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## Instructions for Administering the Canadian Occupational Performance Measure with Children Themselves

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### ABSTRACT

**Aims:** The Canadian Occupational Performance Measure (COPM) can be used to support children to clarify their needs themselves. However, for pediatric occupational therapists it is not sufficiently clear how to effectively use the COPM with children from 8 years of age.

**Aims:** This study aimed to formulate specific instructions for using the COPM with children themselves, based on the experience of children, parents, and occupational therapists. In addition, professional consensus on the instructions was reached.

**Methods:** A multi-stage approach was used to develop the instructions. Triangulation of methods was used to gather knowledge of how the COPM with children themselves is performed in daily practice: interviews with 23 children, questionnaires completed by 30 parents, interviews with 13 therapists, and 10 video recordings of COPM administration. Specific instructions were derived from this knowledge and consensus for these instructions was reached by Delphi method.

**Results:** The data were analyzed and resulted in 40 specific instructions. Consensus of at least 80% amongst 10 occupational therapists, who regularly use the COPM with children, was achieved on each instruction.

**Conclusion:** There is consensus on 40 specific instructions for administering the COPM with children. Following these instructions might help children to formulate their own goals for intervention.



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Children; COPM; goal-setting; occupational therapy; outcome measure

Pediatric rehabilitation services aim to help children identify their abilities, so they can fulfill their potential. Providers focus on the needs of children and their families by using collaborative goal setting, according to family-centered service principles (Poulsen et al., 2015; Rodger & Keen, 2017). Self-determination theory underpins this and argues that interventions tend to be much more effective when they draw on children's intrinsic motivation and resources for change, by supporting feelings of autonomy, relatedness, and competence. Children want to have choice, connection, and competence as they develop and learn new skills (Poulsen et al., 2015; Ryan & Deci, 2018). When

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children formulate their own goals, their sense of autonomy and relatedness and thus intrinsic motivation is increased (Ryan & Deci, 2018).

The Canadian Occupational Performance Measure (COPM) can be used for goal setting with children. The COPM is a client-reported outcome measure designed to detect change in a client's self-reported occupational performance over time (Law et al., 2014). With the COPM, in a five-step procedure, the client identifies a maximum of five occupational performance problems, which they want to address in an intervention. An occupational performance problem is defined as an activity the client wants to do, needs to do, or is expected to do but can't do, doesn't do, or is not satisfied with the way they do it (Law et al., 2014). For each of these activities the client rates their performance and satisfaction with their performance on a 10-point scale. These activities can be used to determine the intervention goals. After intervention, the client once again rates their performance of the activities and satisfaction with the performance. The change in the occupational performance is calculated by subtracting the ratings given at the start of the intervention from the ratings determined at reassessment. Several studies have shown that a difference of two or more points indicates a significant and clinically important change (Law et al., 2014).

The COPM has been used in many intervention studies (COPM 2020; Law et al., 2014), including with children (Arman et al., 2019; McPherson et al., 2018). However, in most studies the COPM is administered with the parents of the children with various diagnoses, rather than with the children themselves (An et al., 2019; Ferre et al., 2017; Ghorbani et al., 2017; Hahn-Markowitz et al., 2017; Morgan et al., 2016; Preston et al., 2016). Several studies show that parents identify different issues for their children than the children do for themselves (Costa et al., 2017; Vroland-Nordstrand & Krumlinde-Sundholm, 2012) and that children differ in their view from their parents on enabling participation (Peeters et al., 2014). In order to enable the participation of children with disabilities and other special needs, it is important to collect their own wishes for improvement with the COPM and use these for their own goal setting. The COPM is developed based on studies with adults, although in the manual it is suggested that the COPM has been successfully used with children as young as eight years of age (COPM 2020; Law et al., 2014). However, the manual and the website do not give specific information about how to do this. Furthermore, occupational therapists frequently ask whether they can use the COPM with children (COPM, 2018). In a recent study, the authors found that administering the COPM with children themselves meets the needs of the children and their parents (Verkerk et al., 2021). In addition, children themselves give suggestions for administering the COPM more effectively (Verkerk et al., 2021). To summarize, specific instructions for using the COPM with children themselves are missing, desired (COPM, 2018; Law et al., 2014), and proposed by children themselves (Verkerk et al., 2021).

The aim of the present study was to develop and achieve consensus on specific instructions for administering the COPM with children, based on the experiences of occupational therapists and consistent with the needs of the children and their parents (Verkerk et al., 2021).

## Methods

### *Study Design*

This study used a multistage approach and a combination of qualitative research methods to formulate specific instructions based on the experiences of occupational

**Table 1.** Overview of the methods used in the multistage study to develop the instructions.

Nr.	Method	Participants	Data format	Period
I <sup>a</sup>	Face-to-face semi-structured interviews	Children $n = 23$	Verbatim transcription of audio recording	01-08-17/01-06-18
II <sup>a</sup>	Multiple choice Questionnaires	Parents $n = 28$	Ordinal scale: 1–5	01-08-17/01-06-18
III	Face-to-face semi-structured interviews	Therapists $n = 13$	Verbatim transcription of audio recording	01-08-17/01-06-18
IV	Video recordings of COPM administering	Therapists and children $n = 10$	Video recording fragments	01-08-17/01-06-18
V	Formulation of instructions	Researchers $n = 2$	Data from I–IV	01-01-18/01-06-18
VI	Delphi survey	Therapists $n = 10$	Written comments	01-06-18/01-09-18

<sup>a</sup>Results of I and II are already published in Verkerk et al. (2021) and also used for the formulation of the instructions.

therapists, children, and their parents (Green & Thorogood, 2014). See Table 1 for an overview of the methods used for the study.

