A MULTIPHASED CULTURAL AND CONTEXTUAL ADAPTATION OF THE PARENTS' EVALUATION OF DEVELOPMENTAL STATUS TOOLS FOR A LOW-INCOME COMMUNITY: A SOUTH AFRICAN CASE STUDY

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Key message

- A culturally appropriate developmental screening tool was adapted for a low-income community in South Africa
- A systematic method for culturally adapting a screening tool was used in this study
- Community participants from a LIC, and experts in ECD informed the changes to the developmental screening tool

ABSTRACT:

Introduction

Culturally relevant developmental screening is one of the best ways to appropriately identify developmental delays and disabilities in children as early as possible across diverse cultural backgrounds. This study aimed to adapt the Parents' Evaluation of Developmental Status (PEDS) tools for a low-income community in South Africa by using a detailed multi-phased cultural and contextual adaption process.

Method and results

A three-phase mixed-method design relying on triangulation of data was used. Data were collected at an immunisation clinic in a low-income community in Mamelodi, South Africa. Phase 1 was a focus group discussion with 11 community participants. The topics explored the possible changes to the PEDS tools to make them more relevant to the community. Phase 1 informed Phase 2 where 12 early childhood development experts achieved consensus through a two-round survey on a modified Delphi method. In phase 3, a draft of the PEDS tools-SA was presented to the authors of the PEDS tools for final approval. Of 55 questions that were adapted for the PEDS tools-SA, two original questions (3.6%), 14 questions from the expert suggestions (25.4%) and 39 from the community participant's suggestions (71%) were included. A final version of the PEDS tools-SA was created.

Conclusion

This study used a systematic method to adapt the PEDS tools to create the culturally appropriate PEDS tool-SA for a low-income community in South Africa, informed by community stakeholders' views from the first step. This resulted in a high-quality adaptation process that

is more likely to result in a tool that is more acceptable to caregivers from a low-income South African community.

Keywords Cultural and contextual adaptation, cultural appropriateness, community involvement, PEDS tools, South Africa, low-income.

1. INTRODUCTION

Developmental screening, using standardised screening tools, during every health visit is one of the best ways to identify developmental delays and disabilities in infants and young children as early as possible and to ensure timely early intervention for the family and child (Lipkin et al., 2020; Macy, 2012). A significant barrier to accurately identifying developmental delays and disabilities in infants and young children in low-income communities is the lack of culturally and linguistically appropriate screening tools (Lipkin et al., 2020; Rousseau et al., 2021). As a result, tools developed in high-income countries are often translated and adapted for use in low-income countries (Munoz-Chereau et al., 2021).

Cultural adaptation involves careful deliberation of cultural values, customs and traditions, using appropriate knowledge and skill (Bernal & Domenech Rodríguez, 2012; Rousseau et al., 2021) while maintaining functional similarity with the original version of the tool. It is a complex and demanding process that involves more than just language translation (Bernal & Domenech Rodríguez, 2012; Rousseau et al., 2021). There is no strong differentiation between translating a tool or culturally adapting a tool, and therefore no clear guidelines for cultural adaptation of screening tools alone. Detailed techniques on cultural adaptation are often not reported (Rousseau et al., 2021; Small et al., 2019). At times, cultural adaptations are not even considered in the translation process (El-Behadli et al., 2015; Lipkin et al., 2020).

Most cultural changes made during the adaptations process are limited to superficial modifications or process adaptations, that is, changes that involve minor modifications to the tool, such as changes in ethnicity or measuring systems (Bernal & Domenech Rodríguez, 2012). For example, the word “Cheerio” was used in the Korean Ages and Stages Questionnaire (ASQ), instead of “black bean” (Heo et al., 2008). In the Afrikaans version of the ASQ, the picture of a snowman was omitted as snow is rare in South Africa (SA) (Bornman et al., 2010). However, these changes do not address the core values, competence, beliefs or norms of the targeted community. Content adaptation is required to address the deeper

structural changes during the adaptation process (Bernal & Domenech Rodríguez, 2012; Rousseau et al., 2021).

A developmental screening tools, The Parents Evaluation Developmental Status (PEDS) and PEDS: Developmental Milestones (DM) (collectively known as the PEDS tools), developed in the USA, is a standardised and validated measure that has been translated and adapted for many populations (*PEDS Tools In Other Languages*, n.d.). This tool has been considered for the use in the public healthcare setting in South Africa because it is quick, reliable and affordable to use (van der Merwe et al., 2019). The PEDS tools have successfully been translated into Zulu and Northern Sotho in South Africa (Fyvie et al., 2016; Maleka et al., 2021; Van der Merwe et al., 2017). However, providing equitable services to all clients in South Africa is challenging because of the country's 11 official languages. Adapting a developmental screening tool for a low-income community in English might ensure that no minority language in a setting is disregarded. Millions of South Africans use English as a second or third language for everyday communication and as the language of instruction in most schools in South Africa (Khokhlova, 2015; Schlebusch & Thobedi, 2015).

Yet, Botes et al., (in press) reported that caregivers in a low-income community in South Africa interpreted the items on, the PEDS:DM , incorrectly on almost half (48%) of the items.. Cultural changes are necessary to ensure that test-takers interpret the items correctly for accurate developmental screenings (DuBay & Watson, 2019). Rigorous cultural adaptation that ensures both process and content adaptations can ensure that developmental screening tools are locally appropriate, increasing the likelihood of accurate early identification within a setting. Involving community participants during the adaptation process is likely to enhance the cultural authenticity of a developmental screening tool, as community members can provide valuable input in the content adaptation.

