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Supplement Article

Undertaking graphic facilitation to enable participation in health promotion interventions in disadvantaged neighbourhoods in Denmark

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Summary

This study reports on a health promotion intervention (HPI), where graphic facilitation (GF) was used as an innovative method to enable participation in a co-design process in a multi-ethnic and disadvantaged neighbourhood in Denmark. The aim was to enable middle-aged and older residents to participate in the research process of planning and evaluating the HPI, as well as in the activities it constituted. GF was used to document statements and inputs from residents through visual meeting minutes and resident experiences with coronavirus disease 2019 (COVID-19) lockdown were drawn by a graphic facilitator. We use the ladder of participation as a framework to unfold the participation enabled by GF. During the HPI, data were produced through ethnographic field studies in and outside the neighbourhood and in design workshops with residents. The study finds that GF helped in reaching a target group difficult to engage in research and that the engagement of a graphic facilitator shifted the power-balance between the researchers and the residents, redistributing expertise. Carrying out GF in a HPI is a collaborative endeavour and in addition to research competences, it requires the artistic and relational skills of a graphic facilitator. The co-created process of the visual minutes and COVID-19 experiences created a sense of ownership and encouraged the residents to reflect on their interaction with the researchers. The redistribution of expertise was conditioned by the power dynamics present and GF helped unfold these dynamics. This is especially important in an HPI engaging socio-economically vulnerable populations.

Lay Summary

This study reports on graphic facilitation as an innovative method to enable participation in health promotion interventions. It investigates how engagement from the target group was achieved. The study is set in an ethnically diverse and disadvantaged neighbourhood. Residents 45 years+ were

invited to participate in two phases of HPI activities. In Phase I, a resident committee planned and evaluated four social outings aiming to build and strengthen social relations among the residents. A graphic facilitator was part of the process, visually documenting the residents' inputs and facilitating a transparent and visual engagement process. In Phase II, seven residents participated in interviews about their experiences during coronavirus disease 2019 lockdown. The graphic facilitator transformed the interviews into an illustrative book communicating their experiences, and posters communicating expedient health behaviour during the pandemic. The graphic facilitation method made it possible to engage a heterogeneous group of residents and helped overcome language barriers. We conclude that it is a relevant method to use when engaging people unfamiliar to research and in risk of suffering from various health problems. The method is suitable for redistributing power and actively including everyday experiences as testimonies of expertise, thereby creating a sense of ownership among the participants.

Key words: community health promotion, community-based participatory research, community-based intervention, qualitative methods, older people

INTRODUCTION

How to reduce health disparities is one of the most important issues to address in public health (Diderichsen *et al.*, 2012; Lago *et al.*, 2018). Health disparities must be addressed in the settings in which they occur and engage various approaches to create sustainable solutions (Bloch, 2014). Health promotion interventions (HPI) are relevant when improving public health in specific contexts, such as disadvantaged neighbourhoods (Craig *et al.*, 2018; Toft *et al.*, 2018; Skivington *et al.*, 2021). Social relations are of great significance for health behaviour, well-being and physical health. Supportive social relations and a sense of belonging are associated with a healthy life and good self-reported health (Berkman *et al.*, 2014). People living in disadvantaged neighbourhoods constitute an ethnically heterogeneous population group with a high prevalence of poor mental health, social isolation and poor social support (Algren *et al.*, 2017; Tanggaard Andersen *et al.*, 2018). Previous research has identified that social isolation and loneliness in disadvantaged neighbourhoods are associated with health-risk behaviour, such as daily smoking and physical inactivity (Algren et al., 2017). HPI's directed at improving social relations have shown the potential to influence health in a positive direction (Hogan *et al.*, 2002).

In this article, we focus on HPIs in disadvantaged neighbourhoods as these areas are characterized by socio-economic vulnerability and ethnic diversity (Ellaway *et al.*, 2012; Algren *et al.*, 2017). Engaging residents in deprived neighbourhoods in HPIs is difficult due to a variety of factors, such as language barriers, socio-economic vulnerability, resistance towards 'being told what to do' and mistrust towards authorities. This population group is underrepresented in research overall (Sydor, 2013; Bonevski *et al.*, 2014; Nielsen *et al.*, 2017; Srivarathan *et al.*, 2020; Nygaard *et al.*, 2021), and more knowledge is needed on how to engage such groups through new and innovative methods experienced as relevant to the participants. This includes methods to engage ethnic minorities in studies on their health behaviours and health experiences (Mir *et al.*, 2013). Engaging residents through participatory methods can help address the abovementioned difficulties and enhance acceptance of HPIs in the context of disadvantaged neighbourhoods.

