

Appendix C

Details of result from the 9-step process analysis

STEP 1

The first step focused on whether or not children felt that the six proposed dimensions connect to their concept of health. For four of the proposed dimensions (*My body, My feelings and thoughts, Feeling good* and *Participation*) the majority of all children felt that these connected to their concept of health. However, for the two remaining dimensions it appeared that some children had difficulty understanding the dimensions.

The dimension '*Who am I and what do I want*', based on the dimension '*Meaningfulness*' from the MPH dialogue tool for adults, was difficult to understand for the younger children. They thought '*Who am I?*' referred to their name and related the phrase '*What do I want*' to future profession. Therefore the researcher clarified the meaning of this dimension and presented the corresponding aspects, such as: looking at the future, culture and religion, having goals and dreams and making choices. After clarification and presentation of related aspects, most children felt that from these aspects, '*dreams and goals for the future*' was the most important aspect regarding meaningfulness in relation to their health and wellbeing. Therefore, the researcher proposed to rename the dimension to '*Now and in the future*'. Furthermore, the dimension '*Daily life*' was initially translated from the adult tool (*Daily functioning*) to '*What can I do and what do I do?*'. This was interpreted quite literally by the younger children and most of them did not consider this dimension connected to their concept of health. Even though a vast majority of the older children said this dimension does connect to their concept of health, some indicated that its terminology caused confusion between this dimension and the '*Participation*' dimension. To clarify the meaning of this dimension and prevent confusion by its duality, the researcher suggested to rephrase it to '*Daily life*'; a phrase that seemed to properly cover all aspects.

When comparing the aspects (as proposed by the multidisciplinary research team) of these two dimensions (*Now and in the Future* and *Daily life*) to the children's concept of health, it appeared that most aspects were also spontaneously mentioned by the children in the first part of the interviews. Indicating that even though initially children were confused by the terminology, they did consider the aspects of these two dimension to be a part of their concept of health.

Finally, it should be noted that for the dimension '*Feeling good about yourself*' it was decided to leave out the phrase '*My happiness and enjoyment*' that was initially part of the dimension title, as both the younger and the older children had difficulty understanding this phrase. Whereas '*Feeling good about yourself*' was very comprehensible to them, as the results of the first parts of the interviews show.

STEP 2

Step 2 focused on the reasons children have for a dimension belonging to their concept of health. For some dimensions, it seemed evident to children that these connected to their concept of health, as is shown in table 1. The majority of children in both age groups agreed that feeling good about yourself belongs to their concept of health and they emphasized the importance of enjoyment, stating it is unhealthy not to enjoy (life). Concerning the dimension '*My body*', almost all children agreed that this was an important part of their concept of

health. Regarding '*Participation*', most children felt this dimension also connected to their concept of health. However, some did not, as they thought not being able to participate was related to sadness/sorrow and therefore not to health or feeling healthy. Others reasoned that participation is related to social activities and having friends and not to health, as from their viewpoint health was only related to the body.

Dimension	Quotes
Feeling good about yourself	"Yes, you just have to be happy and feel good about yourself, yes then life is... or yes then you are also healthier, life is simply better. " – <i>Healthy boy, 8-11 year age group.</i>
My body	"Well, it is like, you feel whether you are healthy or not and you exercise and that is all related to your body. And your food is also your body, in fact everything is your body. Everything you do, you do with your body. " – <i>Healthy girl, 8-11 year age group.</i>
Participation	"Yes if you are healthy then, you are always able to participate anyway, you can, maybe you won't, but it is possible. You can decide that for yourself. But if you are unhealthy then you are not always able participate, maybe you want to, but sometimes it's not possible. " – <i>Boy with muscular disease, 12-15 year age group.</i>
	"I: Suppose you couldn't do that, participate in the fun things, would you still feel healthy? R: Yes, because then there are other nice or fun things. So you kind of need some sort of adaptability, so that you can participate in what you like. " – <i>Girl with muscular disease, 16-18 year age group..</i>

Abbreviations: [I]: interviewer, [R]: respondent

Table 1 Quotes on reasons for dimensions belonging to the concept of health

For the dimension '*My feelings and thoughts*', it was observed that younger children had difficulty understanding the meaning of this dimension and therefore had difficulty reasoning if and why this dimension is part of their concept of health. Some of the older children did not believe feelings and thoughts are an element of health, stating that feelings are related to happiness, but not necessarily to health. Or that mental aspects, such as feelings or being able to concentrate, may influence health but do not belong to the concept of health.

