

Photovoice as a participatory method: impacts on the individual, community and societal levels

Petra Wihofszky, Susanne Hartung, Theresa Allweiss, Monika Bradna, Sven Brandes, Birte Gebhardt and Sandra Layh¹

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Abstract

We present the visual data collection method called “photovoice” in participatory research, and discuss its impetus for change and its possible impacts on work with different groups of people. Using three case examples from PartKommPlus – Research Consortium for Healthy Communities, we report our experiences from joint research involving adults with learning difficulties and young people. Following the Photovoice Impact Model of CATALANI and MINKLER (2010), we assigned the observed impacts to three categories: the individual, community and societal levels. In line with the

1 Petra Wihofszky | Esslingen University of Applied Sciences | petra.wihofszky@hs-esslingen.de

Susanne Hartung | Neubrandenburg University of Applied Sciences | hartung@hs-nb.de

Theresa Allweiss | Catholic University of Applied Social Sciences Berlin | theresa.allweiss@khsb-berlin.de

Monika Bradna | Social Planning Department of the City of Esslingen | monika.bradna@esslingen.de

Sven Brandes | Lower Saxony State Health Association and Academy for Social Medicine | sven.brandes@gesundheit-nds.de

Birte Gebhardt | Lower Saxony State Health Association and Academy for Social Medicine | birte.gebhardt@gesundheit-nds.de

Sandra Layh | Esslingen University of Applied Sciences | sandra.layh@hs-esslingen.de

model, we discuss the contribution that the photovoice method can make to the individual empowerment of co-researchers, the understanding of community needs and assets, and to changing social reality by influencing political and other key actors.

1 Introduction

Photovoice is a qualitative participatory method that combines visual documentation with narrative processes. WANG and colleagues (1994, 1997) built on the method originally devised by the photographer and anthropologist John Collier (COLLIER & COLLIER 1986), creating a research instrument that is intended to strengthen the participation and empowerment of socially disadvantaged groups, particularly in health-related projects. The theoretical framework of photovoice is rooted in the principles of documentary photography, feminist theory and the empowerment approach according to Paolo FREIRE (1973) (STRACK, MAGILL & MCDONAGH 2004; WALLERSTEIN & BERNSTEIN 1988; WANG & BURRIS 1994,1997).

The photovoice method usually comprises the following seven phases (based on VON UNGER 2014, p. 71):

- Planning and preparation
- Training co-researchers
- Field phase
- Group discussions
- Evaluation and results, recommendations for action
- Presentation and use of the results
- Final evaluation

In the **planning and preparation phase**, financial, timing and organisational issues are resolved, and goals are set. This is usually done by a steering group. As the next step in the project, participants are brought in as co-researchers. They are informed about the state of planning, and can influence the organisational conditions agreed so far, the collaboration arrangements, the goals and research questions, as well as the subsequent course of the project, e.g. details of what has been agreed are recorded in the form of cooperation agreements.

In the **training phase**, the co-researchers are trained on ethical and data privacy aspects. They also receive technical and creative guidance on the use of photography as a medium. Especially for the subsequent use of the photos – for example in an exhibition – it is important to point out that the photos may only be used with the consent of the persons depicted.

In the **field phase**, the co-researchers take photos for specific tasks. Ideally, these tasks are developed jointly; they are often based on a preceding question which sometimes is also formulated jointly. This phase can cover several survey periods, alternating with discussions. In the discussion phase, the co-researchers present and describe their photos, explaining their subjective meaning and

providing the context. Discussions usually take place in the group. In addition to the photographers' opinions and experiences, those of the group are also discussed. In this context, WANG and BURRIS (1997, pp. 380f.) use the acronym "VOICE", which stands for **Voicing Our Individual and Collective Experience**. This is a way of helping participants talk about their experiences, including shared experiences. Depending on the setting and topic, it may be desirable to conduct the open, in-depth discussion in the form of individual interviews. In many photovoice studies, the SHOWED method (WANG 1999) is used for the discussion of the photos. This method is usually adapted and modified to suit the respective setting and target group (BAYER, ALBURQUEQUE & OUR WORLD THROUGH OUR EYES PARTICIPANTS 2014; MARENT & MARENT 2013; WOODGATE, ZURBA & TENNENT 2017). The term SHOWED is derived from the following questions that are put to the group: a) What do you **See** here? b) What is really **Happening** here? c) How does this relate to **Our** lives? d) **Why** does this situation, concern or strength **Exist**? e) What can we **Do** about it? (WANG 1999, p. 188).

