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ORIGINAL ARTICLE

Differences in individual empowerment outcomes of socially disadvantaged women: effects of mode of participation and structural changes in a physical activity promotion program

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Abstract
Objectives This study explored the differences in individual empowerment outcomes of a group of socially disadvantaged women participating in physical activity promotion. The outcomes observed were assessed in the context of the women's mode of participation and the structural organizational and community level changes, which took place during the implementation of the program.
Methods Fifteen semi-structured qualitative interviews were conducted and analyzed using qualitative content analysis. Two groups of women participated in the interviews—those involved in the whole process of planning, implementation and evaluation of the program and those who took part in the program activities.
Results Individual empowerment outcomes were achieved for all those interviewed, although those participating in the planning, implementation and evaluation of the program achieved the greatest. A number of organizational and community level processes were also identified that supported the individual empowerment of those taking part.
Conclusions This study supports the use of multilevel empowerment approaches to health as they help to identify the ideal characteristics that organizations and communities should possess and the potential structural changes required to support individual empowerment.

Keywords Women's development · Social inequalities · Immigration · Integration · Health promotion

Introduction

Tackling social inequalities in health is currently one of the greatest challenges to public health (Whitehead 2007). It is well known that the solutions to these inequalities are complex, however, the concept of empowerment—that is enabling people and communities (especially disadvantaged communities) to take control over their own lives —has been put forward by the World Health Organization as one of the key strategies that can help to overcome them (WHO 1997). Empowering marginalized groups is ideally achieved through their participation in the decisions that affect their health, by working with and influencing organizations, which traditionally are in control of the development and delivery of health programs (Israel et al. 1994; Labonte 1994).

The scientific literature on participative planning, implementation, and evaluation of health promotion actions is relatively comprehensive (Zakus and Lysack 1998; Minkler and Wallerstein 2003; Butterfoss 2006; Wright et al. 2010). Health promotion programs that embrace participation have been shown to be associated with a range of positive notions of empowerment (Freudenberg et al. 1995; Zakus and Lysack 1998), often leading to better health

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outcomes (Wallerstein 2006). Whilst, the public health literature is scattered with different uses and meanings of empowerment, the view that it is 'a process: the mechanism by which people, organizations, and communities gain mastery over their lives' (Rappaport 1984) is the one that is most widely shared (Wallerstein 1992, 2006; Zimmerman 2000). Consequently, many recent conceptualisations emphasize the need for multilevel descriptions of empowerment (e.g. Israel et al. 1994; Morrow and Hawxhurst 1998; Zimmerman 2000, Moane 2003). For example, Israel et al. (1994) and Zimmerman (2000) proposed three mutually interdependent levels of empowerment: individual (psychological), organizational and community. From a theoretical perspective, it is also critical that a distinction is made between empowerment processes ("empowering") and outcomes ("empowered") so that the mechanisms through which it supports and creates health are understood (e.g. Wallerstein 1992; Israel et al. 1994; Zimmerman 2000). Zimmerman (2000) proposes empowerment processes and outcomes across all three levels of empowerment. In the following, we are referring to empowerment outcomes on the individual level and to empowerment processes on the organizational and community level.

According to Zimmerman (1995, 2000) empowerment outcomes at an individual level may be classified into three components: intrapersonal, interpersonal and behavioral. Intrapersonal refers to people's self-image, expressed through ideas such as self-efficacy, perceived competence and their motivation to be in control of their lives. Interpersonal relates to the understanding and feelings people have towards their community and related socio-political issues and to how people use analytic skills to influence their environment. Behavioral empowerment outcomes indicate the actual level of people's involvement in formal (organizational) and informal (community) activities (like informal groups and/or networks).

At an organizational level the process of empowerment offers opportunities for people to participate in organizational decision-making. Whereas, at a community level, activities that can lead empowerment include getting improved access to community resources, open government structures and tolerance for diversity. However, given that by its very nature empowerment embraces the need to listen to the voice of the people, Zimmerman (2000) highlights that exact meaning of empowerment and the processes for bringing it about can only truly be understood in the context that it is being used. Nonetheless, the three components outlined are useful in classifying the types of activity that might be relevant.

