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2020

document version

Publisher's PDF, also known as Version of record

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citation for published version (APA)

Anselma, M. (2020). *Kids in Action: is engaging children as co-researchers key to promoting healthy physical activity and dietary behaviors?*.

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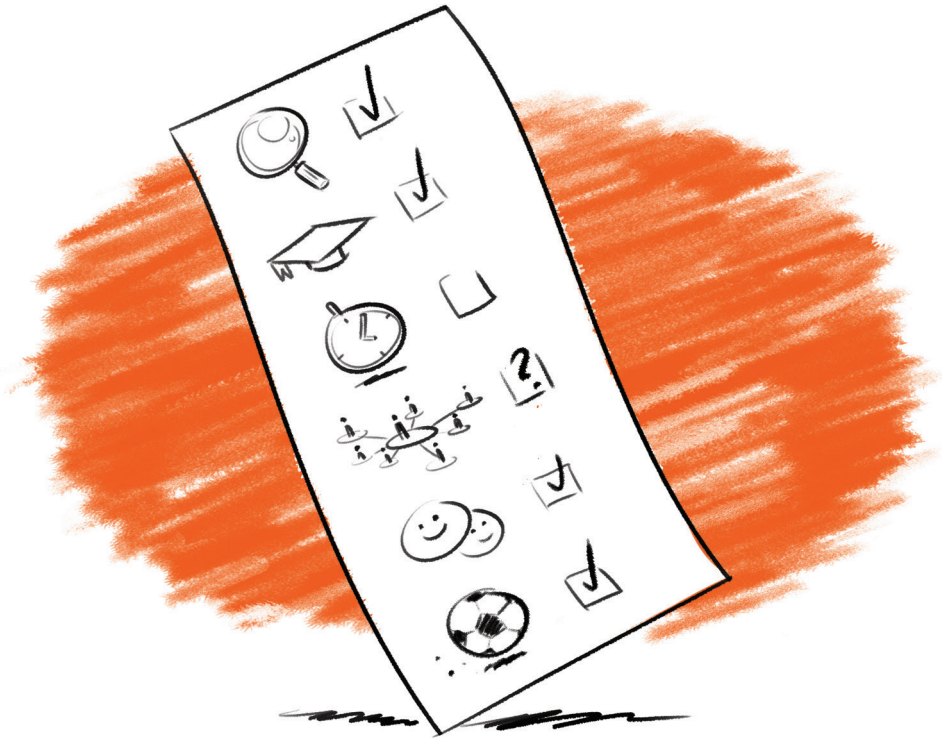
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Chapter 8

General Discussion



8.1. Aims and main findings

The aim of 'Kids in Action' was to develop and evaluate a participatory approach to reduce health disparities experienced by 9-12-year old children from a low socioeconomic neighborhood, in close collaboration with the children themselves. Kids in Action started with a participatory needs assessment to gain insight into the health needs of children (chapter 2). Participatory meetings were held with children, and interviews were held with child-parent dyads, parents, and professionals. From all gathered data it became clear that the main perceived health problem was overweight/obesity, which respondents related to unhealthy dietary behavior and a lack of physical activity. The mentioned underlying factors of unhealthy behaviors were among others finances, cultural habits, and knowledge. Based on the participatory needs assessment, we specified the study aim to: stimulating healthy physical activity levels and dietary behaviors in 9-12-year old children from a low socioeconomic neighborhood by developing and implementing actions in co-creation with children. During three years, weekly meetings with children were organized in which children conducted their own research and accordingly developed, implemented, and analyzed actions (chapters 3 and 5). Youth Participatory Action Research (YPAR) was the leading approach in Kids in Action, which was combined with Intervention Mapping to structure the process and create actions based on evidence-based intervention strategies (chapter 5). In parallel, the academic researchers conducted a systematic literature review to provide insights into effective intervention strategies that could be used for the action ideas of children (chapter 4). The review included controlled trials that evaluated interventions aiming to improve physical activity, sedentary behavior or dietary behavior in 9-12-year old children from low socioeconomic environments. Unfortunately, we found no evidence for intervention strategies that were specifically used in effective interventions. To evaluate the impact of Kids in Action, a process and effect evaluation were conducted. Outcomes in the effect evaluation were children's physical activity, sedentary behavior, sports and outdoor play participation, screen time, neuromotor fitness, consumption of unhealthy snacks and sugar-sweetened beverages, and self-rated health (chapter 7). Results revealed no consistent beneficial intervention effects.