Different approaches to such involvement of the target population through co-designing activities are becoming widely used in HPI research and can be seen as part of a societal tendency of embracing collaborative ventures (Phillips *et al.*, 2018; Sandholdt *et al.*, 2020). HPIs can benefit from applying a more situated and collaborative approach to health communication and intervention outcomes, which has the potential to generate ownership and facilitate dialogic reflections within the target group by approaching health as a socio-scientific issue embedded in everyday practices and relations (Sandholdt *et al.*, 2020; Bønnelycke *et al.*, 2021; Sandholdt, 2021).

Adding a visual aspect to participatory methods presents a new approach to producing data in HPI research. Participatory visual methods present opportunities for involving residents in disadvantaged neighbourhoods, given that visual material can assist people with few resources or low confidence to express their experiences and hopes by communicating within a more

open-ended framework (Packard, 2008). In this study, we applied the participatory visual method of graphic facilitation (GF) (Tyler *et al.*, 2005; Margulies and Sibbet, 2009; Sibbet, 2010; Hautopp and Ørngreen, 2018), which is becoming widely used in practice, but which is not well represented in peer-reviewed literature (Tyler *et al.*, 2005; Hautopp and Ørngreen, 2018).

We seek to unfold the ways GF as a method can enable participation in the planning and evaluation of an HPI in populations that are usually hard to engage.

METHODS

See Supplementary Visualization 1: HPI study design

Study setting

The topical HPI is part of a longitudinal multi-methods study, examining health, well-being and social relations among middle-aged and older residents in a disadvantaged neighbourhood near Copenhagen, Denmark (Lund *et al.*, 2019). The HPI aimed at engaging residents above 45 years of age, and applied a broad health concept that includes both mental and social function as indicators of health (Grabowski *et al.*, 2017; Tørslev *et al.*, 2019). Data were generated between 2018 and 2020.

The neighbourhood in question was selected because it is undergoing comprehensive physical restructuring as part of a Danish political agenda intended to reduce the number of disadvantaged neighbourhoods by changing the resident composition (Regeringen, 2018). The legislation is described elsewhere (Lund *et al.*, 2019).

Graphic facilitation

We chose GF as a method to invite residents to be part of the planning and evaluation of the HPI. GF grew from traditions in design of sketching ideas and was introduced in organizational context, primarily by David Sibbet (Hautopp and Ørngreen, 2018). It originates in the USA in the 1970s and had the aim of approaching collaborative projects in a problem-solving manner (Sibbet, 2001; Espiner and Hartnett, 2016). In GF processes, participants and the facilitator interact and the visual material produced is the primary outcome and can be part of future planning or discussions (Nielsen *et al.*, 2016).

GF is here applied in two ways; (i) analogue drawings and text produced by the graphic facilitator on large wallpaper during meetings or workshops. These visual meeting minutes depict input, ideas, protests etc. set forward by participating residents. The graphic facilitator interprets and organizes the utterances during the meetings, to synthesize the core discussions and opinions in the room (Tyler *et al.*, 2005; Hautopp and Ørngreen, 2018). (ii) Drawings are made by the graphic facilitator during and after interviews. The drawings reconstruct the interviews visually and incorporate quotes. The participating residents are invited to see *their own story*, to validate our visual interpretation and further elaborate, emphasize or reject elements in the drawings.

The intention in using GF was to help redistribute power and expertise between the researchers and residents by providing a visual language for communicating and designing (Bønnelycke *et al.*, 2018; Hautopp and Ørngreen, 2018). GF can increase ownership and engagement in a process (Tyler *et al.*, 2005; Espiner and Hartnett, 2016). For us, it offered an approach to co-design the HPI while acknowledging cultural differences (Espiner and Hartnett, 2016). Specifically, we asked the graphic facilitator and co-author MP, to actively take part in our research group by participating in meetings, designing workshops with residents, drawing visual meeting minutes and coronavirus disease 2019 (COVID-19) experiences (Sibbet, 2010; Dean-Coffey, 2013).

Unfolding participation

The researchers aimed at involving residents in various aspects of the activities constituting the HPI. Recognizing the challenges of engagement, GF was undertaken as a means to make participation accessible and relevant for the participants, with an immediate, visual output. To unfold the participation of residents, we will reflect on the process of engagement using *the ladder of participation* in the version depicted by The Quality of Life Foundation (QoLF) in their framework of quality of life (QoLF, 2021). The model draws heavily on the ladder of participation formulated by Arnstein (Arnstein, 1969) and the work of Hart on children's participation (Hart, 1992, 2008). The ladder is organized in a rung structure dividing citizen participation and redistribution of power into degrees of engagement and control of the process. QoLF focuses on the built environment in neighbourhoods and aims to develop healthy communities. The foundation has formulated six themes to address in building healthy communities, number one being citizens' control and influence in their neighbourhood through collaboration with i.e. resident groups. The version of the ladder applied here is thus developed specifically to be used in community projects with a target group similar to the one in question here.