Although professionals generally agree that empowerment is a multilevel concept, most of the empowerment research focuses on individual empowerment. Outcomes at this level are therefore measured by outcome efficacy (the belief that one's actions can produce results), collective efficacy (the belief that people together can make a difference), political efficacy (the belief that one can influence the political process, organizations and communities) (Kilian et al. 2003; Wallerstein 2006). The evidence accumulated to date therefore has been able to demonstrate the beneficial effects of participation at different levels on individual empowerment outcomes. Target groups covered by this research include youth, working-class neighborhoods, and community residents (Zimmerman and Rappaport 1988; Prestby et al. 1988; Holden et al. 2004).

In more recent years, the need to understand the multilevel nature of empowerment has been addressed by a growing body of research which has assessed the key characteristics of empowering organizations, programs, and communities (see Maton and Salem 1995; Matthews et al. 2002; LeRoy et al. 2004; Hughey et al. 2008). In addition, other research has used survey methodology based on professional perceptions of multilevel empowerment. Different survey instruments have been developed and tested for this purpose (Israel et al. 1994; Schulz et al. 1995, Becker et al. 2002). Some authors confirmed the importance of the mutual interdependence of empowerment levels (Israel et al.; 1994; Schulz et al. 1995), others highlighted that perceived multiple empowerment levels in relation to varying participation levels were investigated using a community survey (Becker et al. 2002). The body of research so far accumulated is based on the perspectives of professionals; few have attempted to explore the views of those actually participating in action research projects and programs (Kieffer 1984; Schulz et al. 1997).

This paper uses Zimmerman's (2000) theoretical approach to empowerment to explore the processes involved and the outcomes achieved from the perspective of those socially disadvantaged women, participating in an action health promotion program aiming to improve access to physical activity.

Specifically it aims to address the following questions:

1. What types of empowerment can be achieved at the individual, community and organizational level?
2. Does the degree to which individuals are involved effect the types of empowerment outcome achieved?
3. What processes operating at the community and organizational level are crucial for the effective empowerment of individuals?

Methods

Introducing the BIG project

This investigation of multiple empowerment processes and outcomes was part of a research project developed by the

Institute of Sport Science at the University of Erlangen-Nuremberg, funded by the German Federal Ministry of Education and Research for 3 years, from 2005 to 2007. The overall goal of the "Movement as an Investment for Health (German language acronym BIG)" project was to promote physical activity among socially disadvantaged women (classified as women receiving low-income or social welfare, having low educational attainment, being unemployed or having a blue collar occupation, being single parent or from an ethnic minority) in three settings in the German city of Erlangen at a residential area, a work site, and a sports club. It used a participatory approach to maximize the women's involvement in the overcoming some of the barriers to physical activity. Their active participation was guided by Butterfoss's (2006, p 325) definition as "the social process of taking part (voluntarily) in formal or informal activities, programs and/or discussions to bring about a planned change or improvement in community life, services and/or resources". They were involved in all aspects of the work including the planning, implementation and evaluation of actions for physical activity promotion. Other stakeholders involved were local policymakers such as the major of the city of Erlangen, representatives of different community organizations (e.g., head of local sports club, regional executive of a sickness fund), and researchers from the Institute of Sport Science.

A cooperative planning approach was taken to ensure the effective involvement of all BIG stakeholders in the development of project activities (for further information see Rütten et al. 2008). Three groups (one group in each setting) that comprised different stakeholders including representation from the women were set up as 'community coalitions'—various authors have described these as "action sets or aggregates of interested groups and individuals with a common purpose whose concerted actions are directed at achieving the coalition's goals" (Butterfoss et al. 1993, p 316). Each group was mandated to work with the principle of shared decision-making. A total of 37 women participated in the groups; 19 women participated the group representing the residential area, 6 in the work site, and 12 in the sports club. Each group followed a standardized protocol (discussed at five planning sessions) to agree on the issues that needed to be addressed and the actions that were taken to improve opportunities for women in difficult life situations to participate in physical activity. Twenty-six women (70.3%) participated in at least three of five planning group sessions. In addition, women were represented on a steering group that managed and coordinated the work of the whole project. It comprised representatives from each of the planning groups. The steering group met three times.