Results from the process evaluation showed that children enjoyed having a voice and working on actions that were actually implemented (chapter 6). Community partners also appreciated the participatory approach and throughout the project increasingly valued children's opinion in decision making. Community partners mentioned observing positive developments in participating children, such as increased leadership skills and awareness of healthy behavior. Community partners also mentioned that involving more children in the participatory process and focusing on parental involvement, could improve the reach of the approach and perhaps increase behavioral effects.

The YPAR study Kids in Action was novel because of the high level of child participation in the development of actions aiming to improve healthy physical activity levels and dietary behaviors. As any (novel) study, Kids in Action provided insights and lessons learned, of which many have been mentioned in the previous chapters. This general discussion will first discuss the main findings followed by the methodological considerations. Then directions for future research will be provided as well as implications for policy and practice. This chapter will end with the general conclusion.

8.2. Discussion of the main findings

The participatory approach of Kids in Action was highly appreciated and the strengths of the study can inform future participatory research. The collaboration between an academic institution (Amsterdam UMC, location VUmc) and an operational partner (Kids Aktief – afterschool daycare) from the initial application for funding and throughout all phases of the study, provided many benefits. It was easier to become part of the local network in the community because Kids Aktief was already known, Kids Aktief offered expertise in pedagogics and in the development of actions related to sports, while the Amsterdam UMC offered the theoretical and scientific expertise for the intervention development and evaluation. Another strength of Kids in Action was the strong relationship between researchers, children, and community partners, which made sure that mutual learning took place, actions were jointly developed and therefore highly supported

and embedded in practice. The participatory approach of Kids in Action resulted in a number of successes, including improvements in children's empowerment and awareness of healthy behavior, and community partners learning from the participatory approach and taking child-participation more seriously.

Even though the process of Kids in Action was highly appreciated, Kids in Action resulted in few measurable intervention effects on energy balance-related behaviors, neuromotor fitness, and self-rated health. When reflecting on Kids in Action, several factors could have influenced the limited effects. Kids in Action took place in a real life setting and had to be adaptable to daily circumstances. For example participatory meetings that were cancelled due to school field trips, children who did not always had the focus to work on the subject, or developed sports activities that were cancelled due to weather conditions. Besides these day-to-day adaptations, there were also limited resources and time available, and consequently not all action ideas could be developed and implemented. Even though the participating children were enthusiastic about the developed actions, the actions may not have been powerful enough to establish healthy habits in all involved children and families. Perhaps involving a larger group of children in the participatory process may lead to larger effects, as the development of empowerment and continuously working on the topic of energy balance-related behaviors may also contribute to behavior change. To create sustainable behavior change, also larger, more disruptive actions might be necessary, as for example social norms need to change.

Overall, it can be concluded that Kids in Action showed that the approach of participating with children in action development is promising since it can contribute to children's empowerment and their participation in community organizations and local policy. Yet few beneficial effects were found on energy balance-related behaviors, neuromotor fitness, and self-rated health. To explain these discrepancies in the findings of Kids in Action, there are several methodological considerations, which will be further discussed in the next section.