Although VON UNGER (2014) describes **evaluation, results and recommendations for action** as the fifth work phase in her list, these elements generally form part of the discussion phase and are embedded in a circular method. In photovoice studies in which scientists participate, the evaluation usually follows the discussion (EICHHORN & NAGEL 2009). The documented discussions are evaluated in order to work out recommendations for action for desired changes, based on these results.

In the following sixth phase, **presentation and use of the results**, the results and recommendations for action are usually made accessible to the public in an exhibition, or in the form of videos. The aim of these activities is to attract attention to the results so as to initiate changes.

As the seventh work phase, a photovoice study can also include a **final evaluation**, for example on the acceptance or the advantages and disadvantages of the method. The final evaluation can also consider the impacts of the photovoice study, but these are generally neglected (CATALANI & MINKLER 2010). VON UNGER (2014, p. 76) formulates three questions for the evaluation of photovoice projects: "a. Were the project goals achieved? b. How satisfied are the people involved with their participation? c. What impacts does the photovoice project have on policy, living environments and health in the community as well as other possible spheres of influence?" In this article, we shine some light on this last question, particularly in our concluding discussion, with the aid of the Photovoice Impact Model of CATALANI and MINKLER (2010). We present this model in section 2.

In the public health field, so far only a few studies in German-speaking countries have used photovoice as a participatory method (BODNER et al.

2011; EICHHORN & NAGEL 2009; MARENT & MARENT 2013; MAYRHOFFER & SCHACHNER 2013). The situation is different internationally, where photovoice has become established in public health and health promotion, and is used frequently (CATALANI & MINKLER 2010; DASSAH, ALDERCEY & NORMAN 2017; HERGENRATHER, RHODES, COWAN, BARDOSHI & PULA 2009; JAGOSH et al. 2012).

No doubt one reason the method has become established in the public health field is that its goals overlap with those of participatory health research, which aims at empowering individuals and groups, learning together, and community capacity building (ICPHR 2013; WRIGHT 2013). WANG and BURRIS (1997, p. 369) cite three goals of photovoice:

1. Photovoice should enable people to record and reflect on their community's strengths and concerns.
2. The method is intended to promote critical dialogue and knowledge about important personal and community issues through the group discussion of photographs.
3. Photovoice should reach policymakers.

As a participatory method, photovoice can be used both for needs analysis ahead of health promotion measures, and for evaluation (BODNER et al. 2011; EICHHORN & NAGEL 2009; SANDS, REED, HARPER & SHAR 2009). Photovoice is particularly regarded as a method that triggers and supports impacts in the sense of personal and social change processes. Against this background, we ask in this article: What impacts can be generated by the application of photovoice in a participatory project?

Having introduced the photovoice method in our first section, in the following section we present the Photovoice Impact Model of CATALANI and MINKLER (2010), which we discuss further in the case studies below and in the concluding discussion. The third section is devoted to the three case studies that were conducted as part of "PartKommPlus – Research Consortium for Healthy Communities" during the first funding phase (2015-2018). Here we focus in particular on the participation of and cooperation with people in difficult life situations, in order to reduce the health consequences of social inequality. Photovoice was used in one case study (GESUND!) involving adults with learning difficulties, and in two case studies (PEPBS, KEG) with young people. In the case study in the PEPBS subproject, photovoice was used in a participatory evaluation. In the fourth section, we summarise the method's impacts as observed in the case studies, and in the fifth section we provide an outlook.

2 The Photovoice Impact Model of CATALANI and MINKLER

CATALANI and MINKLER (2010), following a systematic review of 37 articles, developed a model of the impacts of photovoice which we refer to in this paper. CATALANI and MINKLER (2010, pp. 443ff.) identified three categories of impacts of the photovoice process (see Fig. 1), which we will first explain in more detail.