The women's participation in the planning process influenced the decision to introduce a number of activities that helped to overcome the barriers to physical activity; namely, low-fee exercise classes in each setting (each containing a mixture of aerobic exercises, strength training, stretching) and women-only indoor pool hours and self-defense courses in both the residential area and sports club settings. As a result of the indoor pool hours, the demand for additional swimming classes emerged, which were held at different time and place. The planning process also led to the introduction of a BIG project office in the residential area and the sports club setting was managed by lay health advisors (representatives from the BIG target group as e.g. described by Eng et al. (1997). In the residential area one German and one migrant Muslim woman from Turkey managed the project office, in the sports club setting, one Russian woman. These women had been members of the cooperative planning groups and were identified through the other planning group participants as active and respected community participants. The project office managers received informal training from the BIG University of Erlangen project staff, providing information and skills for their work. In the work site, a company staff member ran the project office responsible for health management.

Each BIG project office was responsible for the implementation of agreed actions in their own setting. This included responsibility for recruitment of women to attend exercise classes and of the hiring of physical activity instructors to organize the premises etc. In the residential area, the BIG project office was supported by the Erlangen City Council. At the work site and the sports club, project offices were self-financed and implemented as a sustainable part of the respective organizational structures.

The BIG project took an integrated approach to evaluation embracing both qualitative and quantitative methodologies for different parts of the evaluation (for further information see Rütten et al. 2008, 2009). Participating women assisted the BIG project staff in project evaluation, including collaboration in the carrying out of surveys.

Assessing multilevel empowerment effects

Semi-structured qualitative interviews were used to investigate the empowerment of the women participating in the project. The interview guideline supported the gathering of information on perceived individual changes, the cooperative planning process, organizational participation, and interaction with other BIG participants. The topic of empowerment was raised in the interview without explicitly referring to the empowerment levels of Zimmerman (2000). Sampling followed the principle of diversification; a total of 15 women were interviewed. All three lay project office managers were included. Furthermore, in each of the

three BIG settings (work site, residential area, and sports club), two planning group participants, one participant of the BIG exercise classes (since the beginning of BIG), and one woman that had dropped out of the BIG exercise classes, were interviewed. Additionally, three women participating in the women indoor pool hours and the swimming classes were interviewed. Two women refused to be interviewed and were replaced by other women. All women were selected as a convenience sample. These interviews were completed with written statements from women who only participated in BIG physical activity programs, where they were asked to give a short statement to their experiences in BIG. Interviews were administered face-to-face and were done by two trained scientific assistants. Where possible they were conducted in the homes of study participants.

The interviews lasted 90–180 min. They were tape-recorded, fully transcribed and analyzed using the Qualitative Content Analysis Method (Mayring 2002). This method involves a systematic, theory guided process to analyze oral communications. It employs techniques that can be related to content analysis (Berelson 1995, Gerbner et al. 1969) and symbolic interactionism (Mead 1968). The following five steps were used to analyze data: (1) decision on available data and on research questions; (2) decision on data analysis techniques to be used (e.g. summary and structuring), and process of data analysis; (3) definition of the categorical system and units of analysis; (4) re-checking the categorical system; and (5) interpretation of results. All 15 interviews were included in the analysis. The research question was: Which individual, organizational and community empowerment processes and outcomes were reported in the interviews? The analysis techniques labeled "summary" was employed to reduce the available material to its relevant content. The categorical system featured the determinants of individual, organizational and community empowerment. The categorical system was re-checked during the process of content analysis by two independent researchers. The researchers specified the categorical system and applied it to the transcript interviews. Interview passages containing information on the categorical system were extracted and summarized. Inconsistencies in the categorical system between the two researchers were discussed and resolved. The agreed upon results are presented.

The policy ethnography was undertaken throughout the life of the project between January 2005 and December 2007. Ethical approval for research within BIG was granted by the dlr, the project agency of the Federal Ministry of Research.

Results

Table 1 presents and overviews the results by empowerment concept and their representation in the qualitative interviews. In the analysis, differences were seen between two categories of study participants.

