for relief", "a place for reflection", and "a place for re-creation". According to the participants, feeling well means to have safety, which justifies the need for promoting it.	2	VI
S5	Mitchell EM, Steeves R, Dillingham R. Cruise ships and bush medicine: globalization on the Atlantic Coast of Nicaragua and effects on the health of creole women. <i>Public Health Nurs</i> . 2015; 32(3):237-45 ⁽¹⁴⁾ .	To explore the health beliefs of creole women who live in Bluefields.	The 12 participants discussed health and healthcare questions of creole women and their families and got cameras. In a subsequent step, a researcher and the participants met so they could describe what each picture represented or meant. The photos were shown in a photo exhibition.	The results were classified into three categories: factors which influence cultural change; reactions to cultural changes; and importance of preserving the creole culture. The study confirmed that photovoice can help healthcare providers and people responsible for public health policies develop and maintain more adequate health interventions.	1	VI
S6	Clements K. Participatory action research and Photovoice in a psychiatric nursing/ clubhouse collaboration exploring recovering narrative. <i>J Psychiatr Ment Health Nurs</i> . 2012; 19(9):785-91 ⁽¹⁵⁾ .	To explore the concept of recovery using photovoice, producing a platform to share this local knowledge.	The project included obtaining pictures of the daily life and writing texts to be put together with them, to explore and register health recovery using photovoice. The members of Club House (five people and a research team) were encouraged to collect the pictures. In a posterior step, the meanings the participants attributed to the process of mental health recovery were discussed.	Photovoice proved to be a useful method to the local knowledge of recovery and for sharing this knowledge, because it facilitates critical reflection and promotes the study dissemination, helping decision-making by the members of the community and health professionals.	1	VI

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Chart 1. Continuation.

Cod.	Reference	Objective(s)	Methodology	Results	Subject/ Focus**	LE* (Level of evidence)
S7	Teti M, Pichon L, Kabel A, Farnan R, Binson D. Taking pictures to take control: Photovoice as a tool to facilitate empowerment among poor and racial/ethnic women with HIV. <i>J Assoc Nurses AIDS Care</i> . 2013; 24(6):539-53 ⁽¹⁶⁾ .	To explore how a group of women with HIV/AIDS experienced empowerment using photovoice.	The 30 participants were recruited in HIV/AIDS services in three municipalities in the midwestern and north regions of the USA. During the first meeting, photography ethical questions were addressed, as well as how to use the camera. In the second and third meetings, the participants engaged in a new discussion process. Each participant chose from two to four pictures to show to the group, and the meaning of each one was debated. They applied strategies of the Grounded Theory to identify the main training themes.	The participants described the training using four key concepts: self-esteem; self-confidence; critical thinking skills; and improved control. The participants reported to feel better about their life and more confident to obtain power and skills. They began thinking of their circumstances and new ways that increased their control over HIV and life challenges.	1	VI
S8	Poudrier J, MacLean RT. "We've fallen into the crack's Aboriginal women's experiences with breast cancer through photovoice". <i>Nurs Inq</i> . 2009; 16(4):306-17 ⁽⁷⁾ .	To explore and disseminate experiences of indigenous aboriginal women with breast cancer.	Twelve indigenous women that completed the breast cancer treatment participated in the study. They were invited to tell their experience with cancer and their stories. The participants debated and attributed meanings to the images they captured.	From the feminist epistemology with power visibility perspective, filters were provided to collectively interpret the stories and the captured images. Two interrelated subjects about health care emerged from the results: spirituality and indigenous identity in the breast cancer experience, which allow a higher awareness of the theme.	1	VI
S9	Türk MT, Fapohunda A, Zoucha R. Using Photovoice to explore Nigerian immigrants eating and physical activity in the United States. <i>J Nurs Scholarsh</i> . 2015; 47(1):16-24 ⁽¹⁷⁾ .	To explore the perceptions and practices of Nigerian immigrants regarding healthy diet and physical activity in the USA.	Thirteen immigrants participated in the study. The methodology included photovoice and four phases of qualitative analysis by Leininger. Photograph analysis, field notes, and transcription of focal groups were used.	Four major subjects emerged from the data: moderation is healthy; Nigerian life models are healthy; developing good manners is healthy; and culture is important to promote a healthy behavior.	1	VI

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Chart 1. Continuation.

