




# BMJ Open Understanding children's perceptions of, and priorities for, healthy neighbourhoods in Aotearoa New Zealand: study protocol for a cross-sectional study

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## ABSTRACT

**Introduction** Neighbourhood environments can have significant and enduring impacts on children's physical, psychological and social health. Environments can impact health through promoting or hindering physical activity, active travel, and healthy eating in addition to opportunities for social interaction, cognitive development, rest and relaxation. There is a paucity of research that has examined neighbourhood and health priorities, strengths and needs from the perspectives of the community, and even less that has focused on the perspectives of children within communities. The aim of this article is to describe the research protocol for a project to gather child-identified needs and strengths-based solutions for promoting child health and well-being in urban neighbourhood environments.

**Methods and analysis** This participatory research project is designed to partner with children in school settings in Tāmaki Makaurau Auckland and Ōtepoti Dunedin, Aotearoa New Zealand. An abundant communities approach will be used with children to identify needs and strengths related to neighbourhoods and health. Specific methods including collaborative, creative, play-based methods such as concept-mapping activities and co-creation of final dissemination material on the key messages are described. Plans for researcher reflections, data analysis and dissemination are also detailed.

**Ethics and dissemination** This research has been approved by the University of Auckland Human Participants Ethics Committee. Results will be disseminated through child and researcher co-created output, a technical report and academic journal articles. By using evidence-based child-centred approaches to knowledge generation, we anticipate the research will generate new localised insights about children's preferences and needs for healthy neighbourhoods which will be shared with stakeholders in planning and practice. The detailed session protocol including critical researcher reflections is shared in this manuscript for application, development and refinement in future research.

## INTRODUCTION

Neighbourhood environments can have significant and enduring impacts on

## Strengths and limitations of this study

- Child-centred research methods are being used to understand how children perceive healthy neighbourhoods and to identify children's needs and priorities.
- Children will be supported to develop knowledge-translation outputs for sharing their neighbourhood needs and priorities with stakeholders.
- An in-depth researcher critical reflection process will aid development and refinement of processes for future research.
- A detailed session guide has been developed that will support researchers when working with children to understand their environmental perceptions, preferences and needs.

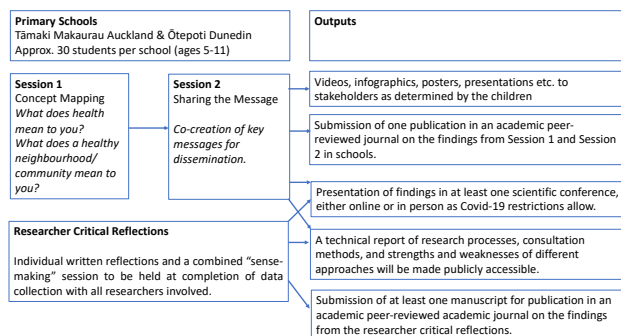
children's physical, psychological and social health, through promoting or hindering physical activity, active transport (eg, walking, cycling or scooting for transport), independent mobility (unsupervised play and active transport) and healthy eating.<sup>1 2</sup> Evidence demonstrates the important downstream impacts of these relationships, including promoting a healthy body size and positive mental health.<sup>3-6</sup> Evidence also suggests a direct link between neighbourhood green/natural space and mental health.<sup>7 8</sup>

Built environments are the places and spaces created and modified by people, encompassing a range of physical and social elements that make up the structure of a place and of a community.<sup>9 10</sup> Built environments are likely to have more sustained influences on health behaviours and outcomes than individual factors. For example, individual, education-based strategies to improve physical activity have proven unsuccessful at

the population level, predominantly because the environmental context remains unchanged.<sup>11</sup> A WHO review concluded ‘Environmental interventions targeting the built environment, policies that reduce barriers to physical activity, transport policies and policies to increase space for recreational activity have been demonstrated to be effective.’<sup>12</sup>

There is widespread agreement that built environments can promote or hinder health behaviours and outcomes, and evidence exists for specific environmental features of importance.<sup>1 2 13 14</sup> Inequalities may exist in terms of residential access to health-promoting environments (eg, public open spaces).<sup>15–17</sup> An Aotearoa New Zealand (NZ) study has shown greater access to fast food, takeaway and convenience outlets around lower decile, compared with higher decile, schools.<sup>18</sup> Similarly, our research has shown greater exposure to unhealthy food and beverage advertising marketed to children in more walkable and higher deprivation school neighbourhoods, compared with less walkable and lower deprivation school neighbourhoods.<sup>19 20</sup>

The Child Friendly City Framework for Action was developed by UNICEF to facilitate implementation of the United Nations Convention on the Rights of the Child (UNCROC) in local government processes.<sup>21 22</sup> A child-friendly city is one that fulfils children’s rights through enabling children’s voices, and integrating children’s needs, priorities, and opinions into public policy, programmes, and decision-making.<sup>21</sup> A recent systematic review revealed numerous potential benefits to the child as well as their community when child participation is facilitated in urban design, however evidence of systematic policy drivers to enable this was limited.<sup>23</sup> There is also a need for increased understanding and application of best practice approaches for environmental design from the perspectives of children.<sup>23 24</sup> Activities that fit with the Child and Youth Friendly Cities framework can be found in NZ, for example, in the Northland city of Whāngārei.



**Figure 1. Structure of the data collection methods and associated outputs**

As part of this, the Northland Inter-sectoral Forum, a collective of government agencies in the region, has committed to a 5-year challenge to develop individual agency plans that focus on child and youth needs, rights, voice and preferences.

Approaches to undertaking environment and child health research are intertwined with how childhood and children are constructed and defined. Here we draw from the UNCROC<sup>22</sup> and the ‘new social studies of childhood’, whereby children are seen as competent social actors, and a socially constructed group in their own right (as opposed to being pre-adult ‘becomings’<sup>25</sup>).<sup>26–28</sup> It is important to situate research findings within wider socio-political structures.<sup>29</sup> This stance allows us to see children as unique and different to the adults who are responsible for the physical and political world in which children exist and to recognise the potential for this group to provide unique knowledge. This framing has provided us with the impetus and rationale to seek, respect, and share children’s perspectives with the aim of informing future policy and practice.

In this context, we take a ‘child-centred’ approach, by exploring and prioritising children’s perspectives through employing participatory research methods,<sup>30</sup> and facilitating children’s knowledge transfer with stakeholders in policy and practice. A range of participatory and co-creation/co-design approaches have been employed with children,<sup>23 24 31–34</sup> with the depth of engagement and framing of children and their role in the research varying substantially.<sup>31</sup> Here, we draw from Horgan,<sup>30</sup> in particular by being cognisant of power and representation, managing the potential risks of group thinking (which could exclude individuals), and using visual and activity-focused methods. Co-creation of information will draw from Paracha *et al*<sup>35</sup> including approaches to allow for multiple perspectives on effective communication, translating field data into usable insights, and idea-generation and rapid concept development. Concept mapping is likely to be a useful method to aid children’s generation of meaning frameworks,<sup>36</sup> as children are not required to come with pre-existing frameworks or understanding. Instead, the concept-mapping approach allows for multiple ideas, topics, and data inputs to be considered, collated, and structured to generate meaning, identify priorities, and understand links between concepts.<sup>37 38</sup>

Previous consultation with children has highlighted the unique perspectives that children can bring to understanding communities and health.<sup>39</sup> For example, children (aged 5–12 years) expressed a clear desire for kind and caring neighbourhoods—an unlikely finding to arise had an adult-centric approach been taken to eliciting information. At face value, this may not seem to directly inform neighbourhood design, but a deeper examination of the priorities and rationale behind this can be extremely powerful, and can be used to inform neighbourhood design for those who might need it most (examples given by children include: provision of seats for the frail and streetscapes that support individuals with mobility impairments to get around safely). This project demonstrated the capacity and capability of young people to communicate effectively on the design of environments that will promote use and enjoyment of the space.