We find the simplicity of the model appealing as a framework to discuss the openings and tensions in

participation created by the GF. Reaching the top rung is not necessarily the aim of a given HPI, but the rung structure can help us unfold the meanings and practices of participation (Cornwall, 2008). We further find the explicit focus on distribution of power in Arnstein's original work and in the applied ladder relevant in our study of GF (Arnstein, 1969; Cornwall, 2008; Espiner and Hartnett, 2016; Gaber, 2019).

See Supplementary Figure: the ladder of participation

Data production

When initiating the HPI a needs-analysis was conducted through semi-structured interviews with 31 middle-aged and older residents. This initial analysis showed a wish for shared experiences and strengthened social relations across ethnicity, and a desire for building a strong community in the neighbourhood. The needs-analysis steered the focus of the HPI towards building social relations.

The HPI consisted of two iterative phases:

- Phase I: Building social relations between residents through social outings.
- Phase II: Building on existing social relations in the neighbourhood through documenting experiences of COVID-19.

The researchers have for more than 3 years been physically present in the neighbourhood through ethnographic field studies and have relied heavily on the relationships formed through these studies in both phases of the HPI. The field-notes and informal conversations from the ethnographic field-study have been part of guiding the direction of and attention in the HPI, validating the iterative process of the HPI phases.

Phase I: Building social relations between residents through social outings

The researchers invited all residents from the target group to participate in a design workshop, with the aim of collectively generating ideas for HPI activities. At the two-hour long workshop, held in the neighbourhood community house, 26 residents, 3 researchers and the graphic facilitator attended. The neighbourhood community house is owned by the housing association. It hosts neighbourhood cafés and serves as an informal meeting point for the neighbourhood residents. The workshop was facilitated by the researchers and the graphic facilitator using idea-generating methods, such as brain-storming (IDEO, 2015; Sandholdt *et al.*, 2020). A wall-to-wall visual minute was created by the graphic facilitator, capturing ideas formulated by the residents. The residents were invited to interact with the drawing through the use of post-it notes to elaborate on the ideas. Lastly, the residents voted on the ideas and the proposal chosen was quarterly social outings to cultural sights, which was carried out in 2019. The aim of the outings was to build social relations between neighbours, with special attention towards ethnicities. The residents thought that experiences on neutral ground, with a cultural content, would help spark dialogue and trust among the participants (Srivarathan *et al.*, 2020).

At the design workshop, a group of eight residents of Danish and Turkish background respectively volunteered to form a more committed force in the HPI. This group of primarily female residents will henceforth be referred to as the resident committee.

See Supplementary Picture 1: Visual minutes from the design workshop with residents.

After the workshop, the resident committee took part in five meetings planning and evaluating the social outings constituting Phase I. These meetings were prepared in collaboration between the researchers and graphic facilitator, but the actual meetings were primarily led by the graphic facilitator. The researchers took on the role of asking questions during the meeting, and conducting participant observations as well as taking field-notes. For each of the five meetings, the graphic facilitator had prepared a visual agenda. This agenda consisted of a template with a drawing of the destination of an outing to be evaluated, and a less detailed drawing of a destination to be planned (In the first meeting, the focus was on planning and establishing the resident committee. In the last meeting, the focus was on an overall evaluation of the four outings.). A box was inserted for practical details, such as date and destination, and an area of the drawing was devoted for other important issues the resident committee wished to discuss. The template was not fixed and could be altered upon residents' request. The repeated use of a template made it a familiar set-up for the resident committee and visualized to the residents what was decided during the meeting and the tasks to be done. The resident committee reflected on successes and challenges during the outings and elaborated on ideas for doing better on future social outings. The researchers planned the outings and took care of logistics, such as renting buses, booking entrances, etc. The visual minutes made through the elaboration of the agenda template also created transparency in the collaboration between the researchers and residents, because it showed the framework the residents could control and the boundaries the researchers operated within (related to research interests, funding, data protection, etc.). In meetings where the graphic facilitator acted as primary facilitator, the visual meeting minutes

were heavier on words, whereas meetings where she acted as co-facilitator liberated energy and focus, resulting in visual meeting minutes with more drawn illustrations. See Supplementary Picture 1 for an example of the visual minutes.