Firstly, children's experiences of administering the COPM with children themselves were collected through semi-structured interviews with 23 children having a minimal mental age of eight years and varying in diagnosis and age (I). Their parents answered a questionnaire (II). These data (I and II) have been analyzed and published already (Verkerk et al., 2021) and the results are combined with those of the current study to formulate the instructions. This paper describes the subsequent stages of this multi-stage study.

Semi-structured interviews were performed with occupational therapists to collect their experiences in administering the COPM with children who have a minimum mental developmental age of eight years (III). Video recordings of occupational therapists who administer the COPM with children were analyzed to discover which aspects make the administering of the COPM successful (IV).

The analysis of the data obtained from the interviews with the children, the interviews with the therapists, the responses to the parental questionnaires, and the video recordings, identified which aspects make administering the COPM successful and led to the formulation of a set of instructions (V).

Finally, consensus on the instructions was reached through a Delphi survey (VI). The instructions were officially translated by a translation agency from Dutch to English. The English version was corrected for mistakes and back translated into Dutch and compared with the original Dutch version to ensure it was valid and correct.

## Participants

Requests for occupational therapists to participate in the study appeared in the Dutch journal for occupational therapy in April 2017 and twice in the newsletters of the Dutch association for occupational therapy. To gather a wide spectrum of opinions from the target group, researchers recruited occupational therapist participants from a variety of clinical settings, including rehabilitation centers, hospitals, and private practices.

Occupational therapists who were willing to participate contacted the researcher and were sent the information letter and informed consent form for themselves, parents, and children. The occupational therapists could give permission for one, two, or all of

**Table 2.** Characteristics of the participating occupational therapists  $N = 13$ .

Work place	
University Hospital <sup>a</sup>	2
Private practice <sup>b,c</sup>	4
Rehabilitation Center	7
Graduation BSc Occupational therapy	
≥20 years ago	3
Between 20 and ≥15 years <sup>b</sup>	6
Between 15 and ≥10 years	2
Between 10 and ≥5 years	1
<5 years <sup>c</sup>	1
Use of COPM with children	
≥15 years <sup>a</sup>	4
Between 15 and ≥10 years	2
Between 10 and ≥5 years <sup>b</sup>	6
<5 years <sup>c</sup>	1

<sup>a</sup>Three therapists did not fulfill the inclusion criteria for Delphi; because of involvement with data analysis ( $n = 1$ ).

<sup>b</sup>Consider the COPM not important for intervention ( $n = 1$ ).

<sup>c</sup>Less than 5 years of experience ( $n = 1$ ).

the following data collection methods: a semi-structured interview (III), a video recording of administering the COPM (IV), and participating in the Delphi survey (VI).

For the interviews (III) and video recordings (IV) the participant had to be experienced in administering the COPM with children. Inclusion criteria for the Delphi survey (VI) were having at least five years of experience in using the COPM with children, considering the COPM important for the intervention, and not being involved with the data analysis. Information about the participants is displayed in [Table 2](#).

Informed consent was also acquired from the parents and the children if the occupational therapist was willing to give permission for video recording. In these cases, the occupational therapist sent the information letter and informed consent forms to the parents and children.

## Procedures

After conducting and analyzing the interviews (III) and video recordings (IV) the specific instructions for administering the COPM with children were formulated (V) consistent with the needs of the children (I) and compatible with parents' responses to the questionnaire (II) (Verkerk et al., 2021).

A Delphi survey was used to reach consensus for each of these instructions (VI). The Delphi survey was sent by e-mail to each of the participating occupational therapists separately.

## Data Collection: Tools and Analysis

### Semi-Structured Interviews (III)

To collect the experiences of the occupational therapists using the COPM with children, semi-structured interviews were performed with 13 therapists between August 2017 and June 2018 using an interview guide ([available online](#)). The interviews were conducted by one of the researchers (GV or LM) at the workplace of the occupational therapist. Both researchers were familiar with administering the COPM with children for more

than seven years. The interviews were audio recorded and transcribed verbatim. The transcript was sent to the occupational therapist to check and give the opportunity to provide additional information. One therapist requested not to use an expression literally and another therapist asked this for two expressions. Otherwise, no changes were indicated. The transcripts were made anonymous by numbering them.

A general inductive approach (Thomas, 2006) was used to identify themes in the text of the transcripts. Both researchers independently coded the first eight transcripts and formulated categories for the codes using MAXQDA software. Through discussion, the researchers reached agreement on the codes and categories. Using this set of codes and categories, both researchers independently coded the following three transcripts. This resulted in new codes and new categories. The two researchers discussed the new codes and categories and agreed on a revised set of codes and categories. With this revised set of codes and categories, the following two transcripts were analyzed, resulting in no new categories: data saturation was reached (Saldana, 2009). Both researchers independently created a set of overarching themes encompassing the agreed-upon set of categories and reached agreement through discussion (Saldana, 2009). The points for discussion mainly concerned the grouping of the categories and the naming of the themes.