Cod.	Reference	Objective(s)	Methodology	Results	Subject/ Focus**	LE* (Level of evidence)
S10	Davtyan M, Farmer S, Brown B, Sami M, Frederick T. Women of color reflect on HIV-related stigma through Photovoice. <i>J Assoc Nurses AIDS Care</i> . 2016; 27(4):404-18 ⁽¹⁸⁾ .	To describe the experiences and the stigma associated with HIV/AIDS in African-American and Latin-Hispanic women using photovoice.	The ten participants received a digital camera to take pictures based on their critical reflections about the stigma related to HIV. After this step, there was a discussion and five to seven pictures were selected to have their meaning registered. The study applied phenomenological and interpretative analysis of narratives and photographs to provide the therapeutic intervention with resources.	The answers were: lack of education and culture as the main causes for the HIV stigma; depression; fear of intimate relationships; and secrecy about the contamination by HIV. The critical reflection using autobiographic photography was used as a therapy. The participants verbalized that photovoice made them think in a more constructive and positive way.	1	III
S11	Postma J, Ramon C. Strengthening community capacity for environmental health promotion through Photovoice. <i>Public Health Nurs</i> . 2016; 33(4):316-24 ⁽¹⁹⁾ .	To identify, in health promoters, the perceptions regarding housing problems faced by families of farmers in an agricultural community, in addition to strengthening the community's capacity to promote healthy and affordable housing.	The six participants were provided with cameras. They were then invited to take pictures of people, places, and objects that conveyed their perspectives regarding the community's strengths and weaknesses related to "leaves, environment, and health". The activities were developed over four sessions. The participants exchanged the pictures to discuss the stories each one contained.	The results were: lack of housing available for affordable prices in the region – factors that influence housing availability, including the seasonality of agricultural work; precarious housing conditions – houses that are overcrowded, in dangerous conditions, and do not meet basic needs; insalubrity – living in a rural area; agricultural area and its population (made up mostly of farmer families). The discussion brought about decision actions for future solutions.	2	VI
S12	Pereira FB. <i>Clic Saúde: prevenção da esquistossomose por meio das tecnologias da informação [dissertação]</i> . Belo Horizonte:	To analyze an educational intervention developed using a convergence of information and communications technologies.	Educational intervention exploratory study using the photovoice technique in the semi-distance modality. During the workshops, the students were invited to problematize their understanding of health	An increased understanding of the students regarding life and health, specifically schistosomiasis. Opening of a communication channel for people who share the same physical space and chronological time in the problematization	2	III

Continue...

Chart 1. Continuation.

Cod.	Reference	Objective(s)	Methodology	Results	Subject/ Focus**	LE* (Level of evidence)
	Programa de Pós-graduação em Enfermagem, Universidade Federal de Minas Gerais; 2014 ⁽⁵⁾ .		and schistosomiasis. Data were also obtained through answers to a questionnaire. The answers and interaction records were transcribed and analyzed using the content analysis technique.	process. The adopted educational technologies allowed to problematize the health issues among the participants, resulting in the empowerment of the community.		
S13	Galon T. Do lixo à mercadoria, do trabalho ao desgaste-estudo do processo de trabalho e suas implicações na saúde de catadores de materiais recicláveis [tese]. Ribeirão Preto: Escola de Enfermagem de Ribeirão Preto, Universidade de São Paulo; 2015 ⁽²⁰⁾ .	To understand the work process and its health implications in recycling material collectors.	Qualitative study carried out with recycling material collectors in Ribeirão Preto, Brazil, with a sampling that adopted theoretical saturation and the use of multimethods: observation, interview, photovoice, and discussion group. Data were analyzed under the perspective of historical materialism based on hermeneutics-dialectic to understand the work process of the collectors.	The results related to four thematic categories: condition of the collectors in the production chain; work routine: collectors get by on their own as they can; work load: expression of job insecurity; from work to health deterioration. The collectors experience a work routine characterized by lack of instrumental resources and of work valuation, which is enhanced by an uneven insertion in the recycling chain, reflecting as the low income measured and dominated and explored work.	2	VI
S14	Costa AGM. Imagem, reflexão e ação para a promoção da saúde dos adolescentes no contexto rural [dissertação]. Fortaleza: Programa de Pós-Graduação em Enfermagem, Universidade Federal do Ceará; 2009 ⁽²¹⁾ .	To analyze the rural health from the adolescents' perspective, based on Paulo Freire's consciousness and critical education process.	Participatory study based on the community's point of view. The sample was 26 adolescents, and data collection was carried out using photovoice and discussion groups. The registered data were categorized according to their theoretical relevance.	Photovoice boosted the health education process, encouraging the critical participation of the adolescents. Their point of view on health is linked to the local culture, which requires this aspect to be included when local proposals and health policies are designed. Implications: the adolescents evolved from having an intransitive consciousness to a transitive one, oriented toward the commitment to the community.	1	VI