There is a lack of research on the approaches to culturally adapting developmental screening tools, and the suggested method of using the expert panel to make cultural changes and only allowing community participant's input at the very end might not allow for all the needed content changes. Rousseau et al., (2021) did a scoping review on the cultural adaptation of a developmental screening tool and found that in only 70.3% of the adapted tools, language, visual, and/or conceptual modifications were reported. Cultural content modifications were reported in 64.9% of adaptations. They concluded that most cultural modifications were minor

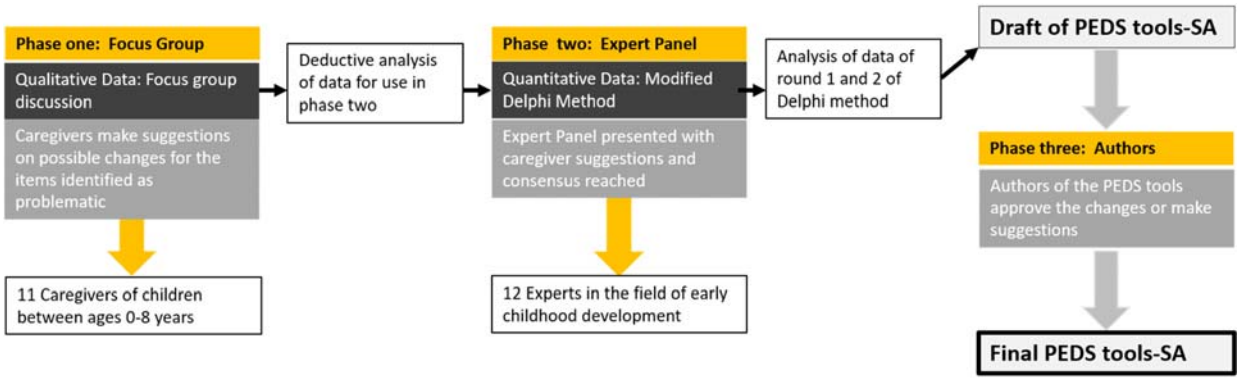
and aimed at establishing an equivalence with the original version. The researchers found that the process of culturally adapting tools varied significantly in studies (Rousseau et al., 2021). The recommendations from the researchers were that the target community be engaged in every step; expert reviews used to verify the cultural, linguistic and developmental appropriateness of the tool and that a systematic methodology that considers language and culture is developed by authors.

As a result, this study aimed to adapt the PEDS tools for a low-income community in South Africa by using a detailed multi-phased cultural and contextual adaption process. This study opted to use community participants as stakeholders from the start, informing the decisions of the expert panel and therefore permitting the community to give their perspectives regarding the changes needed to bring about the PEDS tools-SA.

2. METHOD AND RESULTS

Institutional review board (IRB) clearance (HUM027/0819) was obtained for this study prior to any data collection. All participants, during all phases, provided consent to partake in the study. This study used a mixed-method design relying on triangulation of data for the cultural and contextual adaptation of the PEDS tools in a low-income community to create the PEDS tools-SA. Figure 1 represents the phases of the study.

Figure 1. Phases in the study design



2.1. Phase One: Community suggested adaptations

2.1.1. Setting and Participants

Data were collected at an immunisation clinic in a low-income community in Mamelodi, South Africa. According to the latest available statistics, Mamelodi has one of the largest poverty-

stricken low-income populations in the City of Tshwane (Statistics South Africa, 2011). Most residents are African (98.8%), Women head 40% of households and one-third live on less than R20 000 a year. (Statistics South Africa, 2011). This Community Health Clinic offers a full set of services, including a baby wellness clinic. Participants were selected using convenience sampling. Parents or caregivers, of a child between the ages of 0-8 years, waiting in line at the baby wellness clinic, who were able to communicate in English were invited to participate. The study aimed to adapt the tool and not translate it; therefore, the focus group was conducted in English, as the original PEDS tools are in English. Demographics of the 11 participants are provided in Table 1.

Table 1. Demographic information of focus group participants (n=11).

	N (%)
Age of participants	
30 years or younger	7 (63.6)
31 years or older	4 (36.4)
Home language	
Sepedi	7 (63.6)
isiZulu	2 (18.2)
Other	2 (18.2)
Caregiver employment	
Employed	3 (27.3)
Unemployed	8 (72.7)
Education level	
Grade 10-11	2 (18.2)
Grade 12	9 (81.8)
Household	
Single parent	7 (63.6)
Married	2 (18.2)
Living with partner	2 (18.2)
Dwelling	
Brick house	6 (54.5%)
Informal dwelling (shack)	1 (9.1%)
Room in a house	1 (9.1%)
Flat	3 (27.3%)