#### *Video Recordings (IV)*

Six therapists and ten children and their parents gave informed consent for the video recording. Both researchers independently analyzed the video-recordings of the COPM with 4 girls and 6 boys; ranging in age from 7–17 years old, mean of 10.3 years. Nine children performed the 4 steps of the COPM to identify and score the occupational performance issues they wanted to address in their intervention. The time for this administration varied between 15 and 55 minutes; mean time 34 minutes. One child performed the re-assessment which lasted 9 minutes. One child, with a progressive disease, identified no issues. An eight-year-old child, with chronic pain, became distressed and needed help from her parents to complete the first step of the COPM. The other 8 children were able to score importance, performance, and satisfaction with the performance using the standard scoring cards.

The research question was: What did the therapist do to make the assessment a pleasant experience for the child? The researchers looked for both the verbal and the non-verbal aspects which support the administering of the COPM with the child. These aspects that made it pleasant for the child to perform the COPM were noted by each researcher. The researchers together compared their notes for each child and made a list with the agreed supportive aspects of each video recording. For this analysis the researchers used the Dutch translation of the 5<sup>th</sup> edition of the manual of the COPM (Eijssen et al., 2019) and their experience with the COPM.

*Instructions (V).* Both researchers independently searched for specific information on how to use the COPM with children in the transcripts of the semi-structured interviews. Agreement on which information needed to be included in the instructions was achieved by discussion between the researchers. The discussion points mainly concerned the level of detail of the instruction, the sequencing, and whether or not various

examples were included. In addition, the agreed aspects derived from the video recordings were also included in the instructions. Finally, the suggestions of the children were used to formulate instructions (Verkerk et al., 2021).

The interviews with the occupational therapists, the collection of aspects detected from the video recordings and the needs and suggestions of the children (Verkerk et al., 2021) resulted in 39 instructions for using the COPM with children.

### ***Delphi Survey (VI)***

Ten occupational therapists met the inclusion criteria for the Delphi survey and were asked by e-mail, to agree or disagree with each of the instructions. If they could not agree with that specific instruction, they were asked to give feedback and describe their thoughts. All answers were collected. To reach as much agreement as possible on the formulated instructions, those for which there was no complete agreement was revised based on the therapists' comments. In the following round of the Delphi survey therapists were asked to agree with the changed instructions while the other instructions were visible (Trevelyan & Robinson, 2015). The Delphi method finished when at least 80% agreement was achieved for each instruction.

### ***Ethical Considerations***

The study was approved by the Medical Ethics Committee of the Amsterdam UMC, The Netherlands. All data collected for this study were stored on a database of the Amsterdam University Medical Centers, location AMC and only accessible by researchers/authors of this publication.

## **Results**

### ***Semi-Structured Interviews (III)***

The analysis of the interviews resulted in four overarching themes. The themes and categories are shown in Table 3. The themes are illustrated with quotes of participants.

#### ***Theme 1. The COPM is an Important Goal Setting Tool and Outcome Measure for Children***

This theme shows that the therapists use the COPM as an important tool for identifying the children's own wishes concerning performing activities.

Well I think that if I only ask parents what is important for their child, then we actually decide for the child what is meaningful. However, only the child can indicate whether it is actually meaningful for him or her. (104)

Therapists use the COPM for demonstrating the children's improvement in performance of these activities as well as the change in the children's satisfaction with the performance.

Very often there is a lot of progress. Sometimes there is, for example, a little improvement in the performance score but the satisfaction score increases a lot and then you can have a



**Table 3.** Themes and categories occupational therapists.

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1. The COPM is an important goal setting tool and outcome measure for children.	
Categories:	The importance of the COPM The goal of using the COPM The COPM as outcome measure Comparison with other assessments/intervention tools
2. Professional reasoning about positioning the COPM in the intervention process.	
Categories:	When to use the COPM Use of the COPM in intervention
3. Therapists apply the COPM administration procedures with children.	
Categories:	How to use the form How do you prepare the child How to start the COPM conversation Step 1: make an inventory of the problems/wishes of the child Step 2: scoring the importance Step 3: prioritizing a maximum of 5 issues Step 4: scoring performance and satisfaction Step 5: re-assessment
4. Modify the COPM for children and overcome difficulties.	
Categories:	Difficulties using the COPM in children Learning to use the COPM with children Interview/communications skills Suggestions to adapt it for children Applicability of the COPM for specific groups Cooperation with parents during the COPM Participation in school included in the COPM

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nice conversation about it, is this comparable with how you feel yes and eh ... and sometimes it shows also that they are really proud of themselves 'oh yeah it is so much better now' and it makes visible what the child has accomplished. (106)

Therapists expressed that the COPM underscores the important philosophy of self-direction and encourages the child to be autonomous.