This scenario is reflected in similar research conducted internationally.<sup>40 41</sup>

The research outlined in this study protocol aims to extend this child-centred approach, by starting with the children themselves (rather than a predefined need/setting), identifying what they see as being important in their neighbourhood, where they would like changes made, and what changes they would like to see; and then empowering them to share this information with relevant stakeholders. In this context, we prioritise āta, or growing respectful relationships, through building and nurturing relationships, respecting children's thoughts, perceptions and needs, and recognising the research as a reciprocal process.<sup>42</sup> An abundant communities philosophy prioritises people and communities as having something to contribute to impact positive change, and the competence to problem solve and generate change.<sup>43</sup> Such community strengths-based approaches are integral to developing health interventions and messages that are appropriate, acceptable, relevant and effective.

The aim of this research is to gather community-identified needs and strengths-based solutions for promoting child health and well-being in urban neighbourhood environments. This article will detail the protocol developed to undertake this research.

The key research questions are:

1. What does 'health' mean to children? How do they define/describe health?
2. What community and neighbourhood 'assets' do children draw on to promote health (of themselves or others)?
3. What are children's requirements, priorities and preferences for the design of their neighbourhoods?
4. How can children inform the design of their neighbourhoods for optimal health (what processes exist; what are children's preferences for communicating their thoughts; how can this be achieved)?
5. How can researchers, practitioners, and policymakers work with children to support knowledge transfer, and ensure health promotion initiatives and research are appropriate and effective?

## METHODS AND ANALYSIS

This research will use a child-centred participatory research approach<sup>30</sup> in primary school (age 5–11 years) settings in Tāmaki Makaurau Auckland and Ōtepoti Dunedin, NZ (figure 1). Cross-sectional data collection will be undertaken with a convenience sample (ie, non-probability sampling based on ease of obtaining a sample<sup>44</sup>) of schoolchildren. An abundant communities approach will be used with children to identify needs and strengths related to neighbourhoods and health.<sup>43</sup> Planned dates for data collection are June 2020–August 2021. The timeline for the process is flexible across the activities and will fit with school priorities (eg, the time gap between session 1 and session 2 could be anywhere between 1 day and 2 weeks depending on school schedules). Researcher

critical reflections will occur within 2 days of data collection at each school. The dissemination process will occur after all school data collection is complete and is anticipated to occur after August 2021.

## Participant recruitment

Four primary schools (two each in Tāmaki Makaurau Auckland and Ōtepoti Dunedin) will be invited to participate in this research through the investigators' existing relationships. The study will be conducted in the cities of Tāmaki Makaurau Auckland and Ōtepoti Dunedin. Despite being a sample of convenience at this regional level (the research team currently works across these two cities), the two regions also have considerable differences in sociodemographic characteristics which was of relevance to the research. Ōtepoti Dunedin City has a population of 126 255 usual residents with a median age of 36.8 years, 86.6% of whom identify as being of NZ European ethnicity, 9.3% Māori, 3.2% Pacific and 7.8% Asian.<sup>45</sup> In comparison, Tāmaki Makaurau Auckland is NZ's largest city, with a population of 1 571 718; the population is slightly younger (median age of 34.7 years), and considerably more ethnically diverse (53.5% NZ European, 11.5% Māori, 15.5% Pacific and 28.2% Asian).<sup>45</sup> Schools will be purposively selected for invitation with the aim to have heterogeneity in area-level geographical and sociodemographic factors. All schools will be provided with an information sheet for the school and their board of trustees (Crown entity responsible for governance and control of school management). Researchers will also provide information on sessions to school staff and meet with the school principal where requested. Consent from an authorised school representative will be required for the school to be involved in the study.

Approximately 30 children participants per school will be involved in the research. Our extensive experience working with schools and children has affirmed the importance of being flexible and adaptive in research approaches and respecting school needs and preferences, and in the feasibility of recruiting the proposed number of children.<sup>46–48</sup> Accordingly, participating schools will be asked to invite children to participate in this research. As we are not seeking representativeness or generalisability, and aim to conduct the research in a way that works for schools, we will not stipulate the method by which children will be identified and invited and instead we will work with the schools to recruit children. From the researcher perspective, all children attending the school are eligible to participate (ie, there will be no restrictions on age/year level). However, some schools may choose to identify one class/year group in the school to participate (for ease of scheduling activities around school timetables); and in other schools, all children across all primary school years may be invited on a first-come, first-serve basis.

Schools will be asked to provide children with research material prepared by our research team, comprising a child information sheet and invitation to participate, parent information sheet, child assent form and parent

consent form. Children will be asked to take this material home, and will be given at least 2 weeks to consider the invitation and ask any questions about the research (email and phone contact details will be provided in information sheets for the principal investigator and ethics committee representative). Both child assent and parent consent will be required in order for the child to participate in this research. The only exclusion criterion will be if the child is going to be away on any of the scheduled research activity dates.

### Data collection

Over two sessions of approximately 2.5 hours each, the research team (comprising three to four researchers with at least Master's level qualifications in health promotion or related fields) will come to each school to conduct data collection sessions.

In session 1, the focus will be on concept-mapping,<sup>36</sup> where researchers will work with students to generate definitions and meanings for the two focus areas: (1) What does health mean to you? and (2) How does your community/neighbourhood help you/others to be healthy? After an introductory session to introduce each other and the project and share ideas about key concepts, children will be organised into small groups (approximately four to six children) to brainstorm answers to each question as a group. Research team members will move throughout the space and provide intermittent facilitation where required. Once potential ideas are recorded, groups will be encouraged to organise ideas into themes, again with facilitation where required. A whole-group voting session will then be undertaken—this involves children covering their eyes (in order not to see other children's preferences) while raising their hands to vote for priority topics. Data collected during these sessions will be in the form of photos and/or video (with no child identifiable) of post-it notes, whiteboards, drawings, craft-work, and/or models. For each of these forms of data, information will be entered into a Microsoft Excel spreadsheet for analysis (eg, where available, information will include group number/name, and for each stage of the process any words/phrases written and photographs of drawings or sculptures, etc). In addition, descriptive data will be collated on the number of children participating, number of groups, numbers of children in each group and number of votes for identified topics. The research team will work with children to generate key messages for child-selected priorities for a healthy neighbourhood to share with stakeholders. This could be achieved through discussions, mapping out ideas on whiteboards, or acting out scenarios with children depending on their preference. Depending on the key message of choice, target stakeholder audiences could include local or regional boards, councils or transport agencies.

In session 2, following reorientation activities to remind children of the concepts from session 1, the children will select a concept from session 1 and will co-create dissemination materials to share with stakeholders.<sup>35</sup> It is possible

that these dissemination materials, determined by the children, will include posters, flyers, written speeches and/or a video made using models and other materials. Research team member roles will be to support children in creating these materials which may include helping to finalise and fine-tune wording, but their role will not include determining the topic of interest or key messages.

After each data collection session in each school, researchers will reflect on the session and document these reflections within 2 days, following the critical reflective practice questions of Fook and Gardner.<sup>49</sup> Specifically, members of the research team will be asked to reflect on what they did, what different perspectives arose (or may have been missing), the researcher's potential influence on the situation, personal theories of practice and how these theories could be trialled. Reflection on group dynamics as described by Van Mechelen *et al*<sup>50</sup> including what occurred and how this may impact the findings may also be completed. These reflections will be recorded by each researcher individually in the form of written Microsoft Word documents. At the completion of all data collection, researchers will meet again to consider these reflections and make sense of the data, drawing again from the approach of Fook and Gardner.<sup>49</sup>

Detailed methods that will be used in all data collection sessions are provided in full in the session guide (attached as online supplemental material).

### Analysis plan

Quantitative data, including counts of ideas and themes generated during the concept-mapping activities and the results of voting on key messages, will be analysed descriptively using SPSS V.24 (IBM). Qualitative data including images, pictures, videos and researcher critical reflections will be uploaded into NVivo V.13 (QSR International, Melbourne, Australia) and analysed using thematic analysis.<sup>51</sup> Analysis will be checked by a Māori team member to ensure that Māori understanding is amplified and understood within their context.