See Supplementary Table: Overview of the participants in the HPI

Phase II: Building on existing social relations in the neighbourhood through documenting resident experiences during COVID-19

The social outings constituting Phase I proved to be valuable occasions for building relations between residents and researchers, and thus creating interest and engagement for Phase II. At the last meeting of Phase I with the resident group, a plan for Phase II was outlined by the researchers, the graphic facilitator and the resident committee: the residents were invited to participate in four workshops, where they learned how to draw and to draw their story of, and emotions concerning, everyday life in the neighbourhood. The aim of this phase was two-fold: to empower the residents by letting them tell their story of their neighbourhood and, in a broader perspective, that the drawing skills acquired could be used in other settings by residents with low Danish literacy—for instance at consultations with their general practitioner. However, this was supposed to be carried out in spring 2020 at the time when Denmark was under lockdown due to the COVID-19 pandemic. Hence, the idea was abandoned. Instead, the researchers and graphic facilitator agreed to embrace the difficulties of the pandemic and use our access to the neighbourhood to unfold how COVID-19 influenced social relations and well-being.

We decided to focus on residents with ethnic minority backgrounds because they belonged to a population group overrepresented in the COVID-19 infection numbers (Williamson *et al.*, 2020). Older adults with ethnic minority backgrounds living in disadvantaged neighbourhoods proved to be part of a high risk-category in the pandemic (Bambra *et al.*, 2020; Smith Jervelund and Eikemo, 2021). Ethnically heterogeneous social housing neighbourhoods, such as the one in question here, were labelled as particularly problematic by some of the media and politicians throughout the course of the pandemic (Maach, 2020; Svendsen, 2020; Bøgh, 2021). However, people living in these neighbourhoods—particularly older adults—were absent actors in the public debate. The original objective of Phase II, of empowering the residents by inviting them to tell their story, thus became particularly relevant in the context of the pandemic.

We could not access the neighbourhood physically due to COVID-19 restrictions and therefore we relied heavily on two of our student assistants who lived in the neighbourhood, one with Danish-Pakistani background and one Danish-Turkish. We asked them to use their network to recruit participants. Many of the residents knew the researchers and knew about the project, which helped legitimize our inquiry and opened for access to the field.

Eight residents agreed to participate. The participants were divided into four group interviews, with two people in each session following a semi-structured interview set-up (Kvale and Brinkmann, 2009). In three of the interview groups, the participants were a married couple living together. The last interview group consisted of two women that had been close friends for many years. One of the male participants cancelled, wherefore the interview was converted to a solo interview with his wife. The interviews became possible in June 2020, when restrictions in Denmark were mitigated for the summer. Project researchers conducted the interviews. The student assistants participated and acted as informal interpreters when needed. The graphic facilitator was present as an observer. She did not make visual minutes during the interviews, but drew sketches for her own use. The sketches were shared with the participants at the end of the interviews. All interviews were carried out in the community house in the neighbourhood.

The interviews were transcribed and thematically analysed, identifying three themes: (i) hardships, (ii) family relations and (iii) language and culturally specific barriers to health communication (Braun and Clarke, 2006). Based on the analytical themes, the interview transcription and sketches made during the interview, the graphic facilitator drew the stories the participants had shared with us in an illustrated book. The drawings were made as a mix of aquarelle paintings and sketches. Further, we asked the participants to send us private photos of family holidays, coffee cups, etc., which were digitally incorporated. The book included quotes from the interviews and was written in Danish, but sub-titled in Turkish and Arabic (Originally, we planned to include Urdu. This translation however, proved particularly difficult and we had to abandon Urdu due to difficulties in finding skilled translators and a lack of the necessary economic resources.).

Five of the drawings were chosen and redesigned into posters. The posters communicated expedient health behaviour during the pandemic and included a QR-code to access COVID-19 materials from the National Board of Health in various languages (to access the full material on COVID-19 go to www.strit.ku.dk).

We invited the participants to an evaluation meeting to see and approve the drawings before the materials were finalized. Here, the drawings from their interviews were laid out on the table in the right order. The participants were given time to look through *their story*. We asked the participants for their immediate reaction, if they found some elements of the story to be of particular importance, or if there was something we had misunderstood or if they would like us to remove some of the drawings. This was in autumn 2020 however, and the COVID-19 infection rates were rising again. Therefore, we were only able to meet with one group. Due to increased COVID-19 restrictions, the remaining three groups were presented with the drawings by the student assistants following the above-mentioned procedure. This is a limitation in the validation process of the drawings, and we have relied on the retelling by the student assistants rather than our own first hand observation and data production. However, we are grateful that we had the opportunity to let all the participants go through their stories. The response was positive overall and none of the participants requested drawings to be removed. The specific drawings and issues of concern that the participants found to be particularly important were gathered and became the cornerstone for the selection of health messages in the posters.