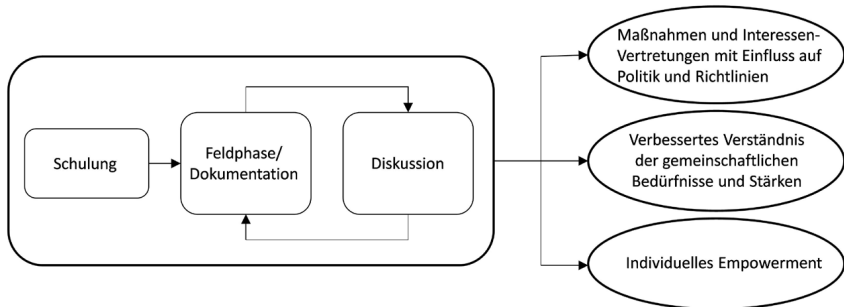


Fig. 1 Photovoice Impact Model (CATALANI & MINKLER 2010, p. 446)

Firstly, photovoice has a positive impact on the **individual empowerment** of the people involved. Empowerment is a central strategy of health promotion, through which “people develop and improve their ability to shape their social environment and their lives themselves, and to not allow themselves to be shaped” (BRANDES & STARK 2016). In their review, the authors found that the greater the degree of participation in a project, the more empowerment took place. FOSTER-FISHMAN, NOWELL, DEACON, NIEVAR and MCCANN (2005) were able to show in their evaluation of the impacts of photovoice that two recurring processes in particular facilitate empowerment: the photographic documentation of the community’s strengths and concerns, and critical dialogue within the community. According to FOSTER-FISHMAN et al., the impacts of photovoice range from “an increased sense of control over their own lives to the emergence of the kinds of awareness, relationships, and efficacy supportive of participants becoming community change agents” (2005, p. 275). CARLSON, ENGBRETSON and CHAMBERLAIN (2006) noted that photovoice

stimulates the development of critical awareness, enables the active participation of citizens, facilitates empowerment and provides multiple opportunities for reflection.

Secondly, the photovoice method leads to an improved **understanding of community needs and assets** among the partners involved in the projects, i.e. between scientists, co-researchers, service providers, local policymakers and other influential members of the community. CATALANI and MINKLER (2010) attribute this to the method's particular ability to involve hard-to-reach groups and stimulate open and honest communicative dialogue. The studies which CATALANI and MINKLER (2010) surveyed also show that the understanding of community needs and assets is improved because photovoice produces rich descriptive information about the participants' everyday lives (JURKOWSKI & PAUL-WARD 2007), and the method helps to develop trustful relationships (GAMBLE 1997; THOMAS & CROUSE QUINN 2000; WASSERMAN, FLANNERY & CLAIR 2007).

Thirdly, the use of photovoice generates **action and advocacy to affect policy**. The majority of the projects listed in the review resulted in action that was geared to the jointly formulated problems. In most cases, this took the form of exhibitions of the photographs and results, which were visited by a broad public and frequently also by political and societal decision-makers. Political here usually means the local political level. A direct correlation was observed between the level of participation in the projects and the implementation of measures (action taken). Where there was more participation in the photovoice project, the scope of action to change the situation was also greater. Various authors of the surveyed studies argue that photovoice has an impact on policy because it encourages communities to take action. However, CATALANI and MINKLER (2010) are critical of the fact that none of the articles reviewed adequately discusses the impacts of photovoice on the political level or cites a project-related evaluation. Authors seem to find it easier to name impacts on the level of the people involved than on other levels (COOK, BOOTE, BUCKLEY, VOUGIOUKALOU & WRIGHT 2017).

According to CATALANI and MINKLER (2010), the impacts in the three categories are achieved through different work steps of photovoice: training, field phase / documentation, and discussion (for the phases of photovoice, cf. VON UNGER 2014). Although the photovoice method in participatory research is often discussed in terms of its potential for change, CATALANI and MINKLER note that impacts on the community level have so far not been sufficiently described and recorded (CATALANI & MINKLER 2010, p. 447).

3 The case studies in the PartKommPlus research consortium

The case studies described in this article originate in subprojects carried out by the PartKommPlus research consortium. The subject of the participatory research conducted by PartKommPlus is participation in health promotion at local level, i.e. the involvement of people whose living and working conditions are to be improved by local health promotion activities, in the assessment of needs and requirements, planning, implementation, development and coordination of activities and offerings.

In the following sections, we present the application of the photovoice method in case studies from PartKommPlus. “We” means the authors of the respective case study. The way in which collaboration with co-researchers and project partners was organised is described in detail in the text to make it clear who participated in the study in what ways at what times.