8.3. Methodological considerations

8.3.1. Child participation in Kids in Action

This section will provide an overarching reflection on Kids in Action in relation to child participation, building on participation models described in the introduction. In Kids in Action, children actively participated throughout the project. The framework of Jans & De Backer (2002) describes three dimensions that create the foundation for active participation in youth work: challenge, connection and capacity[1]. The framework further explains that these dimensions have to be embedded within the social and organizational contexts for children's participation to have a further reach and influence. To feel challenged and attracted towards the topic, children need to be involved in decision making in an early stage and building the research agenda[1]. In this early stage it also needs to be discussed with children to what extent they want to have decision making power themselves, have shared-decision making power with adults, or even give some power away in topics they are less interested in[2, 3]. In Kids in Action we noticed that children were mostly challenged by the topic of physical activity and enjoyed co-deciding on the actions to be developed. Children also asked for assistance when needed and collaborated with multiple community partners to make a success of their actions. This finding is in line with the framework of Wong (2010), which describes the differences in the process of youth versus adult control and that ultimately shared control leads to more empowerment[3]. To feel connected, children need to feel respected as equals and feel that their ideas and efforts are acknowledged[1]. For children to be able to actively participate and become empowered, the organization/research has to create the right environment on a physical, social, organizational, structural and normative level[4]. The right conditions and opportunities will create "a context that favors children's 'ability to do things'" [5](p. 4). To allow active participation, children need to have the capacity to participate, meaning that children need to feel that they can take on the challenge and have the necessary skillset and knowledge to do that[1, 5]. In Kids in Action we included sufficient time for capacity building, such as teaching children the necessary research, presentation, and communication skills.

Three main themes are hereafter discussed in more detail, as they provide the most important lessons learned from the Kids in Action study about child participation: 1) Stakeholder involvement at different levels and in different research phases, 2) Shared control between children and adults, 3) Creating an empowering environment.

Stakeholder involvement at different levels and in different research phases

Important to acknowledge at first is that participation is a dynamic process, resulting in different levels of participation throughout the project[6]. As described in chapter 5, the involvement of children in the different phases of Kids in Action varied. In Kids in Action children participated during the problem analysis, action development, and evaluation of children's opinion about developed actions. Children were also involved in the analysis of data that they themselves gathered, but not in the analysis of the data collected for the effect and process evaluation. Involving children in the evaluation of data and interpretation of results can be of added value for future research, as children better understand the local context and can therefore help in interpreting data that researchers might misclassify (chapter 2; [7]). Because in Kids in Action children were highly involved in tasks that were considered interesting for them and less involved in tasks that needed academic training – such as relating children's ideas to scientific theories (chapter 5) – and/or considerable time, they remained challenged. In future participatory studies, researchers and children have to decide together in which phases children do or do not want to be actively involved, as children have to participate at the highest level of their ability[8, 9].

In Kids in Action, participation was not the main goal, but a means to develop effective and attractive actions to improve children's health behaviors. Despite not having the main aim of reaching child participation, children and community organizations highly valued this approach and community organizations increasingly took child participation seriously and put it higher on their agenda (chapter 6). Involving relevant stakeholders already from the start in the design of the study may stimulate integration of child participation within their organization and thereby lead to even more – sustainable –

child participation. When at an early stage there is open discussion about interests, the desired level of child participation, and the level of commitment towards child participation, this may lead to more cohesive collaborations where child participation can further flourish and be sustained[6, 10]. Early collaboration with stakeholders – including children – also aids the development of better integrated and supported actions. In Kids in Action we collaborated with several community partners in the development and implementation of actions so children could benefit from their resources and expertise, and stimulate sustainability of actions after Kids in Action ended as they were embedded in local structures. Unfortunately, the Kids in Action intervention did not result in consistent favorable effects on energybalance-related behaviors, neuromotor fitness, or self-rated health. Active involvement of more relevant stakeholders – on the micro-, meso-, and macro-level – who have an influence on children's health behavior, may be needed to create holistic actions leading to the systemic changes that are needed for improving children's health behavior[11, 12].