2.1.2. Material and data analysis

In an earlier study, caregivers from the same community identified 58 of the 124 (46.8%) questions on the PEDS:DM and the ten questions on the PEDS as problematic (Botes et al., in

press). Forty-five of the questions on the PEDS: DM, and all 10 questions on the PEDS have been identified by 10% or more of the caregivers as difficult to understand, containing unfamiliar words or as too difficult for the child's age (Botes et al., in press). The focus group was facilitated by the first author, who is an English second language speaker. The facilitator read each original 55 questions and asked the group how they would change it to make it more relevant to other caregivers in the community. If the question could not be understood, the facilitator used gestures (e.g., walking heel-to-toe) or explained the meaning in simple terms. Each member had an equal opportunity to voice their opinions on the items. Consensus was reached on the suggestion of an item after a conversation from the participants. The topics explored the possible changes to make it more relevant for the community. The focus group discussion, of 103 minutes, was audio-recorded and transcribed. Analysis of the data was generated from the transcripts of the audiotapes. The research question guided the deductive thematic analysis. The first author read the transcript and identified themes and subthemes that were given a code. All items with the same code were grouped together. The rater then reread the passages and came up with a phrase or word that described the typical characteristics of the passages. Inter-rater reliability was conducted by having the second and third author, who has extensive early childhood development knowledge, independently read the data. The themes and subthemes that were consistent and that community participants had consensus on were included. Table 2 lists the participants, examples of quotes and the themes that emerged.

Table 2. Participant quotes/suggestions and themes that emerged from the focus group.

Original question presented by moderator	Participant	Quotes/Suggestion	Consensus from community participants	Theme
Does your baby like to play peek-a-boo?	32-year-old female	You must just say what it means. Just say - when you put the blanket on your face, and pull down… then the baby she laughs. The person must just show what it is.	Yes	Describe an item
	27-year-old female	Or can you tickle the baby and then they laugh?	No	Change the item
Can your baby stack blocks?	45-year-old female	Is that like to build something with blocks? You then say - Can your baby build something with blocks.	Yes	Change the item
	39-year-old female	Or can they play with rocks? To say play with rocks?	No	Change the item
Does your child try to jump, even if both feet don't leave the ground?	37-year-old female	What is that? Must the baby just jump? Why you make it difficult? Just say – Can your baby jump?	Yes	Leave out confusing part
Can your baby poke at things with just his or her first finger?	32-year-old female	Is it like this? (gestures poking with finger). You must show them; they will not know. You must put a picture or something.	Yes	Add a picture
	27-year-old female	Like push to push the finger. You say push the finger.	Yes	Change a word

2.1.3. Results

The themes and subthemes that evolved from the analysis are schematically represented in Figure 2.

Figure 2. Themes identified in the focus group discussion to change questions on the PEDS tools (number of questions identified in each theme)

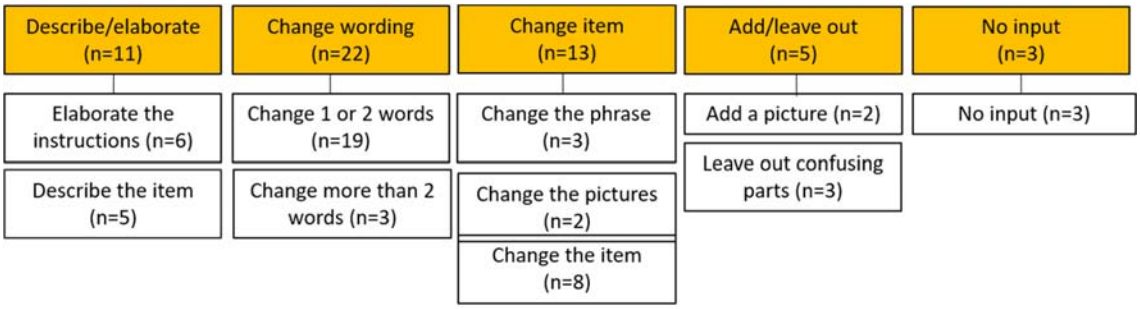


Table 3 sets out examples of the changes proposed by community participants according to each theme. Supplementary tables S1-S3 outline all the suggestions made by community participants. These recommendations were applied to the original items of the PEDS tools for presentation to an expert panel in phase two.

Table 3. Examples of community participants' suggested changes in each identified theme.

Theme	Original question examples	Examples of community participant's suggestions
Elaborate the instructions	If you hold out your hand and ask your child to give you something, does he or she give you something even if it is not the right thing	If you hold out your hand and ask your child to give you something like a toy, does he or she give you something in your hand even if it is not the toy?"
Describe the item	Does your baby like to play peek-a-boo?	When you put a blanket on your face and pull it off, does your baby laugh?
Change 1 or 2 words	Does your baby try to keep his or her head steady?	Does your baby try to keep his or her head still?
Change more than 2 words	Can your child scribble with a crayon or marker without going off the page much?	Can your child draw with a pen without going off the pages much?
Change the phrase	Does your baby try to get to toys that are out of reach?	Does your baby try to get to toys that are too far to reach?
Change the picture	Point to the word, "Exit" and say, "What does this say?" then point to "Danger", "caution", and "Poison" and ask your child to read them. How many can he or she read?	Point to the word, "Exit" and say to your child, "What does this say?" then point to "Danger" and say to your child, "What does this say?", Point to "Stop", and say to your child, "What does this say?" and point to "Poison" and ask "What does this say?". How many can he or she read?
Change the item	Can your child stack blocks?	Can your child build a tower with blocks?
Add a picture	Can your child walk three steps putting one foot in front of the other with heel touching toe?	Can your child walk three steps putting one foot in front of the other with heel touching toe?
Leave out the confusing part	Does your child try to jump, even if both feet don't leave the ground?	Does your child try to jump?
No input	When your child tries to run, does each foot leave the ground a little, even if he or she falls often?	