As described above (step 1) it seemed that the initial terminology for the dimensions '*Now and in the future*' and '*Daily life*' was confusing. During step 2, it became clear that arguments for claiming whether these dimensions do or do not belong within the concept of health, focused around the initial terminology.

STEP 3 AND 4

During step 3 of the process (i.e. during the second part of the interviews) the aspects for each of the six dimensions were verified, by discussing each dimension and asking the children which of the aspects (presented by the researcher) belonged to this dimension. Step 4 focused on aspects that were often mentioned in the open part of the interviews and should (perhaps) be added to one of the six the dimensions.

Some aspects exactly matched themes or subthemes that were mentioned in the first part of the interviews, such as '*accepting or being yourself*'. Others were added to a different

dimensions than initially proposed, based on the children's considerations. For instance '*coping with stress and disappointment*' (which was also frequently mentioned during the first part of the interviews) was originally proposed as an aspect for the '*Feeling good about yourself*' dimension. However, during step 3, it seemed that other aspects were more fitting for this dimension, according to the children. Therefore, this aspect was added to '*My feelings and thoughts*'. Some new aspects that were not presented by the researcher, were added to certain dimensions as they were mentioned frequently during the first part of the interviews. For example, '*having role models*' (such as parents) and '*physical appearance*'. Finally, receiving support and being understood by your environment also seemed to concern acceptance (by others). To fully encompass these aspects, two new aspects for the dimension '*Feeling good about yourself*' were formulated: '*receiving support from others*' and '*experiencing a pleasant environment*'.

An important finding was the perception of '*Participation*' by children. Although this dimension was originally aimed at social participation and participating in society, we found that most of the younger children interpret participation as being (physically) able to play along with other children. The older children discussed aspects such as having friends and being allowed to join in (social) activities. In addition, '*wanting to participate*' or '*doing what you want*' was frequently mentioned by the children and was therefore translated to '*self-determination*' and included as an aspect for this dimension.

STEP 5,6 AND 7

Based on the previous steps, a preliminary design of the tool was created (step 5). The results of the second part of the interviews and this preliminary design were presented to the multidisciplinary research team, along with the researchers' suggestions for modifications of dimensions or aspects.

Based on the (sub)themes mentioned by the children in the first part of the interviews, the members of the multidisciplinary research team also discussed additional suggestions on aspects to be modified or added, such as '*having energy*' (*My body*). The team was also involved in rephrasing several aspects to increase understanding. As mentioned, the initial terminology for two of the dimensions was confusing for the children. The rephrasing of these dimensions into '*Now and in the future*' and '*Daily life*', as proposed by the researcher (step 1 and 2), was discussed with and approved by the multidisciplinary research team. In addition, they argued that it may be wise to mark certain aspects that seemed more relevant to older children and were difficult to understand for the younger children.

Sexuality was initially proposed by the multidisciplinary research team as an aspect for the dimension '*My body*', however it was never spontaneously mentioned by children during the interviews. As it seemed children did not (spontaneously) link this to the concept of health, it was decided not to include it as an aspect. This was later re-evaluated during step 8 with the children's council of the Wilhelmina Children's Hospital.

The dimension '*Participation*' was extensively discussed, because both younger and older children interpreted this as joining their friends in activities and participating in their own way. However, this dimension originally focuses on social participation and participating in society. Considering the original focus of this dimension in light of the children's

interpretations, the team suggested to add '*personal contribution*' as an aspect, as this phrase covers both of these interpretations.

The team eventually arrived at the identification of the 6 dimensions with each dimension consisting of six to eight associated aspects.

STEP 8

The MPH dialogue tool for children was subsequently presented for a review by the children's council of the Wilhelmina Children's Hospital. This council consists of 10 patients aged 8-18 years, that advise the hospital's management team on topics related to health care improvement. The council was enthusiastic about the MPH dialogue tool for children. They felt it could help children to sort out their own thoughts on health and well-being and to share this with their HCP. They agreed that the dimensions and their aspects were formulated correctly and would be understandable for their peers. However, they felt certain aspects were perhaps missing, such as: having a job and feeling insecure or self-assurance. They agreed with the multidisciplinary research team that sexuality and being in love may be considered as aspects, especially for the older children. But as mentioned before, ultimately it was decided to not add this aspect as it was never spontaneously mentioned during the interviews. Taking into account the children's council's advice, the absence of these aspects should be evaluated during implementation and future development of the tool. Finally, the children's council advised on the lay-out of the web-based app.

STEP 9

During this final step, the content of the my positive health (MPH) dialogue tool for children was finalized and subsequently implemented in a digital environment (kind.mijnpositievegezondheid.nl). The dialogue tool is also available as a paper version.