### Patient and public involvement

While the development of the research aims was informed by our previous research with children,<sup>15 46 52 53</sup> children did not inform the research aim or study design directly. School representatives were involved in child recruitment as outlined above, and to some extent informed the conduct of the study (in terms of timing and location of data collection sessions). Study participants will be involved in developing outputs for sharing with stakeholders as outlined above. Participants who have indicated on the participant consent form that they wish to receive study results directly will be sent published articles from the research. Published research will also be shared with schools.

## ETHICS AND DISSEMINATION

This research was approved by the University of Auckland Human Participants Ethics Committee in 2019 (reference number 022910). Community dissemination activities will include: a child and researcher co-created output<sup>35</sup> that outlines community needs and strengths-based solutions for promoting child health and well-being in urban neighbourhoods for sharing with the general public and stakeholders (eg, in urban design or transport planning, dependent on the topic chosen by children) and a technical report (that can also be used for academic dissemination purposes). The research team have existing relationships with a wide range of stakeholders in urban design, child health and transport planning through previous research. We will draw on these relationships to ensure children's messages are shared with appropriate stakeholders effectively. Academic dissemination is proposed to include a scientific journal article articulating child-identified neighbourhood health definitions and priorities, and a second scientific journal article focusing on researcher critical reflections. Findings will also be submitted for presentation at relevant scientific conferences (eg, Child in the City) and local stakeholder-relevant conferences (eg, Living Streets Aotearoa New Zealand Walking Summit, 2WalkandCycle).

## DISCUSSION

This research will provide new information and localised understanding of how neighbourhoods can impact child health and how these might differ across geographical contexts (and where possible, across sociodemographic contexts), with a priority placed on identifying strengths and needs from a child's perspective. A wealth of evidence demonstrates children bring unique perspectives and playfulness to understanding how environments can support optimal health outcomes.<sup>24 31 54</sup> This information is essential for the development of effective interventions for improved health and health outcomes in young people.<sup>1 55</sup> Yet such community-driven approaches are scarce, likely due to the time commitment required to nurture relationships and ensure reciprocity<sup>56 57</sup> and a lack of mandating legislation.<sup>23</sup> Through co-creating outputs to share with stakeholders, we aim to bridge the gap between children and policymakers/practitioners and lay the foundation for future research to improve these links and knowledge-transfer pathways. In-depth researcher critical reflections will be used to produce new knowledge for refining the protocols used in this study and for developing research in this field.

The strengths-based and child-centred research methods used in this research are well placed to elicit local understanding and ascertain specific areas of importance to children.<sup>23 24 40</sup> The study design will also facilitate the sharing of children's knowledge, talents and gifts to stakeholders. This approach embodies the abundant communities philosophy which posits that within neighbourhoods, communities have the capacity to address

human needs and that this occurs by listening to and providing space for all community members (including children and other marginalised people) to contribute.<sup>43</sup> As child health and well-being is no longer solely the responsibility of the health profession,<sup>58</sup> our methodological approach answers the call by Clark *et al*,<sup>58</sup> on behalf of the WHO and UNICEF (2020) to 'find better ways to amplify their (children's) voice and skills for the planet's sustainable and healthy future.' The inclusion of creative and arts-based dissemination and knowledge-translation materials is a vital component of this research which specifically aims to address this need.<sup>59 60</sup>

Anticipated challenges to the research include school recruitment, issues with engaging children in the activities, ensuring depth of information collected, researcher perspectives impacting the research or over-riding children's perspectives, and challenges of knowledge transfer with stakeholders. Specific methods being employed have been drawn from previous research while recognising the importance of being flexible and adaptable in school settings. Proposed approaches to deal with each of these challenges are as follows:

1. School recruitment: we recognise the considerable time challenge schools have due to numerous competing priorities. Methods for engaging with schools and recruiting children have been informed by previous environment and health studies involving school-aged children.<sup>47 48 61</sup> In this research, we are proposing to approach schools where the researchers have existing relationships or connections to aid school recruitment. We will make the research process as streamlined as possible for schools by having clear documentation and processes to share with the school over one face-to-face meeting and having one key point of contact for the school (as opposed to multiple forms of communication over multiple contact points with multiple people). In our documentation, we will be clear that the process can be flexible to meet the school's needs and preferences (eg, providing a range of dates, allowing for flexibility in timing between sessions 1 and 2, and enabling the school to choose the optimal participant recruitment approach for them). We will offer to bring knowledge-transfer materials back to the schools and share these with the school community in a way that the school chooses.
2. Engaging children: it is possible that perspectives of some children are not gathered due to group dynamics, or that children are not engaged in the process at all. To increase engagement, the full session guide allows for preliminary games with the aim of having the children connect with each other and the research team, and to release some energy before the concept-mapping activity. Consideration of group dynamics and qualitative research with children is grounded in the work of Van Mechelen *et al*<sup>50</sup> and Darbyshire *et al*,<sup>62</sup> respectively. In particular, all data collection team members must have familiarised themselves with possible group dynamics identified by Van Mechelen *et al*<sup>50</sup>



- (unequal power, free riding, laughing out loud, apart together, deconstructive conflict, groupthink), and associated strategies to overcome these.
3. Ensuring depth of information: even with high levels of engagement, it is possible the planned duration and number of sessions will be insufficient to collect meaningful information with participants. Participatory approaches and associated methods exist across a spectrum.<sup>63</sup> At the higher end of this spectrum, allowing time to explore the study area; providing opportunities to learn about the area's history; understanding what transformations are possible (eg, through site visits); and having sufficient time to accumulate this information alongside individual experiences to formulate ideas and to generate inputs are important.<sup>64</sup> In the current study, time and funding constraints alongside the aim to collect information in geographically diverse school neighbourhoods restrict such deep engagement with children. Strategies to support the collection of meaningful information include having a team experienced in working with children, participatory methods and group work; having a robust, evidence-based and piloted protocol to keep the data collection on track; and having clear objectives for children to work to during the sessions. It will also be important to consider the limitations of this work in terms of depth of information when we undertake study dissemination.
  4. Researcher perspectives: drawing from Van Mechelen *et al.*,<sup>50</sup> we see the researcher role as orchestrating 'dialogue with and among children and to make sure value conflicts are transcended and translated into meaningful design concepts'. The research team are all experienced in child and health research, and are cognisant of the potential role of researcher bias and positionality in how research is conducted and interpreted.<sup>65</sup> The full session guide provides clear guidance for the team, for example, providing lists of prompting questions rather than researchers using leading questions. The concept-mapping protocols have been drawn from the work of Novak<sup>36</sup> and reformulated for use with children based on pilot work. Researcher critical reflection is also an important component of the research; critical researcher reflections are informed by Van Mechelen *et al.*<sup>50</sup> and Fook and Gardner.<sup>49</sup>
  5. Stakeholder knowledge transfer: as noted above, the research team will draw existing relationships to ensure children's messages are shared with appropriate stakeholders effectively. Importantly, three of the team members (TC, LS, AW) have roles in relevant stakeholder organisations (a primary health organisation, council and a local board, respectively). This multidisciplinary team will help inform approaches for effective knowledge transfer to stakeholders. Finally, we aim to undertake additional research in the future to focus on this area of research with the aim of optimising knowledge uptake and developing strong knowledge transfer processes for this and future projects.

This research will provide urban planners and policy-makers with a practical understanding of how participatory research approaches with children can be employed. We have provided the full session guide in the online supplemental material of this paper to be of practical benefit to others wishing to conduct strengths-based participatory research with children. In the full session guide, we have described the activities in sufficient detail to allow the study materials to be reproduced, adapted and modified to fit a variety of contexts. This approach has been chosen since previous NZ-based case studies showed that planners wanted practical guidelines to be able to engage confidently and effectively with children and young people.<sup>66</sup>

A strength of this research is the evidence-based, robust and reliable method for engaging with children and eliciting their perspectives and experiences. Limitations of this study include a small number of participating schools and children. Within the social construction of 'childhood', it is essential to recognise that children are not a homogeneous group and that intersectional differences will exist across experiences, perceptions and ways of sharing knowledge (eg, across age, gender, ethnicity and geography). This research does not allow for the exploration of intersectionality and associated differences in perceptions and priorities. However, aligning with the work of Holloway and Valentine,<sup>28</sup> this research prioritises 'children' as a primary group of importance. We aim to apply a range of methods to draw out multiple perspectives from children, have wide inclusion criteria so as to not exclude any particular groups (eg, based on age), and to work with children across diverse geographical regions in order to generate localised understanding and to identify any differences between study areas.