Individual level empowerment outcomes

Intraindividual component

All women reported changes in self-efficacy. Participants in the BIG exercise and swimming classes (including those who dropped out) reported changes in their confidence and self-efficacy that in the main was ascribed to their ability to access and engage in physical activity. Furthermore, they reported discovering physical activity for themselves—e.g. as a means for improving their physical fitness, for relieving stress and/or for well-being.

> It is the most ordinary thing to know how to swim, to go to the swimming pool or to work out. This is what you think!! But for me, being a Muslim woman, it is impossible due to religious reasons I cannot go to a swimming pool that is used by both men and women. One year ago, that was my statement. Today I say: 'Nonsense!' I can work out and learn how to swim at the swimming pool – thanks to BIG.

Those women who participated in the cooperative planning groups and the project office managers also discovered physical activity through the BIG exercise classes. These women went on to report that being involved in BIG, gave them more self-confidence to speak openly and authoritatively in more formal settings. For example, some of the women felt more able to talk about issues in groups other than from their own migrant background. Some project office managers (see Table 1 interview 10–12) reported that since participation in BIG they were confident enough to speak to a professional audience (e.g., with city councilors and even the mayor) about their important issues. One Muslim woman, working as a project office manager, reported confidence in visiting local authorities independently without her husband.

> Now I can go myself when I have things to take care of at the city hall. My husband always used to go. I almost never went myself, but now I do and I'm not afraid.

The majority of exercise and swimming class participants (8 of 9) felt the BIG project had given them a new range of competencies: Many felt they had gained knowledge about healthy physical activity options for practising physical activity, correct posture and/or healthy nutrition and all interviewed swimming class participants reported that they learned how to swim. However, it is important to note that some of those who dropped out gave not feeling challenged enough by the exercise classes as

Table 1 Overview of empowerment categories and their quantitative representation in the 15 interviews of the exercise (and swimming) classes participants (interview number 1–9), cooperative planning participants and project office managers (interview number 10–15)

	Interview participants (Number 1–15)														
	Exercise classes and swimming classes participants									Cooperative planning participants and Project office managers					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Empowerment categories															
Individual															
Intraindividual															
Self-efficacy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Perceived competences	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+
Interindividual															
Understanding towards community	0	0	0	0	0	0	0	0	0	+	+	+	+	+	+
Skill development	0	0	0	0	0	0	0	0	0	+	+	+	0	0	+
Critical awareness	0	0	0	0	0	0	0	0	0	+	+	+	0	0	0
Behavioral															
Social contacts/networks	0	+	+	+	+	+	+	0	+	+	+	+	+	+	+
Organizational															
Opportunities to participate in decision making	0	0	0	0	0	0	0	0	0	+	+	+	+	+	+
Community															
Open government structures	0	0	0	0	0	0	0	0	0	+	+	0	0	0	0
Access to community resources	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

+ empowerment category is represented in the respective interview

0 empowerment category is not represented in the respective interview

the reason for not continuing. Nonetheless, two of the three interviewed dropouts reported performing physical activity on a regular basis after leaving BIG. All cooperative planning participants and project office managers perceived competencies through participation in BIG. As well, as feeling more confident in group situations, the project office managers said they had gained skills in planning and organizing physical activity programs and to act independently. They also gained skills in general office work.

> I learned many things. Dealing with different people, in particular with the women on the physical activity programs, with physical activity instructors, with you, and with entire institutions. Also how to further myself, how to write e-mails, letters, and so on.

Interindividual component

None of the BIG exercise and swimming class participants but all project office managers and cooperative planning participants perceived changes in interindividual empowerment. These women developed a deeper understanding of the BIG target groups issues and needs: of their different cultural backgrounds and connected preferences for sport activities (like the importance of swimming and learning how to swim for Muslim women), and for the promoters and barriers to their opportunities for engaging in physical activity. For example, language problems were recognized as a significant barrier for the participation in exercise classes. Additionally, all project office managers (Table 1 interviews 10–12) and a few planning participants, developed a better understanding of the issues and constraints felt by those making important decisions with regards to physical activity promotion in their specific settings, e.g. physical activity within the constraints of a restricted timetable.