2.2. Phase two: expert panel consensus

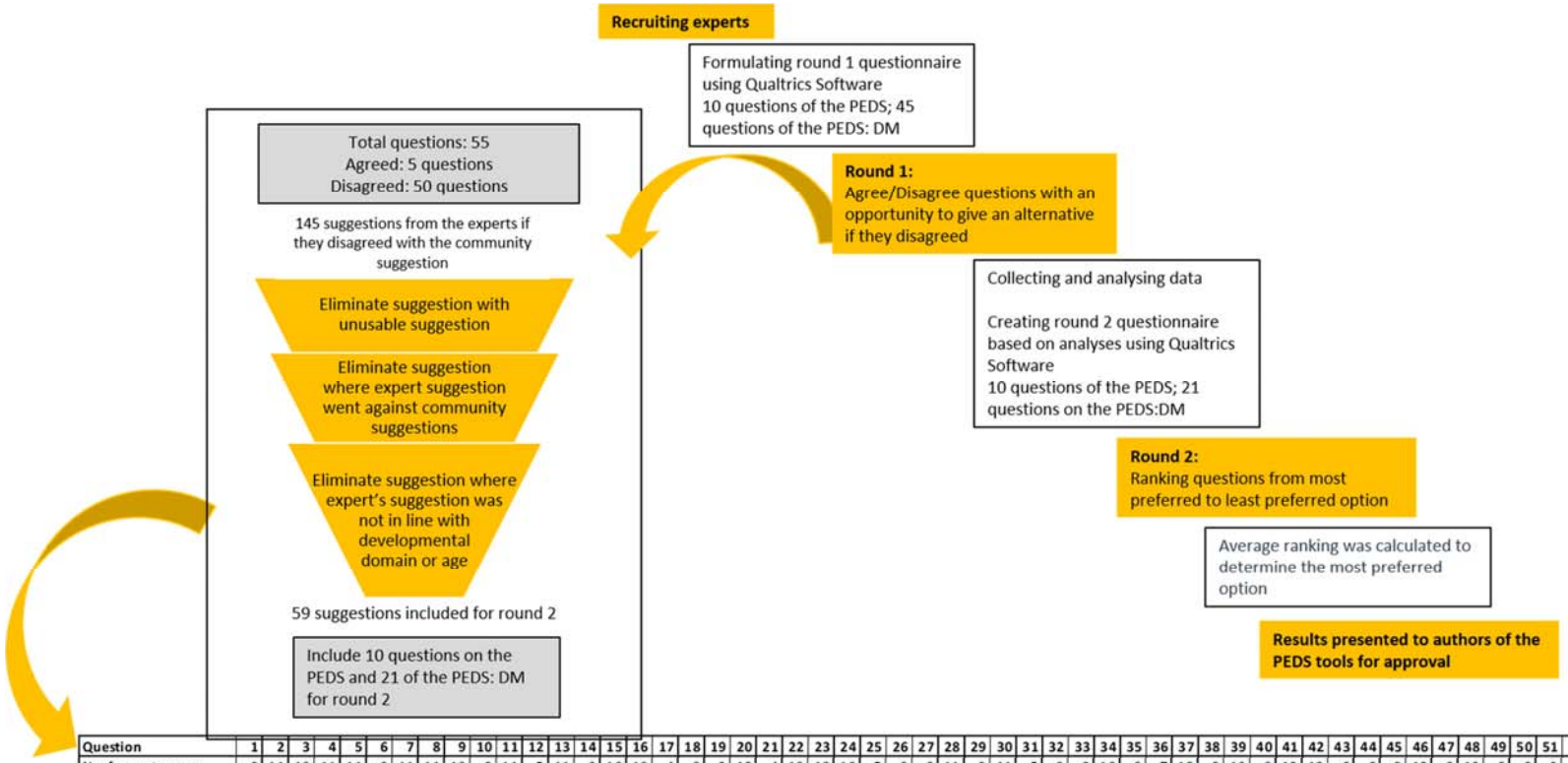
2.2.1. Setting and Participants

A modified Delphi method is a structured process for collecting and distilling knowledge from a group of experts through a series of questionnaires. Purposive sampling was used to identify 12 experts in early childhood. Table 4 provides the details of the experts These experts were recruited, through e-mail, to form part of the expert panel. This Delphi method used two rounds of online surveys to achieve consensus on the recommended changes in the PEDS tools. Figure 3 sets out the steps in the Delphi Method.