See Supplementary Picture 2: Drawing showing Zehra alone in her apartment, worrying about her mother who is living in Turkey.

See Supplementary Picture 3: Poster depicting how you can maintain social relations through communication technology during the COVID-19 pandemic.

FINDINGS

The visual material produced in collaboration between residents, researchers and the graphic facilitator enabled a broader and more inclusive format for participation in the planning and evaluation of the HPI. The immediate visual products in the forms of visual minutes or sketch notes from interviews invited the residents to engage with the researchers and co-producing the HPI.

In Phase I of the HPI, the resident committee had full control in terms of deciding the destination for the social outings, arrangement of lunch and taking care of neighbours' registrations for the outings. Phase I can thus be seen as an example of *co-creating* following the ladder of participation, where the activities were initiated by the researchers, but through the cooperation with the resident committee, a great degree of decision power was devolved to them. Phase II was deeply affected by COVID-19 restrictions and this made it hard to delegate power in the intended way. It was impossible to meet with all the participants several times and co-design posters, etc. The researchers and graphic facilitator therefore ended up taking the primary lead on the illustrated book and the health communication posters. COVID-19 thus left the engagement of residents to *the art of the possible* making Phase II an example of *consulting*. The participating residents were in charge of their own narrative and could decide on elements to highlight or exclude, in partnership with the researchers, but researchers and the graphic facilitator were the main drivers in this phase. To unfold the participation enabled through GF, two findings are especially relevant: (i) how GF helped reach a target group difficult to engage in research and (ii) how the engagement of a graphic facilitator shifted the power-balance between the researchers and the residents, redistributing expertise.

Engaging socio-economic vulnerable populations

The target group in this study represents a socio-economic vulnerable population group underrepresented in research. The participatory visual method of GF provided a relevant format for enabling participation among ethnically diverse older adults, living in the disadvantaged neighbourhood.

In Phase I, the visual meeting minutes drawn during meetings by the graphic facilitator, based on inputs from the residents, made it possible to facilitate a 'transparent process'. By transparent process, we understand a meeting where the ideas, inputs and complaints put forward by the residents were captured and communicated visually on the spot. The decisions made where also highlighted in a visual form understandable across spoken languages. This can be seen in Supplementary Picture 1, where a golden medal was drawn next to the idea of social outings. The golden medal illustrated that this idea had been chosen as the activity of Phase I in the HPI. This format allowed multiple perspectives to be put forward and the drawn minutes could include the heterogeneous experiences and communicate the agreements. As resident Sonja puts it when asked what she experienced the graphic facilitator brought to the process:

> She can put thoughts and ideas on paper – or on the board (. . .) I mean, the words we say are up there. They are drawn, look for yourself. Not everyone always know what's being said. Well then they can just look up there.

In Phase II, the graphic facilitator drew the experiences from COVID-19 lockdown as told by older adults with an ethnic minority background. When Ali and

Aisha were presented with *their* story they became very emotional, as can be seen from this excerpt of field-notes:

> Ali and Aisha approach the table. They glance over at the drawings spread over the table. Ali begins to laugh and points at various pictures, talking in a happy voice in Urdu to his wife. Aisha puts her hands to her mouth and smiles broadly. Ali turns to us (researchers and graphic facilitator) 'This is us! This is exactly what we told you!' Aisha chimes in and says 'This is our story'. She looks at a picture of her husband doing household chores and laughs loudly, tapping her husband's shoulder, 'This suits you hosanna' (** Urdu for 'honey'), and Ali blushes. Ali points at two of the drawings: 'Look, that's our photographs and our casserole.' Aisha: 'Amazing! This is so wonderful'.

During the meeting with Ali and Aisha, we talked with them about our ambition of making a book with the drawings and the possibility of designing posters with COVID-19 health messages. They were both overtly positive and as Ali said: 'If someone can learn something from what we have done it's all worth it'. The couple felt they had contributed with important experiences and expressed a hope to help others, to contribute to society and play a part in the battle against COVID-19. The drawings made it possible for them to see their own story and gave the researchers an opportunity to give something back to the participating residents. They were clearly proud of the drawings, and the implied distribution of expertise allowed Ali and Aisha to use the researchers' audio recorders and the drawing hand of the graphic facilitator to tell their story.

GF thus offers a format suitable in HPI with socio-economically vulnerable target groups, because it encompasses a space for different objectives for participation, and works from a bottom-up perspective.