Shared control between children and adults

As described in the introduction, there are different views on the level of shared control when participating with children. An important identified strength of Kids in Action was the strong relationship between researchers, children, and community partners (chapter 6). In Kids in Action, a lot of time and effort was put into building trustworthy relationships where children and community partners felt comfortable with the facilitators, treated as equals, and felt that the researchers did not only come in to gather information but also gave something in return. For example, the weekly meetings with children started with an icebreaker together with the facilitators and children could share their thoughts and feelings (chapter 5). To strengthen the collaboration with community partners, the researchers took part in a local network of professionals working with youth, where ideas could be shared and joint actions started. Researchers also collaborated with community organizations on efforts not directly related to the research, to familiarize with the organizations and community members. Children benefited from collaborating with community partners, as actions can reach larger effects

when making use of the local professional's expertise and network[1, 4]. In Kids in Action, when children for example wanted to organize a sports tournament, they collaborated with local professionals with experience in organizing such an event. If children had to organize the event on their own, the tournament might have failed which also is negative for children's feeling of empowerment[3]. Furthermore, in the process of developing actions, adults have value in creating a safe environment for children to meet in and align various ideas and interests[3]. These arguments vow for close youth-adult collaboration in participatory research with children[3]. However not every topic/project might require shared-decision making. For example in Kids in Action, children were less interested in implementing actions related to dietary behavior. Children might prefer adults taking over such a task, as children saw the importance of eating less unhealthy snacks, but did not want to be responsible for junk food becoming too expensive or for closing of the local fast food joint. On the other hand, certain tasks might be suitable for children to have full decision making power over, because it considers their expertise instead of the researchers. Therefore, in future studies children and adults are recommended to discuss their desired level of involvement in decision making.

A related point of discussion concerns the involvement and shared control of children with researchers and community partners. We aimed to engage children throughout the research process, but they were not leading in the design of the research or the effect and process evaluation. During the study, the involvement of stakeholders appeared valuable for children's personal development as well as for action development and implementation. However, children kept the lead in the action development and as the process evaluation indicates, also perceived it that way. Overall, community-based or youth-informed, rather than youth participatory action research, would better match the approach used in Kids in Action.

Creating an empowering environment

The process evaluation showed positive effects on children's empowerment (chapter 6). Zooming in on individual empowerment, children deserve to be complimented for the development they went through, as they worked

hard for it. Children were present week after week to work on the project and developed various skills. In Kids in Action, the researchers created an environment in which children could become empowered. In line with Shier (2019), researchers tried to build children's personal qualities, such as knowledge and capabilities, by providing conditions and opportunities[5]. Examples of this include training in research skills, connecting them to local stakeholders, and by co-developing and implementing their ideas for action. The process evaluation showed that an empowering environment was for example created by the strong relationship between researchers and children, the individual guidance that helped children to show their talents and develop new skills, the feeling of children that they were listened to and that they could make a contribution to their community (chapter 6). Children can therefore benefit from collaborating with adults, as adults can contribute to creating an environment in which children can become empowered[3].

8.3.2. Facilitation

Participatory research requires sensitive and skilled facilitators[13, 14]. Facilitators need to possess certain qualities, such as patience, self-reflection, cultural sensitivity, open-mindedness, receptiveness, active listening, and creativity[15, 16]. Facilitators need to be able to create an environment built on trust, where strong relationships can be built and learning can take place, in order for participants to become empowered[16]. Some of these necessary qualities are part of a person's personality, which makes some researchers more suitable for participatory research than others. Researchers who want to conduct YPAR, need training in teaching, facilitation, and pedagogics[15, 17]. In Kids in Action we had in-house expertise on teaching and pedagogics with Kids Aktief as a partner. Kids Aktief employees accompanied the researchers in their work with children and vice versa, teaching researchers about creating a positive atmosphere, settling disputes, and identifying children's personalities and suitable approaches to work with these different personalities. When YPAR facilitators are properly trained, they can get most out of the participatory process and through that show the respect towards children for the time and efforts they dedicate to the project[18].