> I'm in contact with those who assisted. What I mean is, through the BIG project office I'm in contact with the city sports council, the community adult education center and with (name of a city councilor) whom for the last few months I have been unable to reach. But I'm working on that.

An appreciation of all stakeholders' issues was the key to the project office manager being able to facilitate bringing about change. All project office managers and one cooperative planning participant reported skill development. They improved their decision-making skills during their work, and leadership skills through working with staff. They also reported developing a critical awareness for different stakeholder needs. For example, they recognized the importance of high participant rates in exercise classes and the women-only indoor pool hours for obtaining policy support.

Behavioral component

Seven of nine BIG exercise and swimming class participants reported new social contacts and networks with other women participating in the BIG physical activity programs. The project office managers and cooperative planning participants developed new social contacts and were involved in networks with important decision makers, physical activity instructors, and with other women.

> And what I recognized later, because of the well distributed project from (name of the project office manager in the work site), I mean because of the high number of people she involved, our communication worked out better, just because they got to know each other personally.

Organizational level empowering processes

None of the exercise and swimming class participants but all project office managers and cooperative planning participants reported empowering processes at an organizational level. In the BIG planning stage, all of these women participated in decision-making in the BIG cooperative planning group and asserted their own requirements regarding the BIG exercise classes.

> Yes, we were asked. They didn't say that we have to do this or that and so on, they asked us what we want. (…) For example the time, when will they [the exercise classes] be, what time. Then we all adjusted, when, which day, we were always asked, the women, because it was for us.

Moreover, in the BIG implementation stage in the residential area and sports club setting, there were opportunities for women to participate in decision-making with other stakeholders. For example, in the residential area the two project office managers were involved in planning and implementation of women-only indoor pool hours. This was managed in conjunction with Erlangen city council public swimming pools and different city council staff members. The project office managers in both settings further participated in planning and implementation of BIG exercise classes for socially disadvantaged women in collaboration with different decision makers; e.g. staff of the local sports office and executive director of the sport club. Moreover, the Muslim project office manager played an integral role in decision-making for the replacement of her colleague (the second project office manager position in the

residential area and who left the project office for another job) together with city council members.

> My role was very good because of (names of the head of the local sports office and a city councilor), who were there. I think a woman from the local staff council was also there. I really can't remember any more. And they always asked me, they always asked me first, "What do you think about this woman, what impression have you got?" I mean I was the leading character.

Community level empowering processes

There were a number of achievements at the community level. All participating women obtained access to public resources e.g., to different gyms, and Erlangen public swimming pool and at the latter venue, women-only indoor pool hours were negotiated. They gained support from local and national media to promote their activities of the BIG project—including women-only indoor pool hours, self-defense courses, and the physical exercise classes. The Muslim project office managers even felt confident enough to be interviewed on German national TV channel.

> Yes, in the beginning I was very distracted by the cameras, because the woman with the camera was always next to us and this was odd. We did a few practices and the camera was always next to me.

Hence, the project office managers reported that in Erlangen, through BIG, there are open government structures for socially disadvantaged women. One residential area BIG project office manager was invited to present the BIG project to the "Foreigners Integration Advisory Board" as part of the voting preparation for sustaining the BIG project office in Erlangen.

> I'm excited. This evening I'm participating in the Foreigners Advisory Board. There is a session with 30-40 people and I'm presenting the BIG project.

A city councilor promoted the sports club project office manager for city council candidacy.

Discussion

This study aimed to explore lay perspectives on how participatory health promotion programs can impact on empowerment. It used Zimmerman's (2000) multilevel framework to analyze data from a series of qualitative interviews with women participating in the BIG project. This lay perspectives adds value to existing literature which up until now has mainly reported on the views of professionals (see Israel et al. 1994; Schulz et al. 1995; Becker et al. 2002). Few other qualitative studies have already identified multiple dimensions of empowerment, e.g. among citizen leaders in grassroots organizations (Kieffer 1984) and among village health workers (Schulz et al. 1997) through health promotion programs. In these studies, interviewees reported new skills, broader knowledge, and self-efficacy in relation to different authorities as important individual level outcomes. In addition, a critical understanding about social and political relations and increased social contacts were reported (Kieffer 1984; Schulz et al. 1997). On the organizational and community level, interviewees were involved in decision-making with state legislators and other decision makers (Kieffer 1984) and reported alliances with different community organizations and initiatives (Schulz et al. 1997). These multiple dimensions of empowerment were supported and complemented by our study for the target group of socially disadvantaged women.