Table 4. Details of expert panel participants

	Profession	age	Years of experience	Race	Highest qualification	Field of Expertise
1	Speech Therapist	25-35y	5-10 years	White	PhD	Knowledge of specific community and PEDS tool
2	Speech Therapist	25-35y	> 10 years	White	PhD	Expert in early childhood development and knowledge of PEDS tools
3	Occupational Therapist	56-65y	> 10 years	Black	Bachelors	Expert in early childhood development
4	Occupational Therapist	56-65y	> 10 years	White	PhD	Special interest in low-income communities and expert in early childhood development
5	Psychologist	36-45y	> 10 years	White	PhD	Expert in early childhood development
6	Psychologist	36-45y	5-10 years	Black	Bachelors	Expert in early childhood development
7	Paediatrician	36-45y	5-10 years	White	Specialist Medical Degree	Expert in early childhood development
8	Paediatric neurologist	46-55y	> 10 years	White	Specialist Medical Degree	Expert in early childhood development
9	Physiotherapist	46-55y	> 10 years	White	PhD	Special interest in low-income communities and paediatric HIV
10	Healthcare worker	46-55y	> 10 years	Black	Grade 12	Knowledge of specific community, expert in early childhood development
11	Remedial Therapist	46-55y	> 10 years	White	PhD	Special interest in low-income communities and expert in early childhood development
12	Nurse	56-65y	> 10 years	Black	Nursing Diploma	Knowledge of specific community and expert in early childhood development

Figure 3. Steps in the Delphi method for consensus on the PEDS tools.



Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	Total
Nr of experts agree	9	11	10	11	11	9	11	11	10	9	11	5	11	9	10	10	4	9	9	10	4	10	10	10	5	8	8	11	8	11	5	9	9	10	8	7	12	8	10	9	12	12	6	6	9	12	3	10	8	9	9	8	10	3	12	50
Nr of experts disagree	3	1	2	1	1	3	1	1	2	3	1	7	1	3	2	2	8	3	3	2	8	2	2	2	7	4	4	1	4	1	7	3	3	2	4	5	0	4	2	3	0	0	6	6	3	0	9	2	4	3	3	4	2	9	0	5
Nr of suggestion	3	1	2	1	1	3	1	1	2	3	1	6	1	3	2	1	7	3	2	2	7	2	2	2	6	3	4	1	4	1	7	3	3	2	3	4	0	4	2	3	0	0	3	5	3	0	4	1	4	3	3	3	1	6	0	145
Nr of usable suggestions	1	1	1	1	1	1	1	1	2	3	0	3	0	0	0	0	2	3	2	0	3	0	0	0	2	1	0	0	0	0	4	2	3	2	3	2	0	1	0	1	0	0	3	2	0	0	2	0	1	0	1	0	0	3	0	59
Question included in round 2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	N	N	N	N	Y	Y	Y	N	Y	N	N	N	Y	Y	N	N	N	N	Y	Y	Y	Y	Y	N	Y	N	Y	N	N	Y	Y	N	N	Y	N	Y	N	Y	N	N	Y	N	Y = 31 N = 24
Original, expert or community suggestion in final draft	C	C	C	C	C	C	C	C	C	C	C	E	C	C	C	C	E	C	C	C	E	C	C	C	E	E	C	C	C	C	C	E	E	E	E	E	C	C	C	O	C	C	E	C	C	C	E	C	E	C	C	C	O	E	C	O = 2 C = 39 E = 14

2.2.2. Material, analysis and results: round 1

Experts were surveyed using the online Qualtrics software. In round 1 of the Delphi Method, the 55 questions from phase one that were adapted with community participant's suggestion were presented to the experts. Round 1 questions consisted of the original question and community participant's suggestion. The experts had a choice to agree with community participant's suggestion or disagree. If they disagreed, they were asked to give a reason and another suggestion to the question.

Of the 55 questions, all experts supported the suggestions made by community participants for 5 of the questions. With the remainder of the 50 questions, some experts disagreed and made alternative suggestions to the question. There was a total of 145 suggestions made by the expert panel for all the questions. Expert suggestions were eliminated (see Figure 5.3) that resulted in 59 usable suggestions on 31 questions (21 of the PEDS: DM and 10 of the PEDS). These suggestions on the questions were used for round 2. The table in figure 5.3 shows the distribution of the expert selections. After round 1, one original question and 23 community suggestions were placed in the first draft of the PEDS tools-SA. On the 23 community suggestion, for five questions, 100% of the experts agreed; for the other 18, more than 67% agreed.

2.2.3. Material, analysis and results: round 2

In round 2 of the Delphi Method, the original questions, the community member's and expert suggestions were presented to the expert panel. The experts were asked to rank the question options from the most preferred to the least preferred option. The average ranking for each answer choice of the 31 questions was calculated. The answer with the highest-ranking was the most preferred choice. The supplementary tables show the highest-ranked questions. On the 31 questions, the experts ranked one original question the highest, 16 community participant's suggestions the highest and 14 expert suggestions the highest.

2.3. Phase three: Consultation with the authors

2.3.1. Material and results

When culturally adapting a tool, the integrity of the tool should be maintained. There should be a clear similarity between the original and the adapted tool (DuBay & Watson, 2019). The authors of the original tool should agree with the changes made, that the integrity of the original tool is evident. The PEDS was developed in 1997 by Dr F. Glascoe for the developmental-behavioural screening and surveillance of children birth to 8 years (Glascoe, 1997). The PEDS:DM was designed by Brothers, Glascoe and Robertshaw in 2008 (Brothers et al., 2008) for children from birth to 8 years as a milestone-focused measure that consists of 6-8 questions per visit or age range.

The results of the two rounds were put together to create a first draft of the PEDS tools-SA. The following were included: 2 questions were kept as the original (3.6%); 14 questions from the expert suggestions were included (25.4%) and 39 from the community participant's suggestions were included (71%). The table in figure 5.3 shows the distribution. This draft was electronically presented to the authors of the PEDS tools for final approval of the suggested changes on the PEDS tools. The authors approved all the changes but suggested that the graphics of the pictures should be enhanced. The final version of the PEDS-tools SA was created.

