

Promoting physical activity in socially vulnerable groups

A mixed method evaluation in multiple community-based physical activity programs



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Thesis

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Summary

Background

In the Netherlands, inequalities in physical activity behaviour go hand in hand with socioeconomic inequalities in health. To stimulate physical activity behaviour and promote physical activity effectively and equitably, participatory community-based physical activity interventions seem promising. The Dutch government's policy is to support community-based sport and physical activity schemes at municipal level, on the assumption that participation in these programs supports the development of social capital, the quality of life in a community, and health and wellbeing. Although many strategies have been developed to increase physical activity levels in general and in socially vulnerable groups in particular, most evaluations show only small to moderate effects. To date, the evidence base rests mainly on correlational, cross-sectional studies at participant level, lacking insight into causal relationships and interaction patterns between factors influencing physical activity. In addition, in line with Dutch health promotion policy, there is a general demand for community-based health-enhancing physical activity (CBHEPA) programs to be evaluated for impacts and (cost) effectiveness.

Aim

The aim of this thesis is to report on the design and implementation of an evaluation approach, assessing the effectiveness of CBHEPA programs at different impact levels (individual, group, and program), and the mechanisms involved. This study aims to contribute to the evidence base of programs targeting socially vulnerable groups, by applying systematically a multilevel and realist perspective in order to generate recommendations about how to evaluate physical activity promotion interventions targeting socioeconomic inequalities in health and physical activity.

Methods

The study was built on a mixed methods design, combining quantitative techniques and qualitative approaches, to monitor 268 participants in 19 groups in seven ongoing CBHEPA programs between 2012 and 2015. We collected data at multiple levels. At individual level, a sequential cohort design was used to acquire quantitative longitudinal data on developments in physical activity behaviour and health-related indicators, and to assess participants' willingness to pay for sport and physical activity. At group and program level, interviews and focus group qualitative techniques of measurement were used. Thus, we were able to link outcomes at multiple impact levels from different datasets over a period of time, adding contextual and time-related value to our findings. The different kinds of evidence pulled from all cases contributed to the robustness of the mixed methods approach and to the generalisability of the findings.

Results

Part I of this thesis presents the theoretical orientations for the development of a context-sensitive monitoring and evaluation approach in order to measure the effectiveness of CBHEPA programs. It presents an evaluation design, grounded in an ecological perspective on human health, enabling the identification of underlying mechanisms at multiple levels which explain what works and why in community-based physical activity programs.

Part II presents the empirical findings from multiple perspectives. A multilevel analysis highlights the longitudinal developments from a participant perspective, addressing (leisure-time) physical activity behaviour in relation to participants' personal factors and covariates. CBHEPA programs reach socially vulnerable, but not necessarily inactive, groups in terms of socioeconomic and health-related quality of life outcomes. No increase in physical activity levels over time was observed, but the findings suggest that ongoing CBHEPA programs in particular contribute to physical activity maintenance in socially vulnerable groups. Over time, significant positive associations were found between leisure-time physical activity, and health-related quality of life, self-efficacy, and enjoyment.

Furthermore, participants' willingness to pay (WTP) for sports and physical activity was explored— as also its associated predictors – in terms of money and time. From the literature, relevant predictors of WTP were identified, relating to personal, socioeconomic, health-related, and sports and physical activity-related predictors. The average monetary WTP amounted to €9.60/month, exceeding the average monthly program fees actually paid by €2.64, and was positively associated with income and sport and physical activity experiences. The average WTP in travel time was close to 18 minutes and was positively associated with income and age. Short-term program satisfaction is probably more decisive for WTP than long-term perspectives of improving health-related quality of life.

At group level, participants' appreciation of the group-based principles for action was explored, addressing active participation, enjoyment, and fostering group processes. Fostering group processes was found as an overarching principle, conditional for spin-offs in terms of enjoyment and active participation, which, in turn, lead to a sense of ownership among participants, who take up responsibility for the exercise group as well as for their individual activity behaviour. CBHEPA programs thrive on participants having fun together and on exercise trainers' leadership skills. A professional, competent, responsive exercise trainer plays a key role in the organisation and maintenance of CBHEPA programs.

A multilevel framework was used to explore the issue of physical activity maintenance in the case of women of non-Western origin. The factors influencing physical activity maintenance at individual level were: perceived (health) benefits, self-regulation, and learning outcomes regarding physical activity and social participation. At group level, mutual support, security, sharing stories, and trust were important factors. At program level program, quality, staff responsiveness, continuity, and accessibility were important factors. Individual perceived benefits and factors at group and program level, aimed at an appropriate mix of exercise and social activities, contributed significantly to physical activity maintenance by women of non-Western origin.