3.1 *GESUND! – Menschen mit Lernschwierigkeiten und Gesundheitsförderung* *(HEALTHY! – People with learning difficulties and health promotion)*

In the Berlin subproject “GESUND! – Menschen mit Lernschwierigkeiten und Gesundheitsförderung” (HEALTHY! – People with learning difficulties and health promotion), we used a photovoice study to record health-related factors, i.e. personal, social and also environmental factors influencing health, from the perspective of people with learning difficulties. The research team consisted of co-researchers who had learning difficulties, together with scientists from the Catholic University of Applied Social Sciences Berlin, and was supported by students. As co-researchers for the study, we recruited adults through their workplace – a workshop for disabled people (*Werkstatt für behinderte Menschen*, WfbM).² As the result of the study, factors influencing the health of people with learning difficulties were to be made visible to actors in (local) administration, politics and disability assistance, in order to jointly take steps to

² “Workshops are nonprofit service providers for those people whom the general labour market rejects because of the nature or severity of their disability. Workshops are open to adults with mental, psychological and severe physical disabilities. [...] The aim of the workshop is to develop, regain and increase the employees’ individual capabilities in such a way that they can either do a minimum of economically useful work in the workshop or even be integrated into working life.” (Bundesarbeitsgemeinschaft Werkstätten für behinderte Menschen e.V. (BAG WfbM), 2013).

improve the health opportunities of people with learning difficulties in the Berlin district of Lichtenberg.

Implementation of the photovoice method

As a framework for the study, we developed an inclusive university seminar (cf. HAUSER, SCHUPPENER, KREMSNER, KOENIG & BUCHNER 2016; TERFLOTH & KLAUSS 2016), where people with learning difficulties, students and scientists met and conducted joint research. An existing partnership was continued between the university and Lichtenberger Werkstätten gGmbH as well as the Berlin Lichtenberg district office (*Bezirksamt*), department of quality development, planning and coordination. Over a period of one semester, the inclusive team (consisting of 9 women and 7 men aged 23-65) met every week for three hours. For training the co-researchers, we produced accessible guides in simple language. We also made sure that personal assistance and support could be offered to the co-researchers, depending on their needs and requirements. We taught basic knowledge about health determinants, the district of Lichtenberg and how to use photo cameras. In addition, we discussed ethical and legal aspects of photography, especially data privacy requirements and how to obtain consent from third parties for a photo if necessary (WILES et al. 2008). We formulated the two research questions as simply as possible and discussed them in the inclusive research team: 1. What helps us to live healthily in Lichtenberg? What keeps us healthy? The data collection in GESUND! – i.e. the photography – was done mainly during accompanied walks. The co-researchers showed each other an area of their choice in the district, and took photos for a task matching the research question. To prepare the discussions about the photos, we asked the co-researchers to select pictures and answer questions about them on a worksheet, based on the SHOWED method (see above, WANG 1999). The subsequent discussions took place in small groups of four to five people. We recorded and partially transcribed them. Afterwards we performed a structured, simplified computer-assisted content analysis (KUCKARTZ 2016). To avoid changing the results of the individual working groups too much, we used the co-researchers' categories (headings). During the analysis, we identified key aspects, which we discussed and validated with the inclusive research team. The aspects were highly diverse, ranging from specific working and living conditions to the effects of pets on health and dealing with racism and discrimination (ALLWEISS 2019). Finally, each co-researcher chose one of these aspects to investigate in more detail and present in the form of an exhibition poster (roll-up poster). The roll-up exhibition was shown several times, including in the town hall of our partner municipality and at a discussion event staged by a Berlin daily newspaper.

Impacts of the photovoice method

Impacts of GESUND! could be seen particularly on the individual level among the co-researchers: 1. an enhanced awareness of health, their own district and a healthy lifestyle (e.g. participants reported that they were more environmentally conscious in their actions, used less fat in food preparation or generally were more aware of their neighbourhood) and 2. empowerment and increased competence (e.g. experiencing self-efficacy, expressing their own opinions, speaking and giving presentations in front of groups). However, since most of the co-researchers had already taken part in a preceding, internal education and research project in the workshop, it is difficult to say which of the changes can be attributed to the photovoice study. With regard to impacts on influencing politics, at this time we can mainly point to the raising of awareness among the various municipal and national actors. The exhibition of photos produced during the course of the project served to highlight problems, potential for improvement, and resources, and to raise awareness among a broad public. We see the attention gained as a first step towards improving health opportunities; but translating this into policies or strategies requires staying power and active networking structures – beyond the time of the actual photovoice project.