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Chart 1. Continuation.

Cod.	Reference	Objective(s)	Methodology	Results	Subject/ Focus**	LE* (Level of evidence)
S15	Brandão Neto WB, Silva MAI, Aquino JM, Lima LS, Monteiro EMLM. Violência sob o olhar de adolescentes: intervenção educativa com Círculos de Cultura. Rev Bras Enferm. 2015; 68(4):617-25 ⁽²²⁾ .	To apply the culture circle methodology to a group of school adolescents as a health education strategy through nurses in the development of collective knowledge of the violence subject.	Action research with a qualitative approach using the culture circle proposed by Monteiro and Vieira. The sample was 15 adolescents who attended a state school in Recife, Brazil, who were invited to use the photovoice technique to discuss violence.	The study showed that the problem-posing action made possible by the culture circle allowed to create situations in which the adolescents were invited to think critically about the violence phenomenon and its complexity. The collective reflection on violence brought up revelations by the adolescents which call for an urgent review of educational policies and programs.	1	VI
S16	Garcia CM, Medeiros M. Ar, água e terra: percepções de saúde ambiental de adolescentes de origem mexicana. Rev Eletrônica Enferm. 2007; 9(3):574-87 ⁽²³⁾ .	To describe how environmental influences are perceived by Mexican immigrant adolescents living in the USA.	Ethnographic study based on the ecological framework and symbolic interactionism and oriented toward carrying out individual interviews and participatory observation, and obtaining visual narratives using disposable cameras. Fourteen participants photographed their life as Latin immigrant adolescents, focusing on health aspects. The interviews and photographs were analyzed using the Atlas.ti® software.	Four themes emerged from the study: garbage is everywhere; work hurts me; the air we breathe; and relaxation in nature. The study helped nurses understand the health of Latin immigrant adolescents, specifically the environmental factors that may influence their physical and mental well-being. Nursing practice and research may evaluate the results of the study and act to promote health and reduce environmental risks.	2	VI
S17	Findholt NE, Michael YL, Davis MM, Brogoitti VVV. Environmental influences on children physical activity and diets in rural Oregon: results of a youth Photovoice Project. Online J	To explore the perceptions of young people living in a rural area regarding environmental barriers and enabling agents of physical activity and healthy eating in the Oregon state, USA.	Six students were invited to photograph enabling and hindering agents of physical activities and healthy eating in their communities. The most important pictures were selected and captions were written for them, in an attempt to answer the questions: What do you see here? What is really	Physical activity was hindered by inadequate recreational resources, unsafe streets, and large distances, but was promoted by the natural environment and the support to youth sports. A healthy diet was hindered by lifestyles (occupation), limited access to health foods, and promotion and	2	VI

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Chart 1. Continuation.