8.3.3. Evaluating YPAR-based interventions targeting energy balance-related behaviors

Controlled pre-post trials, such as in Kids in Action, are rarely conducted alongside YPAR, because many YPAR studies are more focused on the process and outcomes around children's participation itself, and also because it is challenging. Firstly, finding suitable control schools is a challenge, as it is difficult to find two schools/neighborhoods that are comparable in for example size, school policies, neighborhood characteristics, and children's sociocultural characteristics. Also, schools are generally not very eager to participate as a control school. Another challenge is that at the start of the study it is unclear which specific health behaviors will be targeted and what actions look like [19, 20], and therefore what are relevant outcome measures. For example in Kids in Action, a water policy was introduced at one of the schools, but water consumption was not measured in the effect evaluation; neuromotor fitness was measured, but no actions were developed that specifically aimed at improving fitness. Additionally, it is challenging to find suitable measurement instruments. In Kids in Action we worked with the best available measurement instruments, but validity and reliability was not always known or adequate. For measuring neuromotor fitness, the valid and reliable MOPER fitness test was used [21]. Results of the MOPER fitness test can however be influenced by children's motivation, temperature in the gym, and time of day. Moreover, certain test-items such as leg-lifting are difficult to administer and therefore prone to cheating [21]. For measuring physical activity and sedentary behavior, Actigraph accelerometers were used. The Actigraph accelerometer is an objective instrument to measure accelerations, but subjective data reduction decisions have to be made to translate raw data into estimates of sedentary behavior, light and moderate-to-vigorous intensity physical activity. As there is no consensus on the best data reduction methods, our decisions – based on previous accelerometer studies with youth (chapter 7) – have influenced the results. Additionally, the accelerometer cannot be worn during water-based activities and high-impact sports such as swimming and judo, and can therefore not capture all of children's activities. For measuring sports and outdoor play participation, consumption of sugar-sweetened beverages and unhealthy snacks, screen

time, and self-rated health, we developed a questionnaire using items from three previously validated questionnaires[22-24]. However, not all items had acceptable validity and reliability, while the responsiveness was unknown. Thus, the questionnaire may have been inadequate in detecting subtle changes in energy balance-related behaviors and self-rated health. Another challenge in health research in low socioeconomic environments is low levels of participation[25, 26]. We experienced this in the questionnaire and accelerometer measurements with participation rates between 30%-65%. These low participation rates could have influenced the results, because children who participated in the actions, did not necessarily also take part in the measurements and vice versa. Another challenge Kids in Action faced was that one of the intervention schools did not participate in the second year of the project, as they were invited to participate in another study. Children of this school therefore did not participate in the development of actions throughout this year, while at other schools most actions were developed in year two. It also reduced the number of children from this school that participated in effect measurements at multiple time points. Lastly, a challenge in Kids in Action was that we collaborated with children in grades 6/7/8 during three school years, which meant that we had a dynamic cohort: grade 8 children in year one and grade 6 children in year three could only participate in the study during one school year.

Because of the challenges of conducting a controlled pre-post trial alongside YPAR, future YPAR studies could look into alternative evaluation designs, such as: 1) the extended cohorts design, where time point one of the intervention group serves as a baseline for age-equivalent intervention groups at following time points[27], thereby dealing with the challenge of finding comparable control schools; 2) a delayed baseline measurement, which takes place after intervention development, but before implementation, and could therefore be helpful in selecting adequate measurement instruments for the targeted behaviors; 3) process evaluations and qualitative effect evaluations, which can provide more insights into the effects of the participatory process itself on the participants and the effects of the study on the larger community, based on their experiences[28, 29]; 4) practice-based evidence, in which the effect and process evaluation are

enriched with the researcher's expertise regarding the target group and targeted behaviors, as well as findings from previous studies[30-32].