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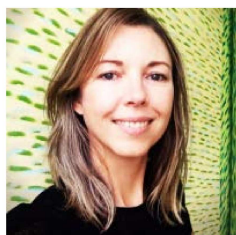
**MEDICAL AND  
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# Neighbourhoods and Health

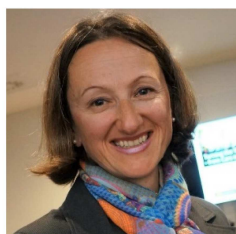
Session Guides and Research Protocol

May, 2020

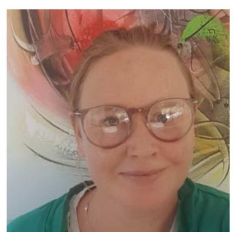
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## SESSION ONE: CONCEPT MAPPING

### *Materials:*

- White board
- White board markers
- White board eraser
- Funny whistle/bell
- Balloons
- Name tags
- Blue tac
- Facilitator note book
- Demographic cards (prepared in consultation with schools)
- Blank A4 paper
- 5 small tarpaulins
- 40 small prizes (e.g. balls, hats, books, stationery supplies)
- 10 packs each containing:
  - A full set of colourful felt tip markers
  - Pens
  - Post it notes in 5 different bright colours
  - Sheets of large butchers paper
- Charades cards (back up games)
- Boom speaker (back up games)
- Yarn (back up games)

*Set up:* Both Session 1 and Session 2 are to occur on separate days. Each session is to be the duration of approx. 2 – 2.5 hours, in accordance with the needs and preferences of participating schools. (Note the timings indicated in the headings included in this protocol are for 2 hour sessions allowing 5 minutes at the beginning and end of the session as leeway). In the appendix are a list of games that can be played with the children if extra time needs to be filled by the facilitator at the end of the session. Because these games can be quite loud, it is preferable for the session to be held in the school hall or in a large classroom away from other usual classes. The room should be cleared of furniture and only contain open space, a clean floor and a whiteboard.

*A note on timing:* The aim of Session 1 is to gain insight into children's perceptions and ideas around health and neighbourhoods. It is therefore important that the timing of the sessions be flexible. It is more important for children engage meaningfully with the activities and be given opportunity to voice their opinions and thoughts than to complete all the scheduled activities within the session timeframe. Some schools may complete all activities well ahead of the time allotted for each activity. In this case, in order to maintain enthusiasm and momentum timing can be reduced - this is why the back up games have been included for use at the end of the session. It is also possible some schools, will take much longer to complete each activity than the allotted time. **It is ok if not all schools complete all activities.** Facilitators are to carefully document any changes to scheduled timings, including the reasons for the change in the facilitator notebook.

For schools where Activity 5: Application is not completed, this will occur at the beginning of Session Two.

*Research note:* All facilitators are to be familiar with this session guide in full. Prior to the session facilitators should adjust the time guides for each activity in Session 1 depending on the time

allocated by each school and document it in the facilitator note book, however, note that this is flexible.

One facilitator leads the session and gives the primary direction to the group for each activity. The second facilitator is responsible for the facilitator note book, careful observation of the group for group dynamics, power and participation, and assisting with prompting students in Activity Two and Activity Three. Depending on the numbers of children participating in each session additional facilitators may be required, both to control group dynamics and assist with scribing in the concept mapping activities. To ensure continuity in delivery appoint one lead facilitator for all sessions. This will be Dr Victoria Egli.

The following articles should be read by all facilitators prior to running the sessions:

- Fook, J., & Gardner, F. (2007). Chapter 10: Using Critical Reflection in Research and Evaluation. *Practising critical reflection: A resource handbook: A handbook*: McGraw-Hill Education (UK).
- Van Mechelen, M., Gielen, M., Laenen, A., & Zaman, B. (2014, June). Exploring challenging group dynamics in participatory design with children. In *Proceedings of the 2014 conference on Interaction design and children* (pp. 269-272). ACM.
- Novak, J. D. (2010). *Learning, creating, and using knowledge: Concept maps as facilitative tools in schools and corporations*. Routledge.
- Egli, V., Villanueva, K., Donnellan, N., Mackay, L., Forsyth, E., Zinn, C., ... & Smith, M. (2019). Understanding children's neighbourhood destinations: presenting the Kids-PoND framework. *Children's Geographies*, 1-15.

### *Activity 1: Getting to know the students (20 min)*

*Goal:* Through playing fun, active games, the group gets used to working together in teams and listening to the facilitators for direction and instruction. Rapport is developed. The active component will help to let off excitement/energy about being outside of the usual classroom setting. People Bingo will introduce concepts relating to health and neighbourhoods, as well as get students thinking about themselves and others. Facilitators may use the funny whistle/bell or music playing through the Boom speaker to get the groups attention in noisy/rowdy groups.

*Overview:* Play the following two games.

#### Tarp Flip:

1. Spread a few tarpaulins on the floor.
2. Get groups of students to stand on them.
3. They have to flip the tarp completely over without stepping off of it. For older students, place more people on smaller tarps gradually increasing difficulty with teams eliminated as the last to finish, rather than first finished wins.

#### Neighbourhood People Bingo:

1. Give every student the worksheet and a pen (see appendix).
2. Read aloud the written instructions.

*Research note:* Facilitators should watch and identify students who are leaders and identify students who may need more prompting to ensure their voice is also heard in the activity. Decide if groups need to be rearranged for the next activity, or if the groups on the tarp are working well then use these as the groups for the proceeding concept mapping activity. If it is necessary to rearrange groups, do so by asking students to form a line and counting off each child number 1-6 repeated, (to create approximate groups of 5), then form groups by number.

## Activity 2: Concept mapping 1, health (35 min)

**Goal:** Gain an understanding of what “health” means to children.

**Step 1. Setting up/Preparation:** Divide students into small groups of 4-6 students. Provide each group with a set of materials and ask them to come up with a team name (this gets students used to working together as a team). Go around the room and share the team names. Ask students to write their team name in the top right corner of the large sheet of butchers paper. Tell teams that what they have created at the end of this session they will present to the larger group at the end of the activity.

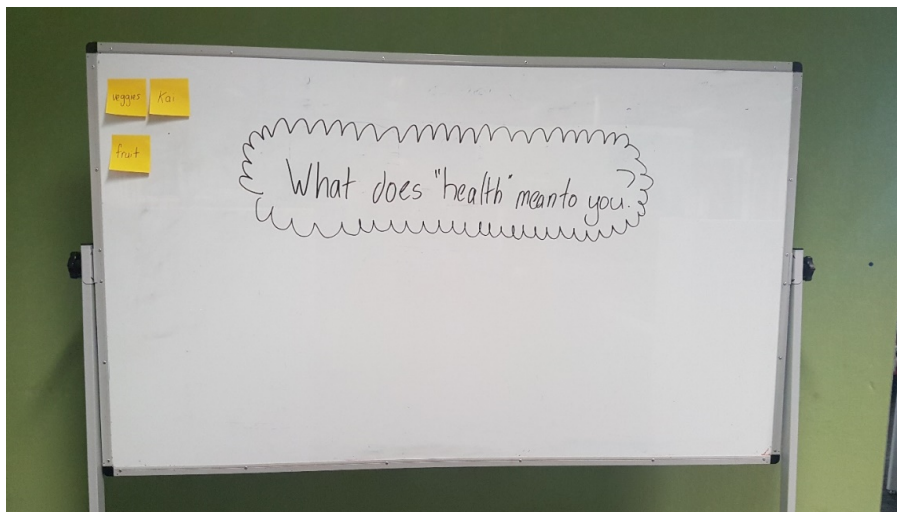
While this is happening, the facilitator writes the focus question in large font on the whiteboard, **“What does ‘health’ mean to you?”**

Ask students to write words or draw symbols for each of the possible statements they can think of that might be included in their meaning of health. Demonstrate by asking for 4-5 examples from the large group, write them in big black marker on a large post it note, and list them on the whiteboard neatly in table format. Remind students there are no right or wrong answers, we just genuinely want to know what they think.