Cod.	Reference	Objective(s)	Methodology	Results	Subject/ Focus**	LE* (Level of evidence)
	Rural Nurs Health Care. 2010; 10(2):11-20 ⁽²⁴⁾ .		happening here? How does it affect physical activity or food choices? Why does this problem, concern, or force exist? What can we do about it?	easy access to unhealthy foods, and was promoted by the agricultural environment and gardening. The perspectives of the young people provided resources for actions that aimed at setting healthier environments.		
S18	Cooper CM, Yarbrough SP. Tell me-Show me: using combined focus group and photovoice methods to gain understanding of health issues in rural Guatemala. Qual Health Res. 2010; 20(5):644-53 ⁽²⁵⁾ .	To describe a project that applied focal groups and photovoice to gather information about health conditions in Guatemala.	Exploratory study using focus group and photovoice and involving 15 midwives in 11 villages in the examined region. In the first phase of the study, the group of midwives were encouraged to express their perceptions in a focus group. In the second phase, photovoice was applied, and the participants saw the pictures taken in the previous step.	Most interviewees reported health problems in their community and lack of access to clean water, which brought up several subjects related to improving their live style. The results of this two-phase approach are compatible with other studies suggesting that photovoice provides further data in traditional interviews or discussions in focus groups.	2	VI
S19	Stedman-Smith M, McGovern PM, Peden-McAlpine CJ, Kingery LR, Draeger KJ. Mothers concerns about children's exposure to pesticide drift in the red river basin of the North: a novel application of photovoice. Online J Rural Nurs Health Care. 2012; 12(2):88-101 ⁽²⁶⁾ .	To evaluate the needs and perceptions of mothers regarding the routes of exposure to pesticides and other concerns related to environmental health.	Study which applied photovoice and included 16 mothers who reflected and captured images showing their concerns about how their children may be exposed to pesticides and other health and safety issues. In a posterior step, the mothers participated in a workshop to share and discuss the meanings of their pictures, the community's resources, and changes they want to protect their children better.	Two main subjects were identified: agricultural activities and mosquito control. The subthemes were related to possible exposure places, precautions, and ways to prevent exposure. Photovoice proved to have potential to increase the level of awareness among the members of the community.	2	III

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Chart 1. Continuation.

Cod.	Reference	Objective(s)	Methodology	Results	Subject/ Focus**	LE* (Level of evidence)
S20	Leal CCG. O processo de amamentação e suas implicações na vida da mãe adolescente [tese]. Ribeirão Preto: Escola de Enfermagem de Ribeirão Preto, Universidade de São Paulo; 2017 ⁽²⁷⁾ .	To understand the breastfeeding experience of a group of adolescent mothers.	Qualitative study applying the photovoice method. The sample was a group of 12 adolescent mothers who attended postpartum appointments in the primary care network in Ribeirão Preto, state of São Paulo, Brazil. Data collection consisted of asking for pictures to be taken at the mothers' households, in an attempt to address breastfeeding, and carrying out focus groups to give voice to the participants. Data were treated using inductive thematic analysis.	Three subjects emerged in the results: building your breastfeeding history; revealing specificities of the breastfeeding routine of adolescent mothers; and knowledge and practices developed by adolescent mothers. These subjects led to the conclusion that nurses should give voice to the adolescents in the different dimensions that pervade the individual, family, and social context by applying a listening conduct to build trust in any health education opportunity.	2	VI
S21	Brum MLB. Percepções de adolescentes frente às IST/HIV/AIDS: demandas de cuidado à saúde na perspectiva das vulnerabilidades [tese]. Porto Alegre: Escola de Enfermagem, Universidade Federal do Rio Grande do Sul; 2017 ⁽²⁸⁾ .	To know the elements which make up the vulnerabilities in STI/HIV/AIDS prevention in a group of adolescents and identify their health care demands based on the bioecological model.	Qualitative study partially applying the photovoice method to collect meanings regarding STI/HIV/AIDS. The investigation was carried out in a nongovernmental organization (NGO) in a municipality in the Western region of the Brazilian state of Santa Catarina, and the sample was ten adolescents of both genders whose ages ranged from 12 to 18 years. Data were interpreted from the perspective of the hermeneutics proposed by Paul Ricoeur, supported by the vulnerability framework of the bioecological model.	The results indicate that the family system is the basis of care to the adolescents' sexual health, even with embarrassment and incipient knowledge. What the family teaches has repercussions in their behavior. The mesosystem (interaction with neighbors and friends) is an opportunity to learn, whereas the exosystem (the NGO) influences their healthy growth and development. The chronosystem makes up their life stories and the meanings attributed to them, contributing to the total knowledge they gain. The macrosystem involves culture, policies, and health educational actions that pervade the social interaction and give the adolescents the awareness of the need for self-care.	1	VI

Continue...