3. DISCUSSION

This study is one of the first examples of culturally and linguistically adapting a developmental screening tool, where community participants were seen as specialists, and their input was not only one of the initial steps in the adaptation process but also invaluable. Understanding community member's perspectives in the decision-making process on adaptations must be prioritised from the outset. Although community involvement is suggested with all cultural adaptions of tools, it forms part of the cognitive interviews, one of the last steps in cultural adaptation of tests recommended by the World Health Organisation (World Health Organization, 2016). The goal of cognitive interviews is to evaluate the questions on a tool to determine whether the true meaning of the question is conveyed to respondents and whether the question is functioning as intended. Questions found to have problems can then be modified to reduce errors in the response process (World Health Organization, 2016). In the current study, the goal was to involve the community members from the start as decision-makers to

ensure that the items on the tool for consideration were culturally, linguistically, and contextually informed. This inclusive method incorporates the local expression or customs, language and parental understanding as a point of departure (Kohli-Lynch et al., 2019; Rousseau et al., 2021). Using this detailed adaptation method, the study resulted in the culturally adapted PEDS-tools for a low-income community in South Africa.

A previous study established that a systematic and detailed adaptation of the PEDS tools was necessary, as many items were identified as being culturally inappropriate or irrelevant for a low-income community in South Africa (Botes et al., in press). The adaptations made to the PEDS tools-SA included modifications of words, phrases and items, using local South African English, illustrations of some items and changing the pictures to make them culturally appropriate. One of the suggestions from community participants to increase the comprehensibility of the questions was to elaborate the instructions. This recommendation was similar to that of the Denver Developmental Screening Test, in the Philippines translation of the item "What is a spoon made of?" that was elaborated to read: "If a table is made of wood, a spoon is made of…?"(Kiing et al., 2012) Another suggestion was to change some words to make them culturally appropriate. On the PEDS: DM, questions on the use of *markers* were changed in this study to *pens*; similarly, questions on the use of *crayons and pencils* on the ASQ-3 for the Australian aboriginal community were changed to *drawing with sticks* (D'Aprano et al., 2016).

In some circumstances, items can be identified that may not be suitable for the target population. Botes et al., (in press) noted that items in the pre-literacy category in the age group 4 to 5 years of the PEDS: DM were not age-appropriate for the community, as many children cannot identify the alphabet letters. This was also the case in the Arabic translation of the ASQ-II where many children were not yet taught the Arabic alphabet at the age interval of 4 to 5 years (Charafeddine et al., 2013; Rousseau et al., 2021). Such items can be replaced with age-appropriate questions that still examine the developmental domain.

What set this study apart was the community member's involvement from the onset of the study on the cultural adaptations. Usually, it is the role of an expert panel to make the cultural adaptations to a tool as an initial step in the adaptation process (World Health Organization, 2016). One of the limitations of using an expert panel to make cultural adaptations to a tool is that the changes might only be minimal modifications (Bernal & Domenech Rodríguez, 2012).

The changes that experts make are based upon their understanding of the culture and their knowledge in their field of expertise In this study, the community members were part of the developmental process that resulted in a version of the PEDS tools that is more accessible to South African caregivers in low-income communities, representative of the majority of the country. Detailing this adaptation process provides an example of the procedure to address the lack of guidelines for cultural adaptations of tools. This procedure can be duplicated in other settings to attain a quality cross-cultural adaptation of screening tools for linguistically and culturally diverse low-income communities.

The thorough method of cultural adaptation in this study involving community member's suggestions in the beginning steps of the adaptation process demonstrates significant value, with more than two-thirds (71%) of community participant's suggestions incorporated in the final version of the PEDS tools-SA. Further research studies can incorporate this method of involving the community to make suggestions on items to ensure a better culturally adapted tool.

4. STRENGTHS AND LIMITATIONS

This adaptation method is unique in that it sets out that community involvement should be the primary method to culturally adapt a tool and that an expert panel, as a next step, should only strive for consensus on the community suggestions. A limitation of this study is that it was carried out in a single setting with community participants representing a small sample from a broader community. In spite of the fact that the participants demonstrate much of the diversity of the community, the small sample size limited the generalisability of the findings. The authors chose to separate the adaptation from the testing and/or validation of the PEDS tools-SA to give full attention to the cultural adaptation process. The finalised tool was therefore, not validated in the setting, and it is proposed that future studies validate the PEDS tools-SA in a low-income community in South Africa.

5. CONCLUSION

This study used a systematic method to adapt the PEDS tools to create the culturally appropriate PEDS tool-SA for a low-income community in South Africa informed by community stakeholders' views from the onset of the study. These adaptations were achieved by community participation and expert panel agreement. This systematic process for culturally

adapting a tool is an example of how community involvement can create a linguistically, culturally and contextually sound tool by incorporating language, norms, values, beliefs, and customs from the community. This high-quality adaptation method resulted in a version of the PEDS tool that is more likely to result in a tool that is more acceptable to caregivers from a low-income South African community.

CONFLICT OF INTEREST

The authors have declared no potential conflicts of interest concerning this article's research, authorship and/or publication.