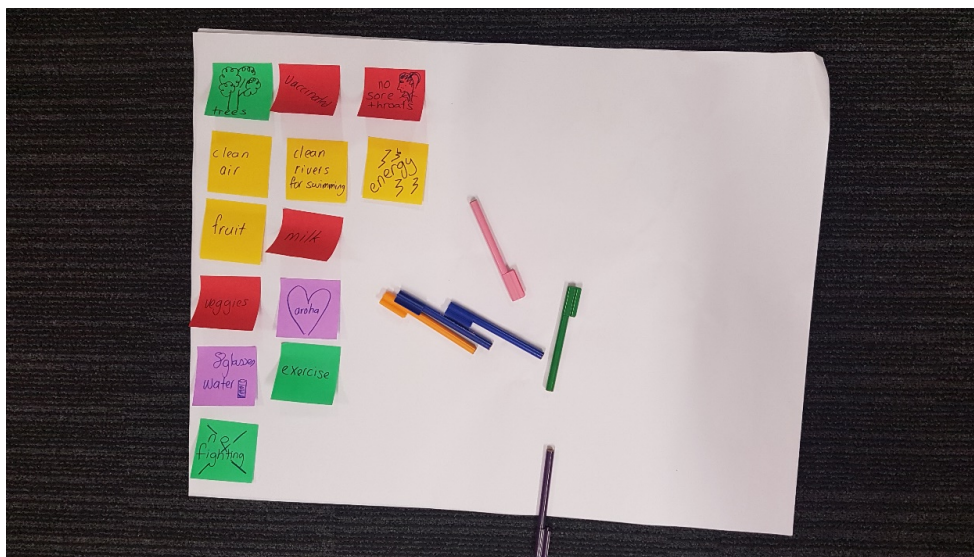
The following prompting questions are to be used to ensure children think holistically about “health” not just the absence of sickness or infirmity.

### Prompting questions:

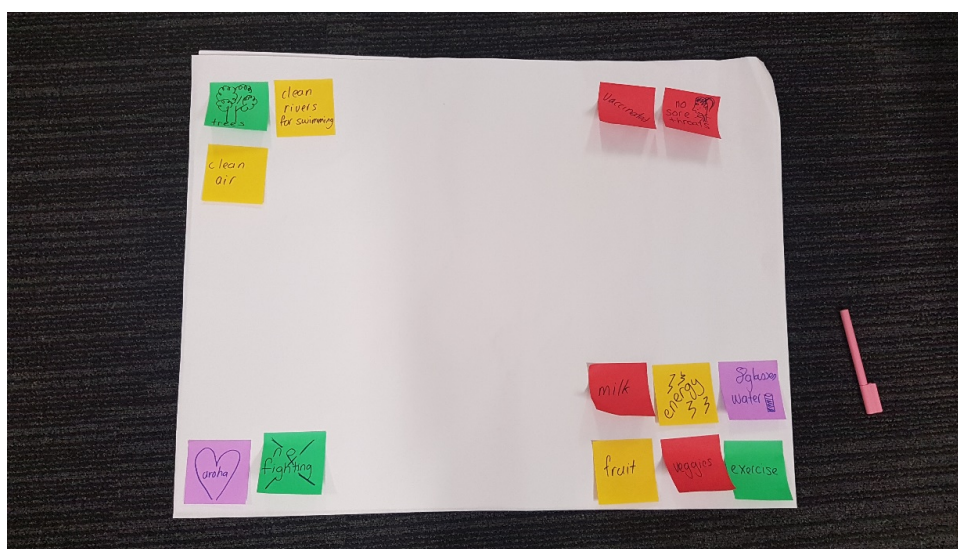
- What does life feel like when things are ‘good?’
- What sorts of things are you doing?
- What can you hear?
- What can you smell?
- What are you eating (can you eat those things all the time? How do they make you feel?)?
- Where the sorts of things/activities make you feel good?
- Who are you with?
- What are your family like when things are good?
- What makes you feel proud of who you are?



**Step 2. Generation:** Give students time to do this in groups. Remind them to think holistically about all the different possible things that health could mean for them using the prompting questions above, and to list everything they can think of even wacky ideas. Aim for quantity. Facilitators are to move around the room assisting teams who appear slow to be getting started, or who may need the instructions explained differently. Facilitators are to also observe team dynamics and sit with the team (at their level) observing, and perhaps prompting quieter students “what do you think?” to ensure everyone in the team provides input to generate ideas.



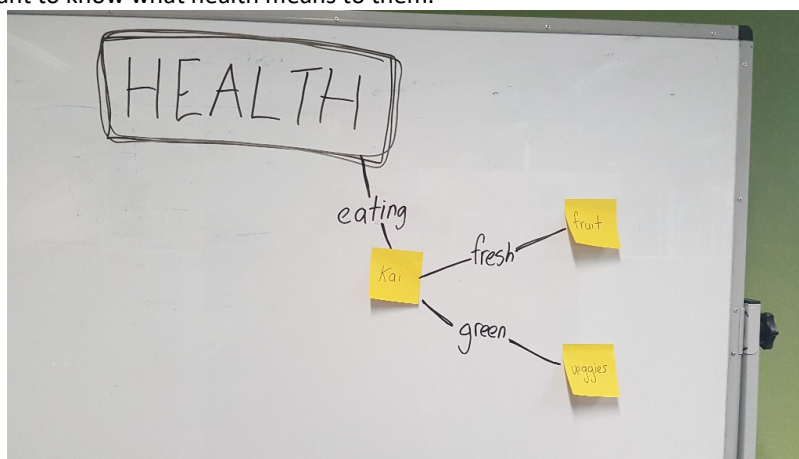
**Step 3. Structuring/Sorting:** Ask teams to sort their items so they are grouped together in a way that makes sense for them. Demonstrate on the whiteboard by grouping “kai”, “fruit” and “veggies” together (5-10 min). Facilitators are to move around the room and assist teams that are lagging with prompting questions e.g. “What do you think goes together?”, “What else can you see that might go with X?”.





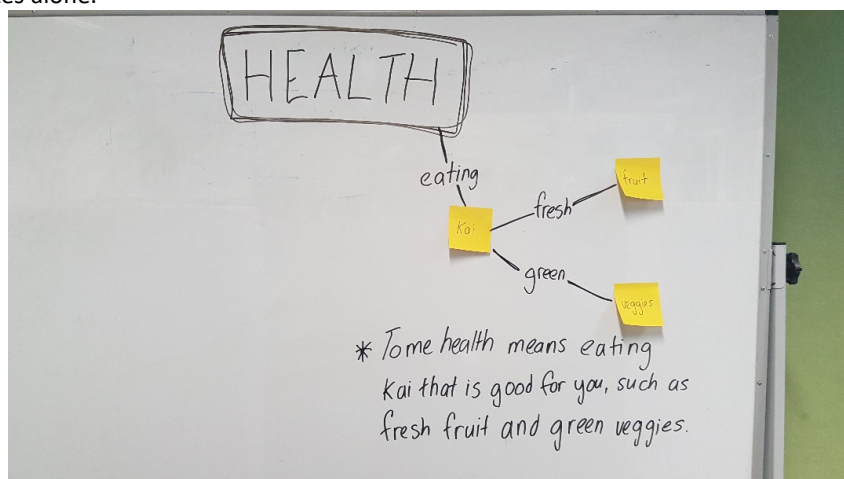
**Step 4. Representation:** Write the word “Health” in whiteboard marker at the top of the board. Put a box around it. Ask teams to create a diagram on their piece of butcher paper that connects all the items on their post-its. Demonstrate by linking health – kai – fruit and veggies, and adding the prepositions, eating, every day, snack fruit. Remind the group that there is no right or wrong answer. Demonstrate that you could link health -kai-fruit and veggies with the prepositions “fresh” and “green” veggies too.