In the story of Ezma and Zehra, we experienced the same strengths of GF as with Ali and Aisha. However, Ezma and Zehra's Danish language skills were more limited, and in the interview we relied heavily on the student assistant, acting as an informal interpreter. This provided us with fewer direct quotes for the drawings and we focussed more on the meaning and context of the story. Their stories were sad and proved a bigger challenge to reproduce visually. In the illustrated book, their story is to a great extent a depiction of feelings and anxiety rather than chronological events or specific experiences. An example of this is when Ezma and Zehra in the interview tell us that their biggest fear is to die from COVID-19. Not due to a fear of dying, but because the travel restrictions of the pandemic mean they will not be able to be buried in Turkey. Their fear stems from the worry of having their physical remains buried in Denmark and not in their home country. This is depicted in the illustrated book through a drawing of a Muslim cemetery and a commercial aircraft.

See Supplementary Picture 4: Drawing of Muslim cemetery and a commercial aircraft, depicting Esme and Zehra's fear of not having their physical remains buried in Turkey.

GF enabled engagement with a wider group of residents and across different languages, due to an accessible *reading* of, for example, emotions and physical surroundings through the visual representation. The shared interaction with the drawings created a sense of ownership of the process among the target group and facilitated a collaboration between researchers and residents.

Shifting the power balance

The graphic facilitator (MP) participated as an active partner in planning and evaluating the HPI with the residents. Her presence enabled new forms of engagement for the researchers and for the residents because it shifted the power-balance by adding an extra *player* to the team. This was especially relevant in Phase I, where she met with the residents at the design workshop and facilitated the five planning and evaluation meetings. This on-going involvement created a trust and familiarity between her and the residents. At one of the planning meetings with the resident committee, MP was delayed and the residents refused to start the meeting until she had arrived and could draw the minutes.

MP acted as the main facilitator in meetings with the resident committee leaving the researchers as co-participants and co-facilitators. This shift encouraged the residents to reflect on their interaction with the researchers and unfolded stories of motivations for participating in the HPI. Her outsider position of not taking part in the social outings of Phase I, but still facilitating the planning and evaluation meetings graphically, enabled her to point out more sensitive matters that the researchers had observed during the outings. This was the case at the meeting with the resident committee where an outing to Copenhagen Zoo was evaluated:

> MP says that she had heard a little about the social outing [from the researchers]. She explains she heard about how the residents with ethnic Danish background had placed themselves in the lower level of the bus while the residents with ethnic Turkish background had seated themselves in the upper level. She draws it on the big wall-to-wall paper while several of the residents with ethnic Turkish background object and say they had been

> seated in the lower level as well. MP laughs and says that she meant to mildly provoke the group. Karsten answers that provocation will get her nowhere. MP reacts by asking the resident committee to get up and stand in a line according to the years they have been living in the neighbourhood. Meltem and Birthe takes control by asking the others how long they have lived in the neighbourhood. One by one they place them in the line. MP then asks the residents to group in pairs with the one standing next to them and share their favourite neighbour experience from their time in the area. The residents engage in lively chats.

This field-note excerpt shows how the graphic facilitator could take the liberty to articulate a sensitive observation made by the researchers, here referring to the division of residents based on ethnicity during the social outings. The visualization of her 'provocation' in the visual minutes makes the resident committee oppose her statement and this tension opens the possibility for a teambuilding exercise where the residents are asked to talk with each other across ethnicity.

At the final evaluation meeting in Phase I, the residents were asked by the graphic facilitator what they thought about collaborating with the researchers (who were all female), as can be seen in the right side of Supplementary Picture 5:

> Henny: Well, all the project-girls have just been so nice
>
> Karsten: Yes, they all smile
>
> Birthe: Yes, and you can talk with them. I mean, you for instance (pointing at CTS), you knit and then we can talk about that and share knitting patterns with each other.

See Supplementary Picture 5: the visual minutes from the final evaluation meeting.

The residents' response underlines the importance of building relations through ethnographic fieldwork when undertaking HPI among socio-economically vulnerable populations in disadvantaged neighbourhoods. Building trust through long-term presence proved vital to gain access to the field and recruit residents to the HPI. The informal chats and exchange of, e.g. knitting patterns were key factors in building motivations among the residents for participating.

The residents also told the graphic facilitator that they were highly amused with the researcher's job description and assignment: 'Did you know they get money for coming out here and drink coffee with us?' as Henny puts it, laughing. To the residents, the researcher's job seemed much like a recreational task, basically doing what the residents do in their free time (e.g. participating in their morning café).