Chart 1. Continuation.

Cod.	Reference	Objective(s)	Methodology	Results	Subject/ Focus**	LE* (Level of evidence)
S22	Pereira VR. Intervenções Assistidas por Animais com crianças em contextos de vulnerabilidade social: utilizando o método Photovoice [dissertação]. Pelotas: Programa de Pós-Graduação em Enfermagem, Universidade Federal de Pelotas; 2017 ⁽²⁹⁾ .	To understand the contributions of the animal-assisted interventions to children's perceptions in contexts of social vulnerability using photovoice.	Participatory study carried out in a public school in Pelotas, state of Rio Grande do Sul, Brazil. The sample was five children whose ages ranged from six to nine years who were in primary school. The dogs were part of the extension project of the veterinary course known in the community as <i>Projeto Pet Terapia</i> . The use of photovoice allowed the participants to register their perceptions regarding animal-assisted interventions.	The children took pictures representative of their experience, which increased their self-esteem and self-confidence, a fact observed when they played with the dogs. Petting the animals was an important addition to reduce stress and anxiety. The presence of the dogs provided emotional comfort and a supportive atmosphere, in addition to encouraging the friendship bond in the group, improving the relationship among its members and leading to a healthy interaction.	2	III
S23	Woda A, Haglund K, Belknap RA, Cleek E. Photovoice: a research method and intervention to engage older adults. <i>J Gerontol Nurs.</i> 2018; 44(7):43-9 ⁽³⁰⁾	To describe the use of photovoice with people who belong to vulnerable population groups.	Ten African-American men and women with ages from 66 to 72 years with heart failure living in three different facilities of public lodging for low-income people were recruited to participate in a project about photovoice. They were asked to capture images that represented easy and difficult aspects to the development of self-care behaviors.	Photovoice helped provide opportunities for the participants themselves to share personal beliefs and perspectives. When shared and discussed, the pictures allowed a debate about facilities and barriers to the development of self-care in the elderly people's daily routine in vulnerability situations, envisaging coping strategies. Attitudes like these are essential for nursing professionals to redirect care-educational actions in institutions where vulnerable elderly people live.	2	VI
S24	Bashore L, Alexander GK, Jackson DL, Mauch PJ. Improving health in at-risk youth through Photovoice. <i>J Child Health</i>	To explore the factors that influence mental and emotional health using pictures of Hispanic students in a secondary school.	Interprofessional collaborative proposal involving social work and nursing, oriented toward school health. Eight students were recruited and had consent to participate in the study. The adopted method was	The subjects that emerged from the students' reflections regarding their pictures were related to the stress originated when dealing with anger and frustration, keeping friendships and communication, recognizing	2	VI

Continue...

Chart 1. Continuation.

Cod.	Reference	Objective(s)	Methodology	Results	Subject/ Focus**	LE* (Level of evidence)
	Care. 2017; 21(4):463-75 ⁽³¹⁾ .		photovoice. They took pictures of each other that reflected their mental and emotional health.	bullying, and planning the future. These reflections helped provide details about how the school environment influences the students' mental and emotional health. It was inferred that nurses, social workers, parents, and school leaders can use knowledge to promote a community environment and a healthy school.		
S25	Olumide AO, Adebayo ES, Ojengbode OA. Using photovoice in adolescent health research: A case-study of the well-being of adolescents in vulnerable environments (WAVE) study in Ibadan, Nigeria. <i>Int J Adolesc Med Health</i> . 2016; 30(2):1-12 ⁽³²⁾ .	To describe the participation of adolescents who live in disadvantaged communities in Ibadan, Nigeria, regarding the community health of vulnerable populations.	Eleven adolescents of both genders aged between 15 and 19 years participated in the study. The researchers asked for pictures representative of health and its promotion in disadvantaged communities. To give voice to the adolescents, ten pictures were selected to be discussed in meetings.	The findings enabled by photovoice showed that the adolescents could capture images that covered a broad range of health issues, addressing environmental health, safety, nutrition, use of psychoactive substances, and other aspects relevant to health promotion in vulnerable communities.	2	VI
S26	Chew HSJ, Lopez V. Empowered to self-care: A photovoice study in patients with heart failure. <i>J Transcult Nurs</i> . 2018; 29(5):410-9 ⁽³³⁾ .	To explore self-care promotion in patients with heart failure in Singapore.	Sixteen participants with heart failure were recruited in a cardiology outpatient clinic in Singapore. They were asked to take pictures that represented self-care promotion and discuss them, aiming at developing adequate habits.	Four subjects emerged: accepting life; appreciating life; keeping a meaning to life; and establishing a new, normal life. The four subjects provided insights into how the patients trained for self-care. Their self-reflection was useful as an internal active process. The nurses who coordinate these activities gave voice to the patients and were able to change their behavior toward benefiting their own health.	2	VI