Give groups lots of time to do this, remind the group that there is no right or wrong answer, we just genuinely want to know what health means to them.



**Step 5. Interpretation:** Appoint a group scribe, (depending on the handwriting and literacy levels of the team this could also be a facilitator). Ask students to come up with a set of statements that summarise what health means to their team and write them on the butchers’ paper around their concept map. Give out extra paper if necessary. Demonstrate how these statements could be written using the example on the board, e.g. “to me health means eating kai that includes green veggies and fresh fruit”.

Teams who finish quickly should be encouraged to draw what health means to them on the butchers’ paper, to illustrate it like a poster, therefore providing more detail than single words on post it notes alone.



Step 6. Presentation: One by one, teams bring their concept maps and statements to the front of the room to present to the group. The students are encouraged to ask questions of the teams, such as:

- “Why did you do it that way?”
- “Can you give me an example of what that looks like in your everyday life?”
- “How come you grouped X and Y together?”

If the group is hesitant to ask questions this can come from the facilitator – (Note, the facilitator is to sit on the floor at the level of the other students to do this to make the questions less threatening and influence power in the direction of the presenting teams). The second facilitator takes detailed notes during the presentations including, main points, questions asked and responses. At the end of each presentation the butcher’s paper is collected by the facilitator.

Outcome: 6-8 small group concept maps on what health means to these children.

### *Activity 3: Concept mapping 2, neighbourhood (30 min)*

*Goal:* Gain an understanding of neighbourhood and community assets children draw on to promote their/and others health.

*Step 1. Setting up/Preparation:* This activity occurs in the same teams, or new teams if group dynamics appear to be uncondusive to successful completion of the activity. Facilitator is to document in the notebook if new teams are created.

The facilitator clears the old white board and writes the two new focus questions in large font on the whiteboard:

**“How does your neighbourhood help you and others to be healthy?”**  
and  
**“How does your community help you and others to be healthy?”**

Facilitators are to use the same prompting questions from the previous exercise to help students think holistically about their responses.

Prompting questions:

- What does life feel like when things are ‘good?’
- What sorts of things are you doing?
- What can you hear?
- What can you smell?
- What are you eating (can you eat those things all the time? How do they make you feel?)?
- Where the sorts of things/activities make you feel good?
- Who are you with?
- What are your family like when things are good?
- What makes you feel proud of who you are?

*Step 2. Generation:* As per the previous activity, ask students to write words or draw symbols for each of the possible statements they can think of that might be included in their answer to the focus question. Demonstrate by asking for 4-5 examples from the large group, write them in big black marker on a large post it note, and list them on the whiteboard neatly in table format. Remind students there are no right or wrong answers, we just genuinely want to know what they think, and to go for quantity.

Give students time to do this in their teams. Remind them to think holistically about all the different possible things that could be included in community/neighbourhoods to help them and others to be healthy. Facilitators are to move around the room assisting and prompting as per Activity 2. Facilitator two is to note the examples generated by the class in the note book.

*Step 3. Structuring/Sorting:* Ask teams to sort their items so they are grouped together in a way that makes sense for them. Demonstrate on the whiteboard if needed with examples generated by the larger group. Facilitators are to move around the room and assist teams that are lagging with prompting questions e.g. “What do you think goes together?”, “What else can you see that might go with X?”.

*Step 4. Representation:* Write the words “Healthy neighbourhood” in whiteboard marker at the top of the board. Put a box around it. Ask teams to create a diagram on their piece of butcher paper that connects all the items on their post-its, just like they did in the previous activity. A demonstration

should not be required. Remind that there is no right or wrong answer, we just want to know what a healthy neighbourhood means to them.

*Step 5. Interpretation:* Appoint a group scribe, this could also be a facilitator. Ask students to come up with a set of statements that summarise what a healthy neighbourhood means to their team and write them on the butchers paper, give out extra paper if necessary. A demonstration should not be necessary.

Teams who finish quickly should be encouraged to draw around the butchers' paper, to illustrate it like a poster, therefore providing more detail than post it notes with single words alone.

*Step 6. Presentation:* Bring all teams back together and sit in a circle. Ask for teams to volunteer to present their results. One facilitator can ask for definitions or further explanation of points if needed, the second facilitator takes detailed notes during the presentations including, main points, questions asked and responses. At the end of each presentation the butcher's paper is collected by the facilitator.

*Outcome:* 6-8 small group concept maps on what a healthy neighbourhood means to children.

#### *Activity 4: Priorities for a healthy neighbourhood (20 min)*

**Overview:** The statements created in Activities 2 and 3 are then voted on by the students using the balloon game to determine varying levels of importance of each healthy neighbourhood item to the group.

**Goal:** To quantify which of the concepts of a healthy neighbourhood children prefer.

**Step 1. Setting up/Preparation:** Each child is given a balloon and asked to blow it up and stand in a circle in the middle of the room. Facilitators assist students to blow and tie up the balloons. Facilitators also take 4 concepts of a healthy neighbourhood determined in the previous activity and write each one on a piece of butchers' paper and using blue tac stick one in each corner of the room.

**Step 2. Student Instructions:** The facilitator is to convey the following information.

You told us that these 4 things make neighbourhoods healthy for you and others in your community. You each have a balloon, and that is your vote, so what I want you to do is place your balloon in the one corner of the room where you think that item has the most importance. The only catch is, you can't walk, and you can't use your hands (in a really small room - or feet).

**Step 3. Voting Chaos:** While children crawl, kick and blow their balloon into the corners of the room one facilitator prepares the next 4 things on butchers' paper.

**Step 4. Results:** When everyone has finished a final tally is made. One facilitator notes results in the note book and by taking pictures on their device.

**Step 5. Interpretation:** Bring the group back together in a circle for a group discussion. Ask the group to comment on the results. The following questions should be used as a guide:

- "Did you expect that overall result for the group?"
- "Was anyone surprised by the findings?", "Why/Why not? ",
- "Who voted for X... raise your hands?" How come you voted for X?" and
- "Why did no one vote for Y?"

The lead facilitator guides discussion the other facilitator notes down responses in the note book.

**Step 6. Repeat:** Repeat the game for the next set of 4 items. Then again for comparing the winners of the different set of items. Repeat discussion questions to gather meaning from the group voting and note down responses.

**Step 7. Pack up:** Put all the balloons to the side of the room away from the group so as to not be distracting for the next activity. (If the group finishes early these balloons can be used in a quick game of ankle Balloon Pop. For groups who are difficult to settle reminding them to pay attention for the next Activity because there is a fun game afterwards as a reward. This can help with group dynamics and maintaining group attention for the next Activity.)

**Outcome:** Children vote or rank the things in their neighbourhood that make them and others healthy.

**Research Notes:** It can be difficult to keep track of floating balloons so accurate notetaking and counting by the facilitator at the end of each voting session is essential. Appointing one child per to tally the total number of balloons can help, as can setting up the tally chart in the notebook ahead of time.

### *Activity 5: Application (10 min)*

*Goal:* To determine if and how children want to share their messages about health and what contributes to a healthy neighbourhood with policy makers and practitioners.

*Step 1. Instructions:* Bring the group back together and the facilitator reminds children that their experiences and opinions are important. “We have also had lots of fun today and we would like to come back. But when we come back, we don’t want to make any more diagrams, what we want to do is help you share your ideas on neighbourhoods and health.”

“We think it would be good to share your ideas about health and neighbourhoods with policy makers and practitioners. That is: the people who make decisions about how your neighbourhoods are designed. Your thoughts and ideas are important to share with these people, to make sure our neighbourhoods are well designed and healthy.”

*Step 2. Generation:* Facilitator to ask:

“How would you like to share your information with people that make decisions about your neighbourhood?”

Ask children to list all the possible ways they think they could do this and the lead facilitator writes them on the board. The second facilitator writes each suggestion on a piece of A4 paper.

Examples may include “make a video”, “make a poster”, “make a presentation”, “write a picture book”.

*Step 3. Voting again:* Hand out the demographic cards, one for each student. Ask students to fill them in individually.