3.2 Photovoice as a method for participatory evaluation – PEPBS subproject

The second case study is part of the PEPBS subproject, whose name stands for “Participatory Evaluation of the Braunschweig Prevention Chain” (*Partizipative Evaluation der Präventionskette Braunschweig*). In this case study, a prevention programme called *Praxisklasse* at a secondary modern school in Braunschweig for the transition from school to work was evaluated in a participatory way.³ Young people who participated in the prevention programme were recruited as co-researchers. With photovoice, we helped the young people at the beginning and end of the school year to develop and reflect on their career plans, and actively involved them in the evaluation process for the *Praxisklasse* model. Participatory evaluation was intended to provide insights into the reasons for the success or failure of the programme among the participating young people. In addition, we wanted to investigate the extent to which the participatory approach of the photovoice study can help to initiate learning processes and competence development among the school students. In addition to PEPBS

3 *Praxisklasse* (“practical class”) is a support model for pupils at secondary modern schools (*Hauptschulen*) who are lagging behind in learning and performance. These pupils receive specific support to foster a positive attitude towards learning and work, and are assisted into working life through cooperation with companies, in the form of work experience.

scientists and school students, teachers and social workers involved in the *Praxisklasse* programme as well as municipal actors from various administrative departments of the city of Braunschweig and the regional school authority (*Landesschulbehörde*) were involved in the implementation of the evaluation study.

Implementation of the photovoice method

We started the actual work with the school students with an introductory meeting, where we invited them to actively participate in the study process. We emphasised that participation was voluntary, and provided the class with a financial budget as an incentive to get involved in the photovoice study. Next we handed out a “cooperation agreement” and “Ethical Guidelines for Photography” to the students (EICHHORN & NAGEL 2009; WANG & REDWOOD-JONES 2001). All the young people in the class subsequently declared their willingness to work with us. In the further course of the meeting, we planned the next steps in a participatory way with the young people as well as the teachers and social workers. As a group, we decided on the duration and frequency of meetings to fit in with the school’s requirements and the students’ preferences, and discussed the possible use of the results. We made a point of being open to changes in the process to enable congruence between our scientific interests and those of the co-researchers (BORG, KARLSSON, KIM & MCCORMACK 2012).

In the first workshop, we taught basic skills that were necessary for the photovoice study. The students learned how different photographic techniques can be used to achieve different effects on the viewer (see also LENETTE & BODDY 2013). The young people tried out these techniques directly on an example question.

In two field phases, the young co-researchers took photos. Eleven young people were involved in the first survey at the beginning of the school year, and seven students took part in the second survey at the end of the school year. The young people were aged from 16 to 19. The questions for the first field phase were “Where do I stand now?” and “What do I want to achieve this year?” For this phase, the young people independently took 10 photos per person during their free time, school time and work experience. The second survey phase took place at the end of the school year. This time, the question was: “What have I achieved during the *Praxisklasse* year”?

In our initial examination of the photos, we found that some of them hinted at very vulnerable aspects of the young person’s personal life situation, such as broken family relationships (COHENMILLER 2018). We therefore decided – in contrast to the group discussions that are usual in many photovoice studies – that in this case study we would initially hold individual interviews, as these

offered a comparatively protected conversational situation for the school students (BANDURRAGA, GOWEN & THE FINDING OUR WAY TEAM 2013; JURKOWSKI & PAUL-WARD 2007; WOODGATE & SKARLATO 2015). For the core questions for the individual interviews, we referred for guidance to the SHOWED questions according to WANG (1999), as described above, but adapted them to the specific context.

We recorded the conversations with the students' consent. We then partially transcribed and summarised them. In another meeting, we reflected back to the students what we had understood from the interviews (ALLEN 2012; TSAI, SEBALLOS-LLENA & CASTELLANO-DATTA 2017). Some students used this opportunity to reformulate and add to the preliminary content in their own words. At the end of the second survey phase, we conducted a group discussion with all of the young people. We discussed with the students which findings they wanted to pass on to politicians or other groups of people, and in what form they considered it appropriate to do this. With the end of the school year approaching and the initial phases of their careers about to begin, the idea arose of producing a film together, which would be a lasting way of explaining and describing the processes and results of the photovoice evaluation for all interested parties.