Continue...

Chart 1. Continuation.

Cod.	Reference	Objective(s)	Methodology	Results	Subject/ Focus**	LE* (Level of evidence)
S27	Lennon-Dearing R, Price J. Women living with HIV tell their stories with photovoice. <i>J Human Behavior in the Social Environment</i> . 2018; 28(5): 588-601 ⁽³⁴⁾ .	To engage women in sharing stories of their life-with-HIV reality using the photovoice technique.	Twenty-three women shared stories of the reality of their experience with HIV using photographs and critical dialogue with their peers about the challenges they face, how they overcome these challenges, and what they expect to have in the future.	Analysis of the transcribed content of group sessions revealed seven main subjects: adherence to the medication; substance abuse; criminal history; relationship with children; end of little healthy relationships; reformulation of health behaviors; and development of mutual help. What women see as aspects of their experience with HIV can provide information to develop care interventions and review policies to make them more effective.	1	VI

*LE: Classification into levels of evidence of study results for good nursing practices and health care⁽¹⁰⁾; **subject/focus: 1) Health-illness transition; 2) Creation of health-enabling environments.

review by Marques and Miranda⁽³⁵⁾ about the use of photovoice in studies in the area of physical education and health.

Concerning the origin country of the publications, it was found that most of them (12) was carried out in the United States, three in Canada, and Nicaragua, Sweden, Guatemala, Nigeria, and Singapore contributed with one study each.

DISCUSSION

Although photovoice has been becoming a common method in data collection for several purposes⁽²⁵⁾, the articles that describe its use in the health area are mostly limited to specific groups. However, as Wang and Burris stressed, photovoice can be used in different ways when applied as a research method, such as specific participatory purposes in health promotion, and with different groups and communities in varied public health issues⁽¹⁾. The method allows to strengthen the power and capacity of oppressed and vulnerable people, facilitating their empowerment and providing each individual with more control over their life to face their challenges⁽¹⁶⁾.

Among the articles examined in the present review, analysis of gender and age group of the participants showed a prevalence of studies with women^(6,7,14,16,18,25,26,34) and adolescents^(5,11,12,21-24,27,28,31,32). Similarly to what occurred

in other studies, there was a significant predominance of investigations with women, corroborating what some authors claim: the presence of an ideological bias, resulting from the feminist theory included in the photovoice method^(4,35,36). The people under investigation confirmed the photovoice theoretical perspective expressed in the papers by the method's founders, who recommend its use in vulnerable groups and populations, such as women, children, villagers, groups of workers, immigrants, and people who experience stigmatized life and health conditions⁽¹⁾.

Photovoice has become popular and drawn the attention of researchers from many fields, including education, public health, community development, nursing, and social work⁽⁴⁾. In the present review, which addressed the adoption of photovoice by nurses, it was observed that themes and subjects related to the two major focuses, health-illness transition and creation of health-enabling environments, stood out in the examined literature.

In the sphere of the *health-illness transition* research focus, studies that analyzed the meaning attributed to the experiences of suffering from morbidities and going through health conditions which are difficult to cope with were grouped.