By the door, facilitators place A4 pieces of paper with the student suggestions on them.

*Step 4. Thank you and Exit:* Thank students for their time, tell them the session is almost over, but as they leave to go back to class (or before they go to get a balloon to play the balloon game) ask them to place their demographic card face down on the A4 piece of paper for the way to share these messages that they would most like to do when we come back. Read out all the options again to allow students to consider their vote. Facilitators are to also include the option, “not share anything”.

Ask students to form a line, to get ready to exit the room and go back to class.

Thank them again for their input, give them a piece of paper with the details for the next session on it and for sharing their thoughts and experiences. Students exit and place demographic card, face down on A4 paper they leave.

### *Researcher Task 6: Researcher reflection*

*Procedure:* Following the student session, preferably the following day. The facilitators individually sit in a quiet space and either write or audio/video record a journal entry for that day. This journal entry is to be free to capture top of mind thoughts and perspectives of the individual researchers who were involved as facilitators in the student session.

Additionally, the questions by Fook and Gardener (2007) to aid critical reflective practice in research are to be used. These are:

- What did I do?
  - What happened?
  - What worked? – and what does ‘worked’ mean?
  - What didn’t work – and what does that mean?
- What were the different perspectives? What range of views were there about what worked and what didn’t?; are there any missing perspectives?
- How did I/others, influence the situation?
  - My and others’ perceptions
  - My/others’ assumptions and values
  - My/others’ presence and actions
- What was my influence of power?
- What does my experience imply about:
  - My theories of practice – espoused theory and theory in action\*
  - Other theory that I would find useful
  - Theories of practice that I would want to use
  - Theories of practice that other people use
  - New theory that I want to develop?
- How can I try out my new theory?

*\*For further reading on theories of practice these references may be helpful to facilitators:*

Smith, L. T. (2013). *Decolonizing methodologies: Research and indigenous peoples*. Zed Books. New Zealand

Darbyshire, P., MacDougall, C., & Schiller, W. (2005). Multiple methods in qualitative research with children: more insight or just more?. *Qualitative research*, 5(4), 417-436.

DiClemente, R. J., Crosby, R. A., & Kegler, M. C. (2002). *Emerging theories in health promotion practice and research: Strategies for improving public health* (Vol. 15). John Wiley & Sons.

Maller, C. J. (2015). Understanding health through social practices: performance and materiality in everyday life. *Sociology of Health & Illness*, 37(1), 52-66.

Reflection on group dynamics as described by Van Mechelen, Gielen, Laenen, & Zaman, 2014, including what occurred and how this may impact the findings could also be completed. The journal entry is to be dated and saved on the shared drive, accessible only to researchers. No names or other identifying information of participants is to be included in the journal entry.

### *Researcher Task 7: Researcher preparation*

Prior to the next session the researchers are to complete the following tasks

1. Photograph all student concept maps and save the photos on the shared drive.
2. Transcribe the notebook entries into a word document and save on the shared drive.
3. Enter all quantitative data into the database on the shared drive.
4. Create a table and accompanying bar chart showing results from Activity 4. Save these in the shared drive.
5. On 2 large sheets of butchers paper, draw/paint the bar chart showing the results Activity 4. This will be used in Session 2, Activity 2.
6. On another 2 large sheets of butchers paper, draw/paint an announcement of the winner of the how to share messages from last session. For example,



7. This will be used in Session 2, Activity 2.
8. Prepare Session 2, Activity 3 Lesson Plan (see page X) as per results of Session 1, Activity 5 for each school.
9. Gather all materials and conduct any other preparation for Session 2.
10. Ensure reflection exercise is completed.



## SESSION TWO: SHARING THE MESSAGE

### Materials:

- Tally poster with results of neighbourhood priorities
- Post announcing the way messages will be shared
- Name tags
- Large opaque bed sheet/ blanket
- Neighbourhood block stories sets X6
- Egg timer X6
- Play dough sets X6
- Lego sets X6
- Natural material sets X6
- Markers
- Butchers paper
- Concept maps from last session
- Fun whistle/bell
- Blue tac
- Whiteboard
- Whiteboard markers
- X6 ipads, fully charged with iMovie loaded
- Other materials as needed for message sharing as decided last session e.g. video recorder, costumes, giant blank poster, paper to create a story book and paints, markers etc. (thin plywood is needed for the posters, student devices may be needed for speech writing etc.)

*Set up:* As per Session 1, plus, the concept maps created by students in session 1 are to be taped to the walls of the room, for ease of reference. The materials and tools needed for Activity 3, are to be placed under a sheet near the poster announcing the winner, all hidden under a large sheet. The method for sharing messages is to be kept a secret until Activity 3.



**Research Note:** Activity one is a game that uses blocks which have been made in advance by facilitators. These blocks are to be made using wooden A,B,C blocks (see example top right) and on each side items from the Kids PoND framework for understanding children's neighbourhood destinations (Egli et al, 2019) (see right) will be attached to the sides using a combination of both images and words. It is important that all facilitators practice playing the game in advance of the session with friends or colleagues, so that they are familiar with the game as they will need to demonstrate it.



### **Activity 1: Neighbourhood block stories (15 min)**

**Goal:** To have fun and gently reminding students of the concepts from last session (neighbourhoods).

**Step 1. Setting up/Preparation:** Divide the group into teams of 4-6 students (either the same or different from last session depending on attendance and group dynamics), and ask them to sit on the floor in a circle. Each group is given a set of neighbourhood block stories blocks and an egg timer.

**Step 2. Instructions:** Each block has a neighbourhood item on it and the person who rolls the dice, whatever side the 5 blocks land on, has to tell a short story that incorporates all of the items that show facing up. Demonstrate, so if the blocks in my hand land on: bike, litter, jump, shopping and cousin. Then my storey might go something like "Once upon a time, DJ Frog was out shopping she saw her cousin riding their bike in the car park. DJ Frog's cousin was doing jumps and tricks on his bike. And DJ Frog thought her Cousin looked really cool, but then she saw her Cousin litter and throw their take-away rubbish on the ground. DJ Frog thought this was really uncool, and went over to them to sing them a rap song he made about not littering. Mmm cha, yeah, don't litter, mmm cha " Then pass the blocks onto the next person. It's ok to be silly and a bit creative, but you have to use the items that show up on the dice, and the story has to be finished in one minute - by the time the timer goes off. Once everyone in your team has had a turn put your hands up and we (the facilitators) will come over to hear the favourite stories from each team.

**Step 3. Play:** Both facilitators walk around the teams, participating as necessary. It is supposed to be a fun activity and useful for synthesising and remembering concepts, not a research activity.

**Step 4. Pack up:** Ask for one member of each team to collect all the blocks and the egg timer and bring them to the front of the room. Then ask everyone to sit back in the middle of the room ready for the next activity.



*Activity 2: Recap, and presentation of results from last session (10 min)*

Step 1. Setting up: Remind students of the concept maps they made last time (see wall), and present the results of the balloon voting using graphs drawn on butchers paper (prepared prior to this session).

Facilitators are to write up the top key messages from last session on the whiteboard (leave these in place for the next activity).

Step 2: Discussion: Ask students if they have had any thoughts about this since the last session? And if they were to vote again now would they vote differently? Why or why not? Ask students if they are excited about getting to share the statements they came up with policy makers and practitioners and what do they hope to get out of this session, then move quickly into Activity 3.

### *Activity 3: Co-create final dissemination material (90 min)*

**Step 1. The big reveal:** Ask students to guess how they think we are going to co-create these messages today? Reveal the “winning method” by asking the students to make a drum roll by slapping their hands on the floor and ask for a volunteer to remove the sheet.

The likely options are:

- Video
- Speech/Song
- Poster

If students decide on another type of dissemination mode than those listed above that should be written up step by step and all necessary materials acquired by the facilitators prior to Session 2.