However, in the BIG project differences were perceived in individual empowerment outcomes between two categories of participants. The BIG exercise class participants reported individual empowerment outcomes mainly relating to the accomplishment of physical activity, However, the individual empowerment outcomes perceived by the cooperative planning participants and project office managers related to a set of more generic competencies which impacted their everyday life and enabled them—in terms of the WHO (1997)—to take control of the determinants of their own and of other peoples health. Project office managers, who participated intensively in project planning and implementation, seemed to gain the most. For example, one of the women was supported to stand as a candidate to become a city councilor. These results confirm a positive relationship between active participation in health promotion and individual empowerment outcomes for the target group of socially disadvantaged women. Similar results have already been identified for other participant groups, e.g. college students and residents of a community (Zimmerman and Rappaport 1988), citizens of different working-class neighborhoods (Prestby et al. 1988), and for youth (Holden et al. 2004). Moreover, this investigation shows that socially disadvantaged women can achieve individual empowerment outcomes not only through participation in "government-mandated advisory boards, voluntary organizations, mutual-help groups, and community service activities" (Zimmerman and Rappaport 1988) but also through participation in physical activity programs. However, it seems that in particular Muslim women benefit, namely through participation in swimming classes and women indoor pool hours. Therefore, physical activity may improve health directly (see for example

American Heart Association 2007) but also indirectly, by means of enhancing individual empowerment.

Furthermore, it can be assumed that differences in individual empowerment outcomes between study participants might be explained through various empowering processes perceived at the organizational and community level. Whereas exercise class participants reported only marginal empowering processes at the community level, cooperative planning participants and in particular project office managers perceived various processes at both levels. Therefore, these results may support the theoretically accepted connection between individual empowerment outcomes and structural changes in social and political environments (see Zimmerman 2000), empirically confirmed through other research based on a community survey (Israel et al. 1994; Schulz et al. 1995). They underline the need for people to become active in community decision-making in order to improve their circumstances and socio-political environment.

Given the exploratory nature of this study, there are a number of limitations. Firstly, the interviews were only conducted with women participating in the BIG project. As such, information compiled through interviews might reflect a subjective opinion from the target groups rather than an objective finding from an independent observer or from professionals who also participated in BIG. Hence, secondly, it would have been necessary to conduct interviews with professionals from different settings also to thoroughly investigate outcomes at the organizational (empowered organizations) and community level (empowered communities). Thirdly, interviews were not conducted with all women participating in BIG which might introduce a bias to the findings—are those women who responded more likely to report positive outcomes.

Implications for health policy and future research

The results presented here support the notion that health promotion interventions with marginalized groups can contribute to empowerment on multiple levels if they create opportunities for individuals to engage comprehensively in change related action. Results suggest that health promotion interventions have greatest impact on empowerment when they provide opportunities for people to participate in organizational decision-making, so that they can understand the potential influence they can have on their socio-political environment. The process of participation and the empowerment achieved, results in a better understanding of what can be achieved by these type of health promotion action and provides a better opportunity for sustaining it after the research project has been completed. Existing survey instruments and connected theoretical concepts are useful in classifying different associations of empowerment on multiple levels. However, this study shows that listening to the voice of people in a more open-ended qualitative approach allows respondents to express their own perceptions of empowerment. This combined with studies that explore empowerment processes from the perspective of the professional may lead to a more contextualized understanding of how best it can be achieved. Given empowerment processes are particularly context specific, further qualitative approaches are required to consider, its characteristics in other cultures, regions and types of health promotion activities. Finally, attempts to support women to more fully participate further in the research process, including in collection and interpretation of data and in the co-authoring of scientific articles may add further to empowerment outcomes achieved.

Conflict of interest The authors declare that they have no competing interests.

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