The graphic facilitator played a key role in asking these questions and documenting it in the visual minutes. These perspectives would not have been made explicit without the shift of power-balance by the participation of the graphic facilitator and her drawings.

During interviews in Phase II the graphic facilitator took an observing role, sketching her notes for the COVID-19 drawings. The COVID-19-friendly set-up did not accommodate the building of long-term trust that had been so fruitful in Phase I. Instead, the trust and engagement of the GF was established when the graphic facilitator showed the participants her sketches at the end of the interviews. An example of this is from researcher field-notes from the interview with Saleem and Zaafira:

> After the interview we make sure to disinfect the table and chairs. Zaafira says in a low voice that she appreciates our vigour with the anti-bacterial spray. MP uses the moment of hesitation in the couple to approach them with her sketchbook. She tells them she wants to show them her drawings before they leave. The couple look through the sketchbook as MP turns the pages. Zaafira laughs and Saleem starts commenting that he can recognise themselves and several of the things we have been talking about in the interview. I notice that Zaafira is just about to take MP's hand in appreciation, but rushes to withdraw without MP notices. I assume this is due to COVID-19 precautions. The couple tell us they find the sketches wonderful and they are very excited to see the finished drawings.

The active participation of an *outsider* in the process of planning and evaluation of the HPI, being the graphic facilitator, opened up for the residents reflections on their relationship with the researchers. In Phase II, the sketches made by the graphic facilitator during the interviews rendered it possible for the participants to *see* an immediate recollection of what the researchers had been asking about, thereby allowing a joint reflection after the formal interview, and an opening up of the research process.

DISCUSSION

Our exploration of GF as a method to engage residents in a disadvantaged neighbourhood in HPI has unfolded potentials in the method. Through the use of the ladder of participation, we have reflected on the various ways GF played a part in including the target group. Participatory visual methods can be tailored to the specific context and the 1:1 representation of, e.g. the physical environment in the context of the HPI, can facilitate dialogues, which take in concrete experiences and reflections. The potential includes the possibility of designing

HPIs that engage the target group, and are rooted in the context, but at the same time apply methods generic across specifics of context. In the discussion, we will reflect on the competences needed when including GF in the research design, and the ways that participation unfolded in the HPI.

GF as a collaborative endeavour

HPIs are enrolled in a complex web of relations of everyday as well as political agendas and structural practices, making it important to design research that can embrace complexity (Greenhalgh and Papoutsi, 2018). In our study, the COVID-19 pandemic made our original plan for Phase II impossible to pursue and we had to reconfigure. The longitudinal scope of the overall study allowed a long ethnographic field-study and thus allocated the sufficient resources to enable access to field of study and build relations with the residents (Bonevski *et al.*, 2014). The uniqueness in this study is our strong focus on employing visual approaches in the collaboration with residents through GF. The building of trust, establishment of relations between residents and researchers and the mindset of including the residents' perspectives in the planning and evaluation of the HPI is a key factor in participatory research (Simonsen and Robertson, 2012; Rose, 2016). This collaborative process requires a collaborative effort. In this case, a team of researchers skilled in qualitative, participatory methods, an experienced graphic facilitator with knowledge of working with ethnic heterogeneous participant groups and last—but most importantly—a group of residents willing to share their experiences. The interdisciplinary research design was carried out through a process of continued negotiations and reflection (Mol and Hardon, 2020). Not with the aim of reaching consensus, but with the aim of redistributing power through a transparent process focussed on listening to the resident voices through visualization.

In the COVID-19 resident experiences the collaboration with a graphic facilitator enabled new forms of validation of data, in collaboration with the participants. Here, the visual representations of the shared experiences would have been difficult to capture in prose text and even more difficult to validate in our analysis with the participant if we had communicated in a pure-text format. The drawings turned the interviews and the following analysis into a poetic status report, recognizable to the participating residents.

The visual element enabled a more diverse participation across language barriers. The two research student assistants also proved important actors in the process as informal interpreters. They both lived in the neighbourhood and the participants knew and trusted them. They were part of making the visual meeting minutes and COVID-19 illustrations a relevant means to include people with limited Danish language skills in conversations of health and well-being in their neighbourhood. This resonates with Bonevski *et al.*'s point of collaborating with student assistants residing in the neighbourhood to address potential researcher mistrust and ease communication (Bonevski *et al.*, 2014). This collaboration also helped in addressing challenges in understanding culturally specific codes, which, e.g. gave consideration to how to respectfully draw women wearing headscarfs when they are telling stories played out inside their homes, where they would not wear headscarfs. From our study, it is not possible to compare with a HPI not applying visual methods, but we found that the GF succeeded in enabling residents that were not familiar with research to participate. Akgül is an excellent example of this: she told us she was illiterate and could not read or write in Turkish or Danish, furthermore her spoken Danish was limited. She took an active part in the resident committee and recruited residents to the social outings. She was explicit in her interest in the visual work of the graphic facilitator and in how the GF process motivated her engagement in the HPI.