Sometimes therapists talked about other assessments such as the Pediatric Activity Card Sort (PACS): Photo interview (OCL, 2018) and Child Occupational Self-Assessment (COSA) (Kramer et al., 2014) which they use for children with insufficient self-insight or those younger than eight years. Therapists emphasized that they strongly preferred the use of the COPM to really identify each child's personal needs. PACS and COSA consist of examples that already give the child an idea and do not leave them completely free to come up with their own ideas.

### ***Theme 2. Professional Reasoning about Positioning the COPM in the Intervention Process***

This theme demonstrates that therapists decide to introduce the COPM according to the individual needs of the children. Therapists aim to integrate the wishes of the children collected with the COPM into the goals for intervention. Therefore, they try to administer the COPM in the first few sessions of the intervention. However, for some children therapists need time to build a therapeutic relationship before the child could express their personal wishes for improvement.

Usually I ask in the intake with the parents 'How eh ... makes your child contact with other people how would it be e.g. in my situation'. And if the parents already know that their child often needs more time then I will never immediately start the next appointment with a COPM. (103)



The majority of therapists use the COPM two times, with the parents and with the children. They use both sources of information in the goal-setting process.

When we have done the COPM with parents, I would also like to do it with the child to have a look at both perspectives, because parents think from themselves or for their child ... what does my child finds difficult at this moment..., but what is the prioritisation of the child or ... from the child's perspective? (104)

The process of goal setting differs according to the policy of the workplace. The occupational therapists working in a multidisciplinary team use the expertise of the other team members as well, to fulfill the wishes for improvement of the children.

It isn't that the occupational therapist is the only one who is working on that hmm ... that is tackled in a multidisciplinary or interdisciplinary way because some young people express a lot of problems at eh ... eh ... for example on a more physiotherapeutic level but also some young people certainly high school students have a lot of stress also eh ... and that I put in the top 5 but that is something that the psychologist tackles. (110)

### ***Theme 3. Therapists Apply the COPM Administration Procedures with Children***

This theme includes the categories describing how to use the form, how to prepare the child, how to start the COPM conversation and how to perform the five-step procedure.

Step 1. Make an inventory of the problems/wishes of activities of the child:

I tell that we are going to have a conversation 'hey it is important that I find out what is important for you to work on what you run into at school?... And at home'... That's what I'm going to explain, and from there we just start. (103)

I try to do it as an interview as in what does a day look like and if you want to describe me from the beginning to the end and then ask questions about the things you hear from how do you do that and do you do it yourself or do you get help. (107)

Step 2. Scoring the importance of the activities:

How important is this for you to do and then I point on the rating card to not important at all or to extremely important and then I do not say it at every item I noticed today eh ... but I repeat it regularly hmm ... and certainly when they doubt or when I notice that they have not got it right, then I will repeat it again. (108)

Step 3. Prioritizing a maximum of five activities:

I say for example if someone has many issues I say 'well you have a lot of eh ... points listed. Very nice'. Hmm ... 'And now I actually would like you to take the five most important ones'. Yes. 'What, for example, would you like to address first or what would you like to be changed and we will go into that. I have only five possibilities it is not a sequence 1 to 5. 1 is not more important than 5, but I just want the five of them'. (109)

Step 4. Scoring performance and satisfaction of the activities:

We have rating scales with numbers here and I always put them on the table both at the same time, or do it sometimes separate but I think it is more nice when it is next to each other and then I explain it also by saying 'you have to give a score for how well is it

possible for you, number 1 is not at all 10 is very much. How satisfied are you about that'. Well rating is going generally good. There are children who always have to think very hard about every number yes and then I say "do not think too hard about what you rate, what do you feel, please point to that number." (106)

#### Step 5. Re-assessment:

Reassessment that is of course very nice that is actually the most fun part of this instrument. It is also very nice that they look back 'oh yes so I looked at it before and it is really yes things have really improved' or 'I have become more satisfied' especially if they themselves think that they have not progressed so much and it can be for example for the adolescents with chronic pain sometimes a very nice tool because they are not always without pain but at reassessment they can see on the COPM hey I can perform certain activities better or I am more satisfied. (115)

### ***Theme 4. Modify the COPM for Children and Overcome Difficulties***

This theme describes how therapists adapted the administering of the five steps of the COPM in a child-friendly way and the application with specific diagnosis. Therapists expressed that they learned to use the COPM with children by trying and sometimes used supervision from their colleagues to solicit guidance or feedback.

Usually we start at school. Yes. Eh ... because it is very clear for the child, I come to eh ... the occupational therapist of course for some problem. Uh ... and so I use that as a starting point. Yes. Usually that are school activities. (103)

Sometimes therapists used extra cards to make scoring easier.

I can imagine that it would be nice if you immediately have a card with a kind of combination of smileys and numbers. (109)

Therapists indicated that the COPM does not apply to all children, it requires a child to reflect on daily activities and have some self-understanding.

I always have to check whether the words I use are understood by the child by giving that extra question or do you know what that looks like? ... or do you know what that is? ... or I try to formulate it differently. (104)

Therapists stated that the occupation-focused nature of the COPM was helpful, for example when encouraging children with chronic pain to think about activities they wanted to perform with more satisfaction rather than focusing on pain symptoms. Similarly, children with progressive diseases were assisted in identifying the meaning behind an activity they wanted to perform better, which was more likely to result in a realistic goal in relation to participation and engagement than focusing on reducing symptoms.