Impacts of the photovoice method

During the group discussion, we also discussed the suitability and impacts of the photovoice method with the young people. They said that participation in the study was thought-provoking and encouraged reflection. The longer-term focus on the task of thinking about their current situation, their goals in the *Praxisklasse* year, and later their experiences, and then translating these thoughts conceptually into photos, led the students to examine these aspects in greater depth. They rated positively and appreciated the fact that they found us to be interested and inquiring conversation partners in the detailed interviews. They also said the photos were a good tool in the interview for remembering their own thoughts and ideas when they took the photos. Many accounts contained implicit references to increased self-confidence and a growth in self-efficacy. We discussed with the young people various options for further use of the results to communicate their experiences of the *Praxisklasse* year to a broader public (and thus also achieve impacts at the level of local politics). It was important to the school students to make the research results visible. At the same time, there were clear time and organisational limits due to the approaching end of the school year and the examination period. Together with the municipal actors, we also carefully weighed up the active participation of the young people in municipal bodies. While this would be desirable from the point

of view of comprehensive participation by the school students, on the other hand these situations would have been characterised by distinct and irresolvable power asymmetries as well as very tight time windows, and would have constituted an unprotected setting for the students, over which we would have had very little influence.

3.3 *KEG – Kommunale Entwicklung von Gesundheitsstrategien* (Community Development of Health Strategies)

In the third case study, ideas, interests and concerns relating to health were investigated by and with young people using photovoice. The aims of the research project “KEG – Community Development of Health Strategies: Science and Practice in Dialogue” were to promote health in young people’s living environments, and to create the conditions for active participation by young people. The case study was planned, implemented and coordinated as a joint project by Esslingen University of Applied Sciences and the city of Esslingen in a research-practice partnership. As the research setting, the city chose a district which is home to a particularly high number of children, adolescents and young adults. A large proportion of these children and young people are affected or threatened by poverty. Municipal actors in youth work, community work and sports clubs as well as local government specialists (youth welfare planning, green spaces department (*Grünflächenamt*), public order office (*Ordnungsamt*), family centre, adult education centre) were involved in KEG as part of a specially formed research team.

Implementation of the photovoice method

In KEG, our first step was to negotiate the research objectives in the above-mentioned research team. Via their professional setting, actors in the team then approached young people in the district and invited them to participate in the KEG project. Eight boys and one girls were recruited as co-researchers. We familiarised them with the topic of health using experience-oriented formats, and trained them in the photovoice method. The field phase took place during the summer holidays. The young people took photos of their neighbourhood in response to the following questions: What do I like doing? What do I totally dislike? Where do I like to spend time? Where not? What does me good? What doesn’t? And so on. They also made a short video in response to the question: What do I wish for? In a workshop, the young people showed and discussed their photos. We recorded these discussions digitally and transcribed them. Next

we identified the young people's topics that emerged from the group discussions. We validated and prioritised them together with the young people in an evaluation meeting. In this meeting, the young people divided the results of the group discussions into two broad categories: 1. We want to feel comfortable in the district and 2. We need places for us in the district. These included, firstly, concerns such as the care and maintenance of public facilities in the district, and secondly, the desire for a relaxation of restrictions on spending time in public spaces, and generally for places and offerings explicitly for young people. This evaluation phase with the young people was followed by a phase of dialogue between the co-researchers and the municipal actors. In this phase, the results were discussed jointly, recommendations for action were developed, and solutions were devised and implemented. For example, the period of time which young people are permitted to spend in public spaces in the district was extended, and laid down in an ordinance offering young people various opportunities to participate in planning in the district. From the photos and videos as well as audio clips of the young people, we had a video made that was shown in various municipal bodies and at a district festival as part of the presentation of results. In these contexts, some of the young people presented their results themselves. Finally, at a research consortium conference, we held a small ceremony where certificates were presented to the young co-researchers to acknowledge their efforts.