8.4. Future research

The aim of Kids in Action was to improve healthy physical activity levels and dietary behaviors in children from a low socioeconomic neighborhood. For YPAR to become acknowledged as a valuable approach for improving energy balance-related behaviors in this target group and be implemented on a larger scale, cost-benefit analyses are necessary to show the value of such an approach[7, 33, 34]. Up till now, no such studies have been conducted. Furthermore, more research is needed into the generalizability of the actions developed by YPAR. YPAR is a method that does not create one-size-fits-all actions, and developed actions have to be adapted to fit into a new setting. Participatory methods should then again be implemented to make the action fit the local context and increase children's ownership and support for the action. Or perhaps the entire YPAR approach needs to be conducted in the new setting. Future research may be able to identify an effective model for scaling locally co-created actions or action strategies[35-37].

To upscale the YPAR approach in practice, future research could explore options to embed YPAR within the school curriculum by training teachers in the approach or offer it as a standard extracurricular subject[17, 38]. Local businesses, government, or foundations, who are determined towards shared-decision making with children within their policies and are willing to set aside resources for the development of actions, could submit cases for children to work on. With the support, resources and opportunities for scalability that this approach brings forth, children's needs and wishes can be regarded in the development of disruptive actions that may be more effective in improving energy balanced-related behaviors.

8.5. Implications for practice & policy

Participatory researchers believe that children need an active voice in research that concerns them or their lives. We believe that also in policy and practice children need an active voice in decision making when decisions concern them or their lives, since actions are better tailored to children's needs and interests when children are involved in the developmental process (chapter 6; [39]). Moreover, when actions are implemented bottom-up instead of top-down, more local support for the action is created. An example from Kids in Action is the water-policy that was implemented at one of the schools. The principal was already thinking about implementing such as policy, and was further enthused by the children's ideas for implementation. Expected struggles in the implementation and adherence of the policy hardly occurred, because children knew the policy was initiated by their peers (chapter 6). Future participatory projects are recommended to include a structural plan to embed child participation in organizational, local and social policy, to aid sustainability of child participation [1, 4, 10]. Bottom-up policy making is already becoming more common in adults, but also has to become the norm with policy concerning children.

- Interviewer: How do you feel when children can participate in decision making?
- Child1: I like it because then children can also give their opinion because what if they do not agree with something, then they can just say it...
- Child2: If we would also be allowed to vote... I think that children should also be allowed to do that.
- Child1: Yes because you know children do not have to keep their mouths shut like little children because...
- Child2: Children are the future!
- Child1: Yes exactly because they say 'Yes children can participate' but then it's only children older than 13 or 16 years. I don't get that because it's children like us who participate in decision making now.

(data Kids in Action – process evaluation)

8.6. Overall conclusion

In Kids in Action, YPAR was successfully conducted which is supported by improvements in children's empowerment, children's increased awareness of healthy behaviors, and successful engagement of community partners in shared-decision making with children. Community partners and children who actively participated in the study were enthusiastic about taking part in the project, the developed actions, and the observed growth of participating children. Unfortunately, no beneficial intervention effects were found on energy balance-related behaviors, neuromotor fitness, and self-rated health. More YPAR studies with suitable evaluation designs need to be conducted to establish whether and how YPAR can lead to improvements in energy balance-related behaviors and health indicators. As the process of including children in decision making and action development has shown to be valuable for children's skill development, community engagement, and suitability of the developed actions, adults are recommended to structurally involve children in the decision-making process that concern children or their lives.