### ***Video Ratings of Administering the COPM with the Child (IV)***

After independently analyzing the recordings, the researchers agreed that the video recordings showed that for administration of the COPM the verbal and non-verbal communication skills of the therapist are very important. The analyses showed that therapists used non-verbal communication such as keeping eye-contact, nodding, active listening sounds, and using body-language to invite the child to speak. In addition, they gave compliments, positive feedback, made small jokes, and showed empathy.

Sometimes they started with some small talk to put the child at ease. Therapists asked specific questions to clarify which aspects of the activity were troublesome. They summarized and checked whether the child understood them. Therapists also checked whether they completely understood the child.

Therapists were aware of positioning the child, the parent, and themselves relative to each other during the COPM administration. This positioning is used to encourage the child to speak about their own wishes to the therapist and to discourage the parents to intervene. The positioning is sometimes also used to prevent distraction. Usually, the child sat directly across from the therapist who sat against a visually calm background.

Most therapists started with explaining what the COPM is about and how it will proceed before administering it. Nearly all therapists followed the COPM procedures described in the manual (Law et al., 2014).

### **Consensus of the Instructions (V and VI)**

The analysis of the interviews with the therapists, and the video recording, and the suggestions proposed by the children from previous research (Verkerk et al., 2021) resulted in 39 instructions. The sequence and content of instructions generally follow the guidelines provided in the COPM manual. To achieve consensus about these instructions a two-round Delphi survey was needed. The ten therapists who met the inclusion criteria received and completed the survey in the first round; 100% consensus was achieved for 34 instructions. For the other five instructions there was no consensus and therefore the formulation was changed, and one instruction was added based on the feedback of the therapists given in the survey. In a second round the 40 instructions were sent again to each therapist separately with the question to check whether they could agree with the new and reformulated instructions. This resulted in consensus of at least 80% for the 40 instructions: 100% for 38 instructions and respectively 80% and 90% for the two other instructions. The instructions were officially translated; firstly, from Dutch into English. Some corrections were made in this English version by the researchers to increase the clarity and readability. Secondly, this corrected English version was back translated into Dutch. This Dutch version showed one mistake which is corrected in the English version by the researchers. Table 4 shows the officially translated instructions.

**Table 4.** Instructions for using the COPM with children themselves.

- 
1. Use words/language which the child understands.
  2. Create an atmosphere that encourages the child to speak.
  3. Assume an open and interested attitude towards the child.
  4. The occupational therapist determines when to administer the COPM. If the COPM is used as outcome measure, administer the COPM at the beginning of the intervention.
  5. The occupational therapist determines if and how she will prepare the child for the COPM.
  6. Decide beforehand whether the parents will be present when the COPM is administered with the child.
  7. If the parents are present with their child during the COPM interview, clearly indicate to the parents that you want to hear the child's wishes and requests for help. Collect the parents' wishes and requests for help at a later stage.
  8. When the parents also contribute during the administration of the COPM with the child, be sure to state this on the form explicitly and ensure that you administer the re-assessment in the same way.
  9. Explain that you want to know what the child's wishes are regarding the meaningful activities she/he wants or has to do, but is unable to, or is dissatisfied with. There are various ways to encourage a child to put forward her/his wishes. The occupational therapist chooses the one that is most suitable for the child. The occupational
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*(continued)*

therapist keeps in mind that the aim is to identify the problems in daily activities from the child's own perspective.