Impacts of the photovoice method

In the KEG project, we recorded impacts both during the process and in the form of a final evaluation. In this way, we obtained feedback from the young co-researchers and the other members of the research team at each meeting. Within the university team, and at times also together with the cooperation partner, we discussed this feedback as well as our own observations of the process. This enabled us to make adjustments within the research process, if necessary, and also identify impacts such as individual empowerment processes among the young people. We noticed that the co-researchers took the initiative during the discussion and evaluation phases by grouping topics together according to their relevance and taking charge of the further course of the workshop in the sense of process ownership (WÖHRER & HÖCHER 2012; VON UNGER 2014). We consider the increased participation of the young co-researchers to be a success of the approach. The research team was also the institutionalised place in which to discuss with the young people their needs for action, to negotiate what is possible, and to initiate and/or implement changes. For a final evaluation with the young people, we brought in a facilitator specifically to reflect with the group on their experiences in and with the

project. This creative review identified further impacts and served to validate impacts that had already been recorded. When asked what they had achieved together, the young people highlighted the many changes in the district, attracting other people's attention to their concerns, and the experience gained. In answer to the question of what the young people had gained individually by participating in the project, previously unrecognised or poorly recognised impacts became visible, such as knowledge about other age groups and their views, and in general about the district. But the young people also emphasised the increase in knowledge about their own needs and also strengths.

4 Discussion of the impacts of photovoice

In the discussion of the three case studies, we refer to the Photovoice Impact Model of CATALANI and MINKLER (2010), which we presented in the second section. The model distinguishes between three levels of impact: individual empowerment, an improved understanding of community needs and assets, and action and advocacy to affect policy. We used the model to analyse our experiences of impacts, and asked ourselves which changes on which level were caused by photovoice.

In participatory research projects, impacts and action paths cannot be captured with linear study designs such as pre-post studies or control group studies. In the discourse of participatory research, impacts are associated with the metaphor of ripples that form in a circular pattern when a stone is thrown into the water (TRICKETT & BEEHLER 2017). In order to record impacts, TRICKETT and BEEHLER (2017) suggest mapping, the method of social network analysis, or process-oriented reflective methods, for example. COOK and colleagues (2017) developed a conceptual framework for systematically reflecting on impact.

In the case studies we conducted, we reflected on and documented our experiences using reflective instruments such as research diaries, field notes, memos, minutes, feedback rounds, group discussions and introspection. The insights gained were incorporated into the case studies.

Individual level

On the individual level, impacts were confirmed in the case studies, e.g. an increase in personal resources such as self-efficacy and a sense of control, which CATALANI and MINKLER (2010) attribute in particular to the photographic documentation of strengths and concerns, the dialogue, and the associated development of critical awareness (cf. also BORG et al. 2012; CARLSON et al.

2006; MCCARTAN, SCHUBOTZ & MURPHY 2012; RUSSO 2012). Furthermore, we found that on the individual level, photovoice stimulates reflection on one's own life situation and future life plans, for example among the young people in PEPBS, who used their photos as a starting point for discussing their career plans. Photovoice can also motivate co-researchers to take responsibility not only for themselves, but also for the group and the community. In KEG, the young co-researchers began to actively take ownership of their concerns and voice them. In the GESUND! case study, which also addressed healthy lifestyles in the training sessions, some of the co-researchers reported back that they cooked healthier meals or acted more environmentally consciously (on this point cf. GOEKE & KUBANSKI 2012).

Our experience shows that the many impacts that can be achieved on the individual level through photovoice are due in particular to gaining the attention, interest and appreciation of those involved in the research process. In our case studies, we found that this appreciative attitude not only promoted personal development in the sense of empowerment, but also enabled corresponding structural conditions in the research process, such as inclusive spaces and the creation of publicity in the neighbourhood, district and municipality. Other examples are training formats which draw on experience or make the research process open and flexible so that the ideas of the co-researchers can be taken up at any time.

Community level

On the level of community impacts, according to CATALANI and MINKLER (2010) the understanding of the co-researchers' concerns and needs is improved particularly as a result of dialogue between co-researchers, scientists and other participants. Initiating and facilitating such joint reflections between different groups is a central feature of participatory health research (BORG et al. 2012; VON UNGER 2012). In our case studies, we found that the discussions about the photos enabled a dialogue about the participants' own and other people's points of view. Mutual understanding developed among the co-researchers and between co-researchers, scientists and other participants (CATALANI & MINKLER 2010), such as actors from the district and municipality in KEG. Developing understanding for one another also strengthened group formation, identity as a group and mutual solidarity.

As well as structural conditions, such as offering communicative spaces, we found when reflecting on our experiences that in particular a reserved attitude on the part of the scientists promoted impacts on the community level (CATALANI & MINKLER 2010). The experience of GESUND! very clearly confirms this observation. The scientists in the GESUND! project increasingly

expanded the participation opportunities for their co-researchers and observed that over time, the group was able to work with less support and in some cases discussed issues relating to the study without a moderator.