From a local stakeholders' perspective, key combinations of contextual factors and mechanisms triggering outcomes of interest were explored. Outcomes of interest related to

community outreach, program sustainability, intersectoral collaboration, and enhancing participants' active lifestyles. Supportive contexts were municipal policies in support of community-based programs, established collaborative structures and community networks, and alignment with other health and welfare projects. Stakeholders' past experiences with sport and physical activity projects and commitment to the target group were strong additional supportive contextual factors. Supportive mechanisms were entrepreneurship, leadership, responsiveness, deployment of professional exercise trainers, and ensuring the implementation of tailored and accessible program activities. Local governance structures, however, appeared often to lack adaptive capacity to accommodate multilevel processes to realise the sustainment of CBHEPA programs. Policy volatility often results in discontinuity of project funding and collaborative processes, and a reduction in the availability of professional expertise, thus hampering program development and sustainability.

Conclusions

Part III of this thesis describes how CBHEPA programs, if supported in their performance and sustainability, succeed in generating physical activity maintenance in socially vulnerable groups. Two parallel tracks of value co-creation were identified, reflecting value-in-social-context shaped by social forces and reproduced in social structures through interaction and dialogue: the institutional track, involving the collaborative processes at institutional level, and the exercise group track, involving the collaborative processes in the exercise groups. The exercise trainer is usually the only linchpin responsible for connecting these parallel tracks. Strong evidence was found on how contextual dynamics shape local CBHEPA initiatives and on the need for responsiveness and adaptive mechanisms in the institutional track as well as in the exercise group track, in order to realise sustained CBHEPA programs.

People from socially vulnerable groups participate in CBHEPA programs primarily for fun, and most of them are willing to pay a modest contribution. Evidence was found – emphasising the need for a better understanding of the processes of value co-creation at different levels in CBHEPA programs – of the necessity for a shift in perspective on how CBHEPA programs operate: from an intervention to a service logic or transactional paradigm, in which participants are seen as co-creators of value from a consumer perspective, putting emphasis on the need to develop so-called consumer–supplier relationships through interaction and dialogue.

With reference to the Dutch recognition system, put in place to promote quality assurance of lifestyle interventions by encouraging scientific substantiation of intervention effectiveness and feasibility, this research challenges the assumptions underlying the intervention concept as such. CBHEPA program development is grounded in the local contextual realities and geared towards the creation of sustained tailored programs within these specific contexts. Consequently, these process and value-driven approaches are hard to align with project-inspired views on lifestyle interventions.

Future research on physical activity behaviour and maintenance should focus not only on how individuals act, but also on how individuals, groups, and environments interact. The need to incorporate more systematically a systemic perspective on group dynamic theories into physical activity interventions is proposed. In terms of evaluation demands, this calls for

explicit strategies in community-based physical activity programs, involving actors from all levels, which align accountability with learning through evaluation.

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About the author

Marion Herens was born on 3 February 1962 in Maasdijk, the Netherlands, where she grew up. She graduated from the Hugo Grotius High School in Delft in 1980, and acquired her academic degree in Human Nutrition at Wageningen University in 1987. Her main subjects were human nutrition, health promotion, research methods in social sciences, and in communication and innovation studies.

Marion started her professional career in the field of food and nutrition security in the international development cooperation. For more than ten years (1988-1998) she has worked for several national and international organisations in various countries (e.g., SNV and FAO), and has been involved in the formulation, implementation and evaluation of multi-sectoral food and nutrition security programs and projects. In 1998, in the slipstream of the developments in her personal life, Marion moved to stay in the Netherlands, and continued her professional career in the field of health promotion. Her work involved the formulation, implementation and evaluation of lifestyle interventions and health policy at national and municipal level. Facilitating interactive planning processes and providing training courses were an integral part of her work. She worked as a health promotion officer and program manager at the Municipal Health Service in Nijmegen (1999-2005). She also worked as a project coordinator in an educational project on migration and human rights at the Centre for Training and Education at Utrecht University (2005-2006). Thereafter, she worked for nearly ten years as an advisor at the Netherlands Institute for Sports and Physical activity (NISB). To further deepen the knowledge base of that line of work, she recently finalised her PhD research on evaluating community-based physical activity programs targeting socially vulnerable groups (2012-2016).

Her current position of food and nutrition security expert at Wageningen University and Research Centre for Development Innovation (CDI) brings her back to her original field of interest. In this job she is taking up the challenge to integrate her knowledge and research skills in health promotion with food and nutrition security issues worldwide. Her new responsibilities will include program and project advice on linking agriculture and nutrition, research and advice on formulation, implementation, monitoring and evaluation of integrated programs in food and nutrition security, and capacity development and professional training programs in food and nutrition security.

Marion lives in Wageningen, is married, and mother of three young adults. In her spare time, she loves to hang out with friends and family, and to engage in outdoor activities. But she also loves to read, practice improvisation theatre, and enjoy art works.

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