10. Mention that the child may put forward any problems in daily activities.
11. Avoid the word 'problem' as much as possible.
12. Give the child enough time to think about her/his activities.
13. Preferably go over a whole day with the child.
14. Ask questions to further specify the activity that the child wants to be able to do better.
15. If the child names pain or fatigue as a problem, ask questions to identify which activities the child is unable to do or which are difficult or unpleasant for her/him to do.
16. If you already know from other sources (e.g. the medical record) that certain activities are difficult, ask after those activities explicitly, if the child does not name these themselves.
17. Ensure you talk about all three activity areas of the COPM (self-care, productivity and leisure) and preferably follow the child's narrative.
18. It is preferable to write the child's wording on the form.
19. Summarize and check that you have written down all the child's wishes. If the child has any additions, make sure to note these.
20. Step 2 asks to rate the importance of the activity. For each listed activity, ask the child how important it is for her/him to perform that particular activity. Place the score card in front of the child and tell her/him that 1 means not important and 10 means very important. Explain that the child can also choose any of the numbers in between, but only whole numbers.
21. Some children, under 12 years, can benefit from more visual aids when rating importance. For these children, use the children's score card which is identical to the original but provide a visual aid in the form of symbols (e.g stars) below the numbers. This children's score card can be used if the child is having difficulty giving a score.
22. Allow the child enough time to give a score.
23. If you notice that the child is having difficulty giving a score, or does not understand the scoring, explain the process of rating again.
24. Ask the child to choose a maximum of 5 activities which are the most important for her/him to work on. Show the child the recorded activities on the form from which the child can choose. Record the activities chosen by the child on the form in the appropriate space.
25. You can use the ratings for importance to help the child prioritizing the 5 activities.
26. The activities should be written down in the child's own words as much as possible. Check with the child if the chosen wording is correct.
27. The activities should be formulated in such a way that a performance and satisfaction score can be given.
28. Ask the child to rate each activity in the top 5 for performance and satisfaction.
29. For performance, ask: "How would you rate the way you do (name the activity in the child's words) now? Completely impossible is 1 and very well is 10." Explain that the child can also choose the numbers between 1 and 10, but only whole numbers. The score card should be in front of the child. Point to the numbers when giving the instructions.
30. For satisfaction, ask: "How satisfied are you with the way you perform this activity now? Not satisfied at all is 1 and very satisfied is 10." Explain that the child can also choose the numbers between 1 and 10, but only whole numbers can be chosen. The score card should be in front of the child. Point to the numbers when giving the instructions.
31. Some children, under 12 years, can benefit from more visual aids when they rate performance or satisfaction. For these children, use the children's score cards which are identical to the original ones but provide a visual aid in the form of symbols below the numbers. This children's score cards can be used if the child is having difficulty giving a score.
32. When in doubt if the given score accurately represents the child's perception, ask further questions.
33. If you notice that the child is having difficulty giving a score or doesn't understanding the rating, explain the rating again.
34. Allow the child enough time to give a score.
35. Tell the child what will happen with her/his wishes when she/he has finished scoring.
36. The re-assessment (T2) will be done by the therapist who administered the initial assessment (T1). The therapist will administer the re-assessment with the same interviewee(s) as in the initial interview (T1).
37. During the re-assessment (T2), cover the scores previously given (T1).
38. For the re-assessment (T2) of children under 12 years, you can use the children's score cards with the visual aid in the form of symbols.
39. Calculate the change between T1 and T2. See the form and manual for the correct method. Show the change to the child and discuss the outcomes.
40. After the re-assessment (T2) the decision will be made whether or not to administer the COPM again.

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The instructions have to be used in combination with the COPM manual.

## Discussion

This study clarifies the use of the COPM with children by providing 40 specific instructions. These instructions are a supplement to the standard manual. Compared to the procedures described in the manual, there are no clear differences. Apparently, children from 8 years of age, who are able to reflect on their daily activities, can perform the standard procedures. This is in line with what is mentioned on the website (COPM, 2020). However, the instructions provide specific information on how to do these procedures with children.

The pediatric therapists who participated in the study have experience in putting the child at ease and talking about his or her daily activities. The instructions of these aspects are based on video recordings and semi-structured interviews, i.e. theme 3 and 4. These aspects are comparable to strategies pediatric therapists are using to engage children in therapy sessions. Such as 'building a connection', 'attending to feelings', 'giving choice and respecting their choice', and 'helping the child understand and explore' (D'Arrigo et al., 2020). These strategies can be assigned to autonomy and relatedness, two of the basic psychological needs of the self-determination theory (Ryan & Deci, 2018). Fulfillment of these needs increases intrinsic motivation that contributes to the effectiveness of the intervention. It could be argued that pediatric therapists are skilled in communicating with children, but the instructions might help novice therapists and therapists who are reluctant to use the COPM with children.

The interviews with the therapists resulted in 21 categories, which were grouped into four themes. There is some overlap between themes 1 and 2. However, it is decided to create a separate theme for the narratives about the preconditions that must be met to ensure meaningful use in the intervention. There is also some overlap between theme 3 and 4. However, theme 3 encompasses the performance of the five-step procedure of the COPM and theme 4 describes all the specific adaptations the therapists use to make it friendly for the child. We realize that the classification is created by the researchers, and it is possible that other researchers would make a different grouping of the categories. Nevertheless, a different classification does not affect the content of the instructions. Collectively, the themes interconnect to portray how therapists value and conduct the COPM effectively with children.

Both children and their parents value the COPM as an outcome measure for intervention (Verkerk et al., 2021). Although the video recordings showed that the children were able to rate with the standard rating cards, the children themselves suggested to make rating easier with pictures or symbols. Other assessments use symbols as well for rating e.g., PACS: Photo interview (OCL, 2018) and COSA (Kramer et al., 2014). The following symbols could be added on the rating cards: stars for rating the importance, thumbs for rating the performance, and smileys for rating satisfaction.

## Methodological Considerations

For the analysis and descriptions of the semi-structured interviews with the therapists the standards for reporting qualitative research were used (O'Brien et al., 2014). No new categories were detected after analyzing 11 transcripts which is comparable with reaching data saturation in other qualitative studies (Guest et al., 2006). It could be argued that the interviews with the therapists might not completely reveal the daily practice of the COPM

with children. However, the analysis of the video recordings matched the content of the interviews and helped to provide clear data for the instructions concerning the interaction with the child. In addition, the opinions of the children and their parents from previous research correspond with the information of the therapists (Verkerk et al., 2021).

The Delphi survey was performed with anonymity between the participants (Trevelyan & Robinson, 2015). Only two rounds were necessary to achieve at least 80% consensus about the instructions whereas regularly at least three rounds are performed (Trevelyan & Robinson, 2015). In the second round the participants were only asked to comment on the changed instructions and not encouraged to change their mind for the instructions where was already 100% consensus on in the first round. Compared to most Delphi studies the achieved level of consensus is high and number of rounds low (Trevelyan & Robinson, 2015). Probably this is because we did not ask the participants to come up with ideas for instructions but sought consensus on already carefully formulated specific instructions based on our research.