ETHICS STATEMENT

IRB clearance (HUM027/0819) was obtained for this study prior to any data collection.

PATIENT CONSENT STATEMENT

All participants provided written consent to partake in the study.

PERMISSION TO REPRODUCE MATERIAL FROM OTHER SOURCES

No other sources were used in this study.

AUTHOR CONTRIBUTIONS

The authors confirm contribution to the paper as follows: study conception and design: all authors; data collection: Author 1; analysis and interpretation of results: all authors; draft manuscript preparation: Author 1. All authors reviewed the results and approved the final version of the manuscript.

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SUPPLEMENTARY TABLES

Supplementary tables: Changes to the questions on the PEDS tools as indicated by the community

Describe/Elaborate

Form	Q	age	Area	Original Questions	Problematic word	Change	Community suggestions
D	6	8-10m	Socio	Does your baby like to play peek-a-boo?	Peek-a-boo	Describe the item	When you put a blanket on your face and pull it off, does your baby laugh?
E	1	11-13m	Fine	Can your baby make squeeze toy squeak – or try to?	Squeeze toy	Describe the item	Can your baby press a toy – or try to press a toy that a noise (like a squeak) comes out?
F	1	14m-16m	Fine	Can your child unwrap food or a toy that has been loosely wrapped?	Unwrap	Describe the item	Can your child open a sweet that is covered with plastic if you open it a little bit first?
D	5	8-10m	Gross	Can your baby get around on hands and knees or by scooting on his or her bottom?	Scooting on his bottom	Describe the item Change the item	Can your baby get around by **crawling** or **by crawling on his bum**?
E	6	11-13m	Socio	Does your baby look for new things to play with and try to figure out how they work – like busy boxes or squeaking toys?	Busy boxes; squeaking toys	Describe the item Leave out confusing part	Does your baby look for new things to play with and try to figure out how they work – like **toys your squeeze to make a sound**?
F	3	14m-16m	Recep	If you hold out your hand and ask your child to give you something, does he or she give you something even if it is not the right thing?		Elaborate the instruction	If you hold out your hand and ask your child to give you something **like a toy**, does he or she give you something **in your hand** even if it is not the **toy**?
N	4	3y3m-3y7m	Express	Ask your child "**What do we do with scissors**?" and then "**What are refrigerators for**?" Does he/she use words like cutting, and keeping food cold or making ice?	Refrigerators	Elaborate the instruction	Ask your child "What do we do with scissors?" Does he/she use words like cutting Now ask "What is a fridge for?" Does he/she use words keeping food cold or making ice?
R	7	4j6m-4j10m	Math	Ask your child to give you 2 of something (like toys, coins or books). Then ask for 1, 3, 5 and 4 of something. Does he or she give you the right number of things each time?	Coins	Elaborate the instruction change 1 word	Ask your child to give you 2 things (like toys, **rocks** or books). Then ask for 1 thing, **then ask for** 3 things, **then ask for** 5 things and **then ask for** 4 things. Does he or she give you the right number of things each time?

P	8	3y8m-4y0m	Lit	Say to your child, "Listen, are these words the same or not the same?" Then say, "**bit-pit: are they the same or not the same?** Then say, "**set-set: are they the same or not the same**?" Then try these: **hide-glide, bat-mat**. How many did he or she answer correctly?	Bit, pit, set, glide, bat	Elaborate the instruction Change more than 2 words	Say to your child, "Listen, are these words the same or not the same?" Then say, "fun - run: are they the same or not the same? (Your child should say "not the same")Then say, "sit-sit: are they the same or not the same?" (Your child should say "the same")Then say: mop-hop (Your child should say "not the same"),Cat – mat (Your child should say "not the same"),How many did he or she answer correctly?
U	8	6y1m-6y11m	Lit	Point to the word, "Exit" and say, "What does this say?" then point to "Danger", "caution", and "Poison" and ask your child to read them. How many can he or she read?		Elaborate the instructions Change the pictures	Point to the word, "Exit" and say to your child, "What does this say?" then point to "Danger" and say to your child, "What does this say?", Point to "Stop", and say to your child, "What does this say?" and point to "Poison" and ask "What does this say?". How many can he or she read?
V	8	7y1m-7y11m	Lit	Point to the sign for "Fire alarm," and say to your child, "Please read this to me." Try again with "Do not disturb "… and "Wait on the curb". How many were right (sounding as if he or she knew what each one meant)?		Elaborate the instructions Change the pictures	Point to the sign for "Fire alarm ," and say to your child, "Please read this to me." Now point to "Caution, wet floor ", and say to your child, "Please read this to me. Now point to "No entry", and say to your child, "Please read this to me. How many could your child read?

Change wording

Form	Q	age	area	Original Questions	Problematic word	change	Community suggestions
PEDS	1			Please list any concerns about your child's learning, development, and behaviour:	Development	Change 1 word Change phrase	Please list any **worries** about your child's learning, **how they are growing**, and behaviour:
PEDS	10			Please list any other concerns:	Concerns	Change 1 word	Please list any other **worries**
A	5	0-2m	Gross	Does your baby try to keep his or her head steady?	Steady	Change 1 word	Does your baby try to keep his or her head **still**?
A	2	0-2m	Self help	Does your baby open his mouth when he sees a bottle, breast, or pacifier?	Pacifier	Change 1 word	Does your baby open his mouth when he sees a bottle, breast, or **dummy**?
B	2	3-4m	Self help	Does your baby open his mouth when he sees a bottle, breast, or pacifier?	Pacifier	Change 1 word	Does your baby open his mouth when he sees a bottle, breast, or **dummy**?
L	2	2y5m-2y9m	Self help	Can your child take off loose clothes such as pull-down pants or a coat?	Coat	Change 1 word	Can your child take off loose clothes such as pull-down pants or a **jacket**?