Study S1 examined the perspective of children/adolescents in coping with sickle cell disease⁽¹¹⁾. Study S3,

in turn, described how it is to be an African-American adolescent living with asthma in Seattle⁽¹²⁾. Another study with adolescents, S21, explored the prevention of sexually transmitted infections in vulnerability circumstances⁽²⁸⁾. The authors of S8 addressed the experiences of aboriginal women living with breast cancer⁽⁷⁾. The objective of S7 was to understand the care training experiences in a group of women⁽¹⁶⁾. Study S10 described the stigma experiences of African-American and Latin-Hispanic women⁽¹⁸⁾. Study S27 was an effort to share experiences related to living with HIV⁽³⁴⁾. These three last publications addressed women living with HIV/AIDS. The authors of S15 applied the culture circle methodology in school adolescents as a health education strategy for nurses to build collective knowledge about violence⁽²²⁾. Study S5 explored the health beliefs of Creole women who live in Bluefields⁽¹⁴⁾. Study S6 investigated the concept of recovery using photovoice⁽¹⁵⁾. Study S14 analyzed the process of health awareness and education in adolescents living in a rural area⁽²¹⁾. Last, S9 explored the perceptions and practices of Nigerian immigrants regarding healthy eating habits and physical activity⁽¹⁷⁾.

The research focus *creation of health-enabling environments* concentrated publications which aimed at identifying conditions that promote health.

In study S11, the objective of the authors was to identify health-promoting factors and the perception of housing issues faced by rural families in an agricultural community⁽¹⁹⁾. Study S12 analyzed an educational intervention to increase the knowledge of students of life and health, specifically regarding schistosomiasis⁽⁵⁾. The publications S20, S24, and S25 also addressed community health in vulnerable environments, mental and emotional health, and chronic conditions, such as bronchial asthma, aiming at implementing educational coping processes^(31,32). More specifically, adolescent mothers were the focus of the study oriented toward encouraging natural breastfeeding⁽²⁷⁾. The authors of S13 had the objective of understanding the work process of recycling material collectors and its health implications⁽²⁰⁾. Study S4 explored the meaning of place for the well-being of families that deal with chronic diseases⁽¹³⁾.

Study S16 described how environmental influences are perceived by Mexican immigrant adolescents⁽²³⁾. The authors of S17 explored how young people living in rural areas perceive the life conditions in the field and the environmental aspects that facilitate or hinder physical activities and a healthy diet in children in their communities⁽²⁴⁾. Study S18 described a project which aimed at gathering information about health conditions in Guatemala⁽²⁵⁾. Study S2 evaluated mainly health in a community of single mothers, seeking to provide them with better health conditions and quality of life⁽⁶⁾. Study S19 reported how women with children perceive the possibility of these being exposed to the pesticide drift⁽²⁶⁾.

Study S20 examined the importance of employing animals in the care to vulnerable children, using photovoice to help them express the benefits to self-esteem and self-confidence after the interaction with dogs⁽²⁷⁾. Study S23 demonstrated the efficiency of photovoice in helping elderly people who live in public institutions, pointing out facilities and barriers to daily life in the investigated place⁽³⁰⁾. Study S26 explored the promotion of self-care in cardiac patients aiming at changing their behavior to favor good health habits⁽³³⁾. Last, S22 brought contributions related to animal-assisted interventions to the perceptions of children living in a social vulnerability context with the support of the photovoice technique⁽²⁹⁾.

The answers to the research questions emphasized the focus on photovoice, which provided people belonging to vulnerable populations with a camera, allowing them to register daily life experiences, as well as environments and unhealthy situations in which people lived, which affected their health. By sharing photographic images with other interested people, a dialogue was established to improve the conditions that influenced life and health in the local community.

By using photovoice as a research method or simply a data collection method, the publications proved to aim at overcoming health inequities to favor more disadvantaged and vulnerable groups. The researchers concluded that photovoice is a suitable, accessible, and pleasant technique, which gives voice to the examined populations so they can express their needs, and has a significant impact power⁽⁶⁾ because it does not depend on speech, reading, or writing skills⁽²⁴⁾.