### **Limitations**

This study has limitations regarding the methods used. One researcher conducted a semi-structured interview with the other and the content was used for the study. But the bias of this on the instructions seems negligible because the researchers did not participate in the Delphi survey.

It could be argued that instead of using a survey to reach consensus, joint discussion meetings with the participants could probably result in different agreement percentages. In addition, only experienced occupational therapists performed the Delphi survey and it could be argued that also other health professionals should have been included to collect a broader stakeholder perspective on the instructions (Boulkedid et al., 2011). However, the COPM has been developed by and for occupational therapists and will therefore mainly be used by occupational therapists.

### **Generalization**

The participating children and parents varied in diagnosis and age of the child, ethnic background, treatment settings and educational level of their parents (Verkerk et al., 2021). Twelve of the 13 therapists who participated have been using the COPM with children for more than five years. The participating therapists worked in a variety of treatment settings. Therefore, it is reasonable to assume that the results of this study are transferable to administering the COPM with children referred to pediatric occupational therapists in different work settings. However, novice occupational therapists did not participate in this study. Novice therapists might need more information to benefit from the instructions. As is recommended by [www.thecopm.ca](http://www.thecopm.ca), it is important that the therapist has the specific training necessary to administer the COPM in a reliable and valid manner, which includes studying the manual (Law et al., 2014). This study has been performed in the Netherlands with Dutch children and might not be representative for children living in another country or using a different health care system.

In addition, it is expected that the instructions will help therapists in using the COPM with children and make children's own wishes explicit. These wishes could be

the base for treatment goals formulated by children. A recent scoping review showed that there is scarce evidence that children and adolescents with disabilities are involved in therapy goal setting using for instance the COPM (Curtis et al., 2022). The instructions may make the use of the COPM with children easier. Further research is needed to determine if the instructions are helpful for therapists.

## Conclusions

Based on the results described in this paper and Verkerk et al, (2021) which cover the experiences of occupational therapists, children, and their parents, 40 instructions for occupational therapists to administer the COPM with children were formulated. With a two-round Delphi survey consensus on these instructions was determined. Following these instructions may help children to identify the activities they have difficulties with and would like to perform better or with more satisfaction and use these to set their own intervention goals, which is expected to contribute to the motivation of the children and the effectiveness of the intervention.

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## References

- An, M., Palisano, R. J., Yi, C. H., Chiarello, L. A., Dunst, C. J., & Gracely, E. J. (2019). Effects of a collaborative intervention process on parent empowerment and child performance: A randomized controlled trial. *Physical & Occupational Therapy in Pediatrics*, 39(1), 1–15. <https://doi.org/10.1080/01942638.2017.1365324>
- Arman, N., Tarakci, E., Tarakci, D., & Kasapcopur, O. (2019). Effects of video games-based task-oriented activity training (Xbox 360 Kinect) on activity performance and participation in patients with juvenile idiopathic arthritis: A randomized clinical trial. *American Journal of*