Modes of participation

Participation is a dynamic process. There can be differences within the participant group due to, e.g. language competences or social positions, and the participation can play out differently in phases of a HPI as was the case in Phases I and II, respectively. Arnsteins original ladder of participation struggles with encompassing non-stable participatory processes (Carpentier, 2016), which is partly why we have chosen to make use of the ladder formulated by the QoLF (QoLF, 2021). The framework focuses on involvement processes carried out in communities, which makes it a relevant tool to continuously reflect on how participation is performed and nurtured in the HPI. Involving target groups as participants in the research design may be a legitimizing factor or a validation of the research results. From this perspective, we find it important to challenge the normativity of *participation* as being an always positive and democratic process. We subscribe to the moral aim of involvement; however, we also acknowledge that the involvement of the target group is not a value-neutral endeavour. Participatory processes in HPI are always part of an agenda with specific perspectives on *correct* healthy behaviour or *correct* ways of participation (Mol, 2013; Bønnelycke *et al.*, 2021). We as researchers come as outsiders to the disadvantaged neighbourhood and are

asking the residents to give us *something* that must fit into our research-agenda. We as initiators shape the conditions for the HPI and even though we ask residents to be part of planning the HPI, the intervention needs to fit into a framework set by research questions and interests. In line with the work of Phillips *et al.*, we argue that it is of high importance in co-designed HPIs to continuously reflect on how we interact with the people we invite to participate, and that the *co* is produced and negotiated through relationships (Phillips *et al.*, 2021). We have referred to the residents taking part in the HPI as participants rather than, e.g. informants or co-researchers. Throughout the process, we have been conscious of designing a HPI that would be perceived as relevant for the residents to participate in. We have paid attention to logistical details, such as choosing physical spaces for meetings and interviews that we, based on our ethnographic study in the neighbourhood, knew were considered safe spaces for the residents (Cornwall, 2008). Our objective was to give residents various possibilities for influencing the two phases and thus not *just* inform our quest for knowledge on health and social relations in the neighbourhood. We pursued a path of dialogue with residents on their everyday life and perceptions of health and we reproduced and presented their ideas visually to acknowledge their input and make sure they felt included. However, we as researchers have been in charge throughout the process on how project resources (financial as well as personnel) should be allocated. The scope of the activities suggested by the residents was also curated in the sense that they had to fit into the criteria of the overall research project. 'Participants' therefore seemed the most correct term to give to the residents taking part in the study. The power-balance between participants and researchers shifted due to the active involvement of a graphic facilitator. This enabled the residents to speak of their understanding of the researchers' presence and their engagement in the neighbourhood.

When we recruited participants, we presented ourselves as University researchers to avoid being affiliated with municipal officials. To the residents participating in the HPI, we were community-outsiders, without political or financial interests in the neighbourhood. In this respect, we did not hold power over the residents. We could not make decisions on the structural development of the neighbourhood and we could not affect, e.g. their social benefits. We had the luxury of being curious outsiders wanting to learn about the residents and their neighbourhood. The redistribution of power was thus mostly ours to give, because we invited the residents into the process as experts on their everyday life, and we had nothing to lose in the collaboration (Cornwall, 2008). To address structural inequalities and challenge power structures in future research, it would be interesting to engage in a close collaboration with the municipality and use GF to make the residents heard in development programmes for the neighbourhood (Tippett and How, 2020).

CONCLUSION

We have shown how GF is a relevant method to use when engaging socio-economically vulnerable and underrepresented populations in HPI research. GF can help enable participation of the target group, which we have illustrated through unfolding the participation process of the two phases, following the ladder of participation.

GF can shift the power-balance among researchers and stakeholders in a HPI. For example, the presence of a graphic facilitator opened up opportunities for residents reflecting on the researchers and their presence in the neighbourhood. This increased the level of trust among the participants and researchers; trust being important to nurture in participatory processes and part of achieving a high level of participation. GF produces visual material in collaboration with target groups, which can enable heterogeneous groups to take part in the HPI and allow for various agendas and inputs to be represented. We hope to contribute to the growing *body of knowledge* within this field and help meet the continued need for nuancing discussions on the way we—as researchers—undertake participatory methods and the disruptions we cause in the settings in which we intervene.

SUPPLEMENTARY MATERIAL

Supplementary material is available at *Health Promotion International* online.

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