8.7. References

1. Jans, M. and De Backer, K., *Youth (-work) and social participation. Elements for a practical theory*. 2002, Flemish Youth Council - JeP!: Brussels.
2. Thomas, N., (2007). Towards a Theory of Children's Participation. *The International Journal of Children's Rights*, 15: 199-218.
3. Wong, N. T., Zimmerman, M. A., and Parker, E. A., (2010). A typology of youth participation and empowerment for child and adolescent health promotion. *Am J Community Psychol*, 46(1-2): 100-14.
4. Kudva, N. and Driskell, D., (2009). Creating Space for Participation: The Role of Organizational Practice in Structuring Youth Participation. *Community Development*, 40(4): 367-380.
5. Shier, H., (2019). "Empowerment" of Children and Adolescents: What is it, how does it occur, and what is the adult supporter's role? Finding answers in the experience of young people organising with CESESMA in Nicaragua.
6. White, S. C., (1996). Depoliticising development: The uses and abuses of participation. *Development in Practice*, 6(1): 6-15.
7. Leverett, S., *Children's participation*, in *Connecting with children*, S. Leverett and P. Foley, Editors. 2008, Bristol University Press. p. 161-204.
8. Hart, R., (1992). Children's Participation: From Tokenism To Citizenship. *Innocenti Essays*, 4:
9. Treseder, P., *Empowering Children and Young People: Promoting Involvement in Decision-Making*. 1997, London: Save the Children.
10. Shier, H., (2001). Pathways to participation: Openings, opportunities and obligations. *Children & Society*, 15: 107-117.
11. Davison, K. K. and Birch, L. L., (2001). Childhood overweight: a contextual model and recommendations for future research. *Obes Rev*, 2(3): 159-71.
12. Lytle, L. A., (2009). Examining the etiology of childhood obesity: The IDEA study. *Am J Community Psychol*, 44(3-4): 338-49.
13. International Collaboration for Participatory Health Research (ICPHR), *Position Paper 1: What is Participatory Health Research?* 2013, International Collaboration for Participatory Health Research: Berlin.
14. Shier, H., *'Pathways to participation' revisited: Learning from Nicaragua's child coffee workers*. 2009. p. 215-227.
15. Nurick, R. and Apgar, J., *Participatory Action Research Guide for Facilitators*. 2014, Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems.
16. Voluntary services overseas (VSO), *Participatory Approaches: A facilitator's guide*. 2004: London.
17. Ozer, E. J., Cantor, J. P., Cruz, G. W., Fox, B., Hubbard, E., and Moret, L., (2008). The diffusion of youth-led participatory research in urban schools: the role of the prevention support system in implementation and sustainability. *Am J Community Psychol*, 41(3-4): 278-89.
18. International Collaboration for Participatory Health Research (ICPHR), *Position Paper 2: Participatory Health Research. A Guide to Ethical Principles and Practice*. 2013,

International Collaboration for Participatory Health Research: Berlin.