- Physical Medicine & Rehabilitation*, 98(3), 174–181. <https://doi.org/10.1097/PHM.0000000000001001>
- Boulkedid, R., Abdoul, H., Loustau, M., Sibony, O., & Alberti, C. (2011). Using and reporting the Delphi method for selecting healthcare quality indicators: A systematic review. *PLoS One*, 6(6), e20476. <https://doi.org/10.1371/journal.pone.0020476>
- COPM. (2018). <http://www.thecopm.ca/uncategorized/july-2018-copm-newsletter/>
- COPM website. (2020). Retrieved November 2020, from <http://www.thecopm.ca/>
- Costa, U. M., Brauchle, G., & Kennedy-Behr, A. (2017). Collaborative goal setting with and for children as part of therapeutic intervention. *Disability and Rehabilitation*, 39(16), 1589–1600. <https://doi.org/10.1080/09638288.2016.1202334>
- Curtis, D. J., Weber, L., Berggren Smidt, K., & Norgaard, B. (2022). Do we listen to children's voices in physical and occupational therapy? A scoping review. *Physical & Occupational Therapy in Pediatrics*, 42(3), 275–296. <https://doi.org/10.1080/01942638.2021.2009616>
- D'Arrigo, R. G., Copley, J. A., Poulsen, A. A., & Ziviani, J. (2020). Strategies occupational therapists use to engage children and parents in therapy sessions. *Australian Occupational Therapy Journal*, 67(6), 537–549. <https://doi.org/10.1111/1440-1630.12670>
- Eijssen, I., Verkerk, G., & Van Hartingsveldt, M. (2019). *Canadian Occupational Performance Measure (Dutch). Dutch translation of the Canadian Occupational Performance Measure* (5th ed., M. Law, S. Baptiste, A. Carswell, M. A. McColl, H. P. Polatajko, & N. Pollock, Eds.). CAOT Publications ACE.
- Ferre, C. L., Brandao, M., Surana, B., Dew, A. P., Moreau, N. G., & Gordon, A. M. (2017). Caregiver-directed home-based intensive bimanual training in young children with unilateral spastic cerebral palsy: A randomized trial. *Developmental Medicine and Child Neurology*, 59(5), 497–504. <https://doi.org/10.1111/dmcn.13330>
- Ghorbani, N., Rassafiani, M., Izadi-Najafabadi, S., Yazdani, F., Akbarfahimi, N., Havaei, N., & Gharebaghy, S. (2017). Effectiveness of cognitive orientation to (daily) occupational performance (CO-OP) on children with cerebral palsy: A mixed design. *Research in Developmental Disabilities*, 71, 24–34. <https://doi.org/10.1016/j.ridd.2017.09.007>
- Green, J., & Thorogood, N. (2014). *Qualitative methods for health research* (3rd ed.). Sage Publications Ltd.
- Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, 18(1), 59–82. <https://doi.org/10.1177/1525822X05279903>
- Hahn-Markowitz, J., Berger, I., Manor, I., & Maeir, A. (2017). Impact of the Cognitive-Functional (Cog-Fun) intervention on executive functions and participation among children with attention deficit hyperactivity disorder: A randomized controlled trial. *American Journal of Occupational Therapy*, 71(5), 7105220010. [10.5014/ajot.2017.022053](https://doi.org/10.5014/ajot.2017.022053)
- Kramer, J., Velden, M., Kafkes, A., Basu, S., Frederico, J., & Kielhofner, G. (2014). *Child Occupational Self-Assessment (COSA); version 2.2*. University of Illinois.
- Law, M., Baptiste, S., Carswell, A., McColl, M. A., Polatajko, H., & Pollock, N. (2014). *Canadian occupational performance measure* (5th ed.). CAOT Publications ACE.
- McPherson, A. C., McAdam, L., Keenan, S., Schweltnus, H., Biddiss, E., DeFinney, A., & English, K. (2018). A feasibility study using solution-focused coaching for health promotion in children and young people with Duchenne muscular dystrophy. *Developmental Neurorehabilitation*, 21(2), 121–130. <https://doi.org/10.1080/17518423.2017.1289271>
- Morgan, C., Novak, I., Dale, R. C., Guzzetta, A., & Badawi, N. (2016). Single blind randomised controlled trial of GAME (Goals - Activity - Motor Enrichment) in infants at high risk of cerebral palsy. *Research in Developmental Disabilities*, 55, 256–267. <https://doi.org/10.1016/j.ridd.2016.04.005>
- O'Brien, B. C., Harris, I. B., Beckman, T. J., Reed, D. A., & Cook, D. A. (2014). Standards for reporting qualitative research: A synthesis of recommendations. *Academic Medicine: Journal of the Association of American Medical Colleges*, 89(9), 1245–1251. <https://doi.org/10.1097/ACM.0000000000000388>
- OCL. (2018). Photo-interview. Goalsetting instrument for children. [www.datkanx11.nl](http://www.datkanx11.nl)

- Peeters, M. A. C., Hilberink, S. R., & van Staa, A. L. (2014). The road to independence: Lived experiences of youth with chronic conditions and their parents compared. *Journal of Pediatric Rehabilitation Medicine*, 7(1), 33–42.
- Poulsen, A., Ziviani, J., & Cuskelly, M. (2015). *Goal setting and motivation in therapy, enabling children and parents*. Jessica King Publishers.
- Preston, N., Weightman, A., Gallagher, J., Holt, R., Clarke, M., Mon-Williams, M., Levesley, M., & Bhakta, B. (2016). Feasibility of school-based computer-assisted robotic gaming technology for upper limb rehabilitation of children with cerebral palsy. *Disability and Rehabilitation. Assistive Technology*, 11(4), 281–288. <https://doi.org/10.3109/17483107.2014.932020>
- Rodger, S., & Keen, D. (2017). Child and family-centred service provision. In S. Roger & A. Kennedy-Behr (Eds.), *Occupation-centred practice with children, a practical guide for occupational therapists* (2nd ed.). Wiley Blackwell.
- Ryan, R. M., & Deci, E. L. (2018). *Self-determination theory. basic psychological needs in motivation, development and wellness*. The Guilford Press.
- Saldana, J. (2009). *The coding manual for qualitative researchers*. Sage Publications Ltd.
- Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, 27(2), 237–246. <https://doi.org/10.1177/1098214005283748>
- Trevelyan, E. G., & Robinson, P. N. (2015). Delphi methodology in health research: How to do it? *European Journal of Integrative Medicine*, 7(4), 423–428. <https://doi.org/10.1016/j.eujim.2015.07.002>
- Verkerk, G. J. Q., van der Molen-Meulmeester, L., & Alsem, M. W. (2021). How children and their parents value using the Canadian Occupational Performance Measure (COPM) with children themselves. *Journal of Pediatric Rehabilitation Medicine*, 14(1), 7–11. <https://doi.org/10.3233/PRM-190604>
- Vroland-Nordstrand, K., & Krumlinde-Sundholm, L. (2012). The Perceived Efficacy and Goal Setting System (PEGS), part II: Evaluation of test-retest reliability and differences between child and parental reports in the Swedish version. *Scandinavian Journal of Occupational Therapy*, 19(6), 506–514. <https://doi.org/10.3109/11038128.2012.685759>