According to our experience, impacts on the community level are formed particularly during the discussion phase, when the photos are viewed, presented and discussed, the presentations and the transfer of results are planned, and recommendations for action are formulated. We believe that it is precisely the impacts on this level – which strengthen the group of co-researchers and the research team – which form a basis for further impacts on the political level.

Political level

According to the findings of the review by CATALANI and MINKLER (2010), photovoice promotes action and advocacy with impacts on the local political level – even if, in the authors’ opinion, these are not adequately discussed and demonstrated. In our three case studies, measures also followed that had an impact on the local and/or municipal political level. In KEG, the co-researchers formulated their results as proposals for change, which they presented at a street festival and in district and municipal political bodies. The co-researchers of GESUND! presented their results in the form of a roll-up exhibition, which was shown at the district town hall and in other places. In the KEG and PEPBS case studies, films were produced and shown to a district/city and scientific audience. Our experiences indicate that an important factor for initiating changes on this level is to enable co-researchers to have political participation opportunities such as those described above.

The KEG and PEPBS case studies established levels or forums for mediation between the research team and the municipality. This follows the recommendation of CATALANI and MINKLER (2010), also derived from their review, that the political level as well as other influential persons from the research field should be included. In KEG, municipal actors were represented in the research team from the beginning. They discussed with the co-researchers how and in what form their concerns could be addressed. In PEPBS, communication between the research team and the municipality was realised via a steering group. This achieved results, e.g. a dialogue was initiated between municipal and school officials, and the offering was expanded. In our experience, changes on this level usually are not generated in the short term. But it is possible to provide a vital impetus for future structural changes at the level of specific projects (WRIGHT, SALSBERG & HARTUNG 2018). The fact that impacts are often only seen after the completion of projects makes it difficult to describe the many complex dimensions of a potential impact, and is also a topic

in current discussions about impact in participatory research (COOK et al. 2017).

Our results suggest that impacts on all three levels can be achieved with photovoice. In their model, CATALANI and MINKLER (2010) attribute the impacts to the work steps of training, research/documentation and discussion. In our view, this model does not take into account crucial steps that produce impacts particularly on the community and political levels. We found that the discussion of photos is followed by the steps of negotiating recommendations for action and the steps of disseminating and using results. It is usually an integral part and impact of a photovoice project that recommendations for action are formulated, published and presented. These are followed by action for change, thus enabling participants to advocate their interests in a more political way. We therefore propose adding these steps to extend the model (see Fig. 2).

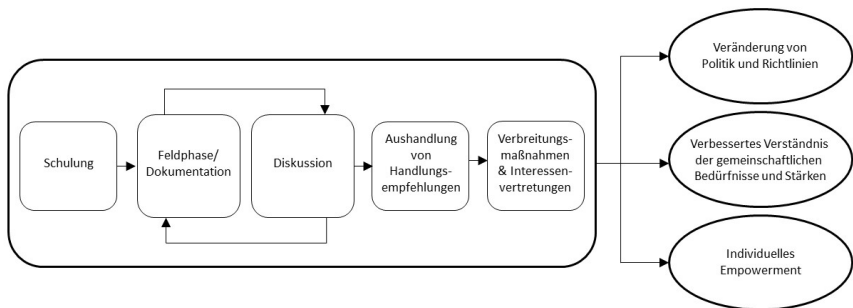


Fig. 2 Extended photovoice impact model, own diagram

5 Outlook

As we have shown, photovoice is a participatory method that provides impetus for change among different groups and on different levels. Our analysis contributes to the identification and demonstration of impacts that are initiated by photovoice as a participatory research method (COOK et al. 2017). This article focuses on the description of impacts, on the basis of which we extended the Photovoice Impact Model of CATALANI and MINKLER (2010). Future research can benefit from our findings if, from the outset, it purposefully creates impetus for impacts that also reach the community and political levels. As we explained, our descriptions were developed in a reflective process. A systematic impact evaluation was not planned in our projects. However, we recommend

that future photovoice projects should consider and plan the description and evaluation of impacts in a participatory design from the start (HARRIS et al. 2018). In the context of the current impact discussion in participatory research (ICPHR 2020), our article provides possible suggestions for proposals in which longer funding periods could be legitimised.

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