19. Allen, K., Needham, C., Hall, K., and Tanner, D., (2019). Participatory research meets validated outcome measures: Tensions in the co-production of social care evaluation. *Social Policy & Administration*, 53(2): 311-325.
20. Anyon, Y., Bender, K., Kennedy, H., and Dechants, J., (2018). A Systematic Review of Youth Participatory Action Research (YPAR) in the United States: Methodologies, Youth Outcomes, and Future Directions. *Health Educ Behav*: 1090198118769357.
21. Leyten, C., *De moper fitheidstest: onderzoeksverslag - 9 t/m 11 jarigen*. 1982, Haarlem: BV Uitgeverij De Vrieseborch.
22. Janssen, E. H., Singh, A. S., van Nassau, F., Brug, J., van Mechelen, W., and Chinapaw, M. J., (2014). Test-retest reliability and construct validity of the DOiT (Dutch Obesity Intervention in Teenagers) questionnaire: measuring energy balance-related behaviours in Dutch adolescents. *Public Health Nutr*, 17(2): 277-86.
23. Ravens-Sieberer, U., Wille, N., Badia, X., Bonsel, G., Burstrom, K., Cavrini, G., Devlin, N., Egmar, A. C., Gusi, N., Herdman, M., Jelsma, J., Kind, P., Olivares, P. R., Scalone, L., and Greiner, W., (2010). Feasibility, reliability, and validity of the EQ-5D-Y: results from a multinational study. *Qual Life Res*, 19(6): 887-97.
24. Singh, A. S., Vik, F. N., Chinapaw, M. J., Uijtdewilligen, L., Verloigne, M., Fernandez-Alvira, J. M., Stomfai, S., Manios, Y., Martens, M., and Brug, J., (2011). Test-retest reliability and construct validity of the ENERGY-child questionnaire on energy balance-related behaviours and their potential determinants: the ENERGY-project. *Int J Behav Nutr Phys Act*, 8: 136.
25. Bonevski, B., Randell, M., Paul, C., Chapman, K., Twyman, L., Bryant, J., Brozek, I., and Hughes, C., (2014). Reaching the hard-to-reach: a systematic review of strategies for improving health and medical research with socially disadvantaged groups. *BMC Medical Research Methodology*, 14(1): 42.
26. Carroll, J. K., Yancey, A. K., Spring, B., Figueroa-Moseley, C., Mohr, D. C., Mustian, K. M., Sprod, L. K., Purnell, J. Q., and Fiscella, K., (2011). What are successful recruitment and retention strategies for underserved populations? Examining physical activity interventions in primary care and community settings. *Translational behavioral medicine*, 1(2): 234-251.
27. Olweus, D., (2005). A useful evaluation design, and effects of the Olweus Bullying Prevention Program. *Psychology, Crime & Law*, 11(4): 389-402.
28. Jonsson, L., Froberg, A., Korp, P., Larsson, C., Berg, C., and Lindgren, E. C., (2019). Possibilities and challenges in developing and implementing an empowerment-based school-intervention in a Swedish disadvantaged community. *Health Promot Int*:
29. Siddiqui, N., Gorard, S., and See, B. H., (2018). The importance of process evaluation for randomised control trials in education. *Educational Research*, 60(3): 357-370.
30. Ammerman, A., Smith, T. W., and Calancie, L., (2014). Practice-based evidence in public health: improving reach, relevance, and results. *Annu Rev Public Health*, 35: 47-63.
31. Green, L. W., (2008). Making research relevant: if it is an evidence-based practice, where's the practice-based evidence? *Family Practice*, 25(suppl_1): i20-i24.
32. Centre for Community Child Health, *Evidence-based practice and practice-based evidence: What does it all mean?*, in *Policy brief*. 2011, Centre for Community Child Health:

Melbourne, Australia.

33. Frerichs, L., Ataga, O., Corbie-Smith, G., and Tessler Lindau, S., (2016). Child and youth participatory interventions for addressing lifestyle-related childhood obesity: a systematic review. *Obes Rev*, 17(12): 1276-1286.
34. Jacquez, F., Vaughn, L. M., and Wagner, E., (2013). Youth as partners, participants or passive recipients: a review of children and adolescents in community-based participatory research (CBPR). *Am J Community Psychol*, 51(1-2): 176-89.
35. Cargo, M. and Mercer, S. L., (2008). The value and challenges of participatory research: strengthening its practice. *Annu Rev Public Health*, 29: 325-50.
36. Ozer, E. J., Ritterman, M. L., and Wanis, M. G., (2010). Participatory action research (PAR) in middle school: opportunities, constraints, and key processes. *Am J Community Psychol*, 46(1-2): 152-66.
37. Lems, E., Hilverda, F., Broerse, J. E. W., and Dedding, C., (2019). 'Just stuff yourself': Identifying health-promotion strategies from the perspectives of adolescent boys from disadvantaged neighbourhoods. *Health Expect*, 22(5): 1040-1049.
38. Checkoway, B., Allison, T., and Montoya, C., (2005). Youth Participation in Public Policy at the Municipal Level. *Children and Youth Services Review*, 27: 1149-1162.
39. Christens, B. and Dolan, T., (2011). Interweaving Youth Development, Community Development, and Social Change Through Youth Organizing. *Youth & Society*, 43: 528-548.
40. Lal, A., Bulc, B., Bewa, M. J., Cassim, M. Y., Choonara, S., Efendioglu, E., Germann, S., Hafeez, H., Iversen, K., Nishtar, S., O'Leary, C., Orlic, P., Ralston, J., Ramchandani, R., and Walji, S., (2019). Changing the narrative: responsibility for youth engagement is a two-way street. *Lancet Child Adolesc Health*, 3(10): 673-675.