**A note on timing:** This session must be completed within the session. The role of facilitators in this session is to ensure dissemination items are completed, so particular attention should be paid to prompting groups on timing and reinforcing that what is produced does not have to be perfect. Priority number 1 is student wellbeing. Therefore, if one group is likely not to finish and it would be potentially detrimental to the student to rush them or push them to finish then it is important that students not feel rushed. An incomplete dissemination item is ok. Remind students that they can take the items/materials home with them to finish if necessary. Detailed notes on this should be documented in the facilitator notebook.

#### **Video**

**Step 2:** Form groups of 5 – 6 students and give each group the following materials

- an iPad,
- a set of natural materials,
- butchers paper,
- play dough set
- Lego set
- markers

**Step 3:** Ask students to decide which of the key messages on the whiteboard they would like to make into a video. Using the materials provided (not themselves as actors) and the video recording function on the iPad students are to work together as a team to create a short video that displays the chosen idea on health and neighbourhoods. Groups may decide to shoot the video in one sequence therefore no prior knowledge of iMovie is needed. Or students familiar with iMovie may use this in their video production. Students are to create the video using the materials provided and not using themselves as actors.

Facilitators should move between the groups providing assistance and clarification as needed. Special attention should be paid to group dynamics and facilitators may decide to step in to ensure all voices in the group are heard. Facilitators are also to keep to the timing of this session and remind students at regular intervals of how much time they have left. Groups who finish early should then create a second movie based on another chosen key message.

### Speech/Song

Step 2: Form groups of 3-4 students and give each group a pen and butchers paper to plan and write out their speech/song. Ask students to decide which of the key messages on the whiteboard they would like to write give a speech/song about.

Step 3: Students are to work together as a team to write a speech/song on their chosen message to be delivered at a later point in time (Facilitators are to liaise with local councils ahead of time to see if an appropriate audience can be provided to hear the students speech.) Student devices may be used if students have access to them and wish to do so. Students should ensure all group members get a chance to talk if they wish, and practice performing the speech/song.

### Poster

Step 2: Form groups of 3-4 students and give each group the following materials

- butchers paper for planning the poster
- thin plywood
- water-based paints, brushes and water
- pens and pencils
- one small tarpaulin

Step 3: Ask students to decide which of the key messages on the whiteboard they would like to create a poster for, and where they would like to display the poster. Students are to work together as a team to create a poster on their chosen message (tarpaulin protects the floor). Facilitators should liaise with schools regarding appropriate locations to place student posters upon completion of the session.

Step 4: 10 minutes before the end of the session bring everyone back together in a group sitting in a circle. Ask students to present their creations to the group. Facilitators may decide to prompt groups for explanation of why they chose to present things a certain way and what aspects mean to them. Facilitators should to take detailed notes of discussion points.

**Students should be thanked for their time and thoughtful participation.**

*Research note:* At the end of the day all dissemination items should be copied, photographed, etc. and uploaded onto the shared drive. Ownership of the items remains with the students and schools should be free to use them to communicate through their channels if students give verbal permission. A school contact email address should be noted so all video's can be sent to the school contact for distribution.

### *Researcher Task 5: Researcher reflection*

*Procedure:* Following the student session, preferably the following day. The facilitators individually sit in a quiet space and either write or audio/video record a journal entry for that day. This journal entry is to be free to capture top of mind thoughts and perspectives of the individual researchers who were involved as facilitators in the student session.

Additionally, the questions by Fook and Gardener (2007) to aid critical reflective practice in research are to be used. These are:

- What did I do?
  - What happened?
  - What worked? – and what does ‘worked’ mean?
  - What didn’t work – and what does that mean?
- What were the different perspectives? What range of views were there about what worked and what didn’t? are there any missing perspectives?
- How did I/others, influence the situation?
  - My and others’ perceptions
  - My/others’ assumptions and values
  - My/others’ presence and actions
- What was my influence of power?
- What does my experience imply about:
  - My theories of practice – espoused theory and theory in action
  - Other theory that I would find useful
  - Theories of practice that I would want to use
  - Theories of practice that other people use
  - New theory that I want to develop?
- How can I try out my new theory?

Reflection on group dynamics as described by Van Mechelen, Gielen, Laenen, & Zaman, 2014, including what occurred and how this may impact the findings could also be completed. The journal entry is to be dated and saved on the shared drive, accessible only to researchers. No names or other identifying information of participants is to be included in the journal entry.

## SESSION THREE: RESEARCHER REFLECTIONS AND SENSE MAKING

Upon completion of Sessions 1 and 2 being undertaken at all schools across all study sites, all facilitators will get together for a sense making session. Ideally this will happen within 2 weeks of the final session 2.

Prior to this session all facilitators are to have completed their own personal reflection exercises, entered all data into the shared drive and become familiar with the results of any school sessions they did not attend (all information will be available on the shared drive, clearly labelled and organised for this purpose).

Dr Victoria Egli will most likely run the sense making session, as she will have been the lead facilitator at all sessions. In a step by step format the research questions of the project will be written on a white board and facilitators will attempt to answer them with pieces of evidence from the sessions, written on post it notes.

### Step 1. Is there evidence to answer the research questions?

The research questions are:

1. What does “health” mean to children? How do they define/describe health?
2. What community and neighbourhood “assets” do children draw on to promote health (of themselves or others)?
3. What are children’s requirements, priorities, and preferences for the design of their neighbourhoods?
4. How can children inform the design of their neighbourhoods for optimal health (what processes exist, what are children’s preferences for communication, how can this be achieved)?
5. How can researchers, practitioners, and policymakers work with children to support knowledge transfer, and ensure health promotion initiatives and research are appropriate and effective?

Photographs may be taken of the whiteboard to help with writing up the analysis.

### Step 2. Did we achieve the aim?

The aim of the research will be written on the white board and evidence will be placed on the white board using post it notes to determine if the aim of the research was achieved.

The overarching research aim is:

- To gather community-identified needs and strengths-based solutions for promoting child health and wellbeing in urban neighbourhood environments.

Photographs may be taken of the whiteboard to help with writing up the analysis.

(It is suggested that researchers take a quick break after this step.)

### Step 3. Strengths and Weaknesses

A critical appraisal of the methods used to collect the data will be undertaken using the guide by Fook and Gardener (2007). Here the reflections of facilitators will be shared and analysed using a phenomenographic approach.



## APPENDIX

### *Extra games “fun only” not for research*

As these games can be quite loud, if the room allocated for the session is near adjoining classrooms and the noise is likely to impact their classes, facilitators should consider playing these games outside, perhaps in a grassy area away from other classrooms. Weather permitting.

#### Charades:

1. Divide the players into two teams, preferably of equal size.
2. Divide the charades cards between the two teams.
3. Select a neutral timekeeper/scorekeeper (facilitator).
4. Students from each team are given a minute to do mimics so their team mates guess the word. Teams take it in turns.
5. Keep track of the points earned by each player or team. The one with the most points at the end of the game wins.

#### Chair-less Musical Chairs:

1. Each child is given an A4 piece of paper and told to lay it on the floor. This will be the piece of paper (or chair) the child is to sit on when the music stops.
2. Play music from the Boom speaker, stop it randomly and each time take away pieces of paper until there is a winner.

#### Ankle Balloon Pop:

1. Give everyone a balloon and a piece of yarn. Have them blow up the balloon and tie it to their ankle. Then announce that they are to try to stomp out other people's balloons while keeping their own safe.
2. Last person with a blown-up balloon wins.

## Neighbourhood Bingo

Find a different person to sign their name in each box, when you have all boxes filled in, call out "BINGO"

I was born in another city	I ate vegetables for dinner last night	I like to draw and paint	I sometimes play basketball in the park
I have 3 or more siblings	I play video games every day	I rode my bike/scooter to school today	I like to sing in the shower/bath
When I am sick I go to the doctor	My grandparent/s like to go for walks	I sometimes don't eat breakfast	I know the names of the people who live next door to me
My mum/dad plays a team sport	I eat dinner with my family at the table	I like playing soccer with my friends	I like to relax with a good book
I went to the library last week	I was late to class this week	My best friend lives near me	I like to climb trees
I took my dog for a walk on the weekend	I usually wake up feeling tired and sleepy	My favourite food is chocolate	Traffic by my house is dangerous