Some authors, including Duffy⁽⁶⁾, claim that the method allows to develop long-lasting relationships with the participants, encouraging empowerment in each person involved. This research tool helps understand personal experiences discussed in groups and favors empowered coping behaviors in search for changes⁽⁷⁾.

According to the opinion of many participants, the critical reflection triggered by the pictures taken acted as a therapeutic process⁽¹⁸⁾, whereas others felt encouraged to express the experiences of their struggles against stigmas, making them think about these questions in a more constructive and positive way. Some participants even declared that the increase in their self-esteem and self-confidence was so high as to allow them to defend themselves against other people⁽¹⁷⁾. Photovoice can help oppressed and vulnerable people recognize their strengths and capacities, facilitating their empowerment, offering them more control over their lives, and encouraging them to face challenges. It can also impart sustainability to changes, providing a tangible resource (a camera) that promotes group reflections⁽⁷⁾, increasing the awareness among the community members and leading to the implementation of measures to improve their quality of life⁽³⁵⁾.

Concerning the methodological aspect of the studies, there was a prevalence of participatory research focused

on photovoice, with the method being adjusted to the specific objectives of the investigations. Some studies combined photovoice with other techniques, such as focus group and interview.

Most of the examined studies involved the modified or split application of the method, in comparison to the original research process defined by its founders^(1,3). The most often modified step was the last one, referring to the intervention about the discussed question: the way to make information reach out political decision-makers.

Regarding the quality assessment of the results of the studies showing a transfer to good nursing practices and health care, it was observed that only five out of 27 studies classified as level of evidence III, that is, well designed clinical trials with no randomization. These were investigations which had an intervention focus as their final objective, resulting in critical and up-to-date material for review of current public policies^(5,12,18,26). The other 22 studies belonged to the level of evidence IV, because they were descriptive and/or qualitative.

Among the findings of this sample of 27 studies published between 2007 and 2018 about the use of photovoice by nursing professionals, it is possible to evaluate the extension of their application as resulting in resources to health education in different contexts and health-illness situations, with the attribution of acceptable levels of evidence (from III to VI), which allows to transfer their results to practice, except for some limitations.

Consequently, the authors claim that the present literature review answered the proposed question and met the established purposes, illustrating the reach and utility of this research method in the nursing field.

However, it is pertinent to emphasize some limitations inherent in the method, which were already mentioned by its founders: the risk of personal judgement to influence several levels of representation in the use of photographs; the difficulty in analyzing and summarizing the set of pictures; and the fact that the methodological ideals cannot meet reality⁽¹⁾. Sporadic ethical embarrassment episodes may occur regarding the consent to use certain photographic images⁽⁶⁾.

Researchers who use photovoice must be aware of the ethical implications and take the due measures to address them with responsibility. The participants need training to use the camera and knowledge of the ethical issues related to taking and using pictures, especially those depicting people, to protect the individuality of each person involved. When proper attention is paid to ethical standards, photovoice allows researchers to combine the old method of capture of “a moment” in a photograph with the new concept of using pictures to “give voice” to the participants⁽³⁶⁾.

CONCLUSION

The present integrative review identified varied literature regarding the meaning attributed by the participants to the specific health-illness transitions through photographs, providing resources for health education in due contexts, in addition to creating health-enabling environments, offering resources for local policy-makers to implement in the educational, social, and health spheres.

The literature produced by nursing researchers using the photovoice method showed that the studies followed the principles of the technique, but adapted them to the contexts, leading to the acquisition of unique guiding resources for the practice of health education, both to understand and act in different circumstances of the health-illness process and to design educational strategies that favor healthy environments.

The scarce production of Brazilian nurses about the use of photovoice (eight publications out of 27) reveals the lack of knowledge of the broad possibilities of use the method offers to research in the nursing field, especially in the most vulnerable populations, when dealing with social and health issues that are difficult to inquire about. This encourages the authors of the present study to stress the need to disseminate the varied research resources of the method under discussion among nursing researchers.

Considering that photovoice is a useful method to facilitate the understanding of the perspectives of people who experience the health-illness transition or live in little healthy environments, its use can result in meaningful intervention studies by nurses acting on people, family, and community education, to empower them in the search for better health behaviors.

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