M	5	2y10m-3y2m	Gross	Can your child stand on each foot for a second?	Each	Change 1 word	Can your child stand on **one** foot for a second?
N	7	3y3m-3y7m	Math	If you showed your child a coin and asked, "**What's this**?", would he or she say coin?	Coin	Change 1 word	If you showed your child **money** and asked, "**What's this**?", would he or she say **money**?
P	2	3y8m-4y0m	Self help	Ask your child, "**What is your name…what is your whole name**?" What does he or she say? (the word last name is in the answer)	Last Name	Change 1 word	(the word **surname** is in the answer)
Q	6	4j1m-4j5m	Socio	When playing, does your child try not to hurt others? If playmates are hurt, does he or she seem concerned?	Concerned	Change 1 word	When playing, does your child try not to hurt others? If playmates are hurt, does he or she seem **sorry**?
T	2	5y6m-6y0m	Self help	Ask your child, "**What is your Mom's name**?" or "**What is your Dad's name**?" (Or other caretaker if needed). What does he or she say? (the word last name is in the answer)	Last name	Change 1 word	the word **surname** in the answer
U	4	6y1m-6y11m	Expres s	Point to the picture of the puppy and tell your child, "**Say what I say: 'Puppies make nice pets but need lots of love**'." If there were any mistakes, try again with this: "**Say what I say: 'The girl went swimming in the lake with friends**'." How did your child do?	Lake	Change 1 word	Point to the picture of the puppy and tell your child, "Say what I say: 'Puppies make nice pets but need lots of love'." If there were any mistakes, try again with this: "Say what I say: 'The girl went swimming in the pool with friends'." How did your child do?
H	6	20m-22m	Socio	Does your child watch people's faces for clues to how they are feeling? Can he or she tell if someone is mad, sad, or happy?	Clues	Change 1 word Change the phrase	Does your child look at people's faces to **see how they are feeling**? Can he or she **see** if someone is mad, sad, or happy?
S	7	4y11m-5y5m	Math	Point to the logs and then to the number 5. Say, "Show me this many." Do this again by pointing to the 6 and then to 7. How many did your child get right?	Logs	Change 1 word Elaborate the instruction	Point to the trees and then to the number 5. Say, "Show me this many." Could your child show 5 trees? Point to the trees again and then to the number65. Say, "Show me this many." Could your child show 6 trees? How many did your child get right? Point to the trees and then to the number 7. Say, "Show me this many." Could your child show 7 trees?
R	7	4j6m-4j10m	Math	Ask your child to give you 2 of something (like toys, coins or books). Then ask for 1, 3, 5 and 4 of something. Does he or she give you the right number of things each time?	Coins	Change 1 word Elaborate the instruction	Ask your child to give you 2 things (like toys, **rocks** or books). Then ask for 1 thing, **then ask fo**r 3 things, **then ask for** 5 things and **then ask for** 4 things. Does he or she give you the right number of things each time?
J	1	23m-25m	Fine	Does your child try to scribble with crayons or markers?	Scribble, Marker	Change 2 words	Can your child **draw** with a crayon or **pen**?

K	1	2y2m-2y4m	Fine	Does your child try to scribble with crayons or markers?	Scribble, Marker	Change 2 words	Can your child **draw** with a crayon or **pen**?
L	1	2y5m-2y9m	Fine	Can your child scribble with a crayon or marker without going off the page much?	Scribble, Marker	Change 2 words	Can your child **draw** with a crayon or **pen** without going off the page much?
M	1	2y10m-3y2m	Fine	Can your child scribble with a crayon or marker without going off the page much?	Scribble, Marker	Change 2 words	Can your child **draw** with a crayon or **pen** without going off the page much?
R	4	4j6m-4j10m	Expres s	Tell your child, "**Say what I say: Jane likes to throw and catch a ball**." If your child made mistakes, try again with this: "**Say what I say: Bob reads good books every time he can**." How did your child do?	Jane; Bod	Change 2 words	Tell your child, "Say what I say: **Tshego** likes to throw and catch a ball." If your child made mistakes, try again with this: "Say what I say: Sipho reads good books every time he can." How did your child do?
S	3	4y11m-5y5m	Recep	Tell your child, "**Put your hands above your head**," and then, "**Put your fingers below your eyes**." Now point to a page in a book and say, "**point to the center of this page**," and then, "**point to the corner**." How many did he or she get right?	Below; centre	Change 2 words Elaborate the instruction	Tell your child, **"Put your hands above your head,"** did your child do it right?**Now say: "Put your fingers under your eyes."** did your child do it right?**Now point to a page in a book and say, "point to the middle of this page," and then, "point to the corner."** did your child do it right?How many did he or she get right?
P	8	3y8m-4y0m	Lit	Say to your child, "Listen, are these words the same or not the same?" Then say, "**bit-pit: are they the same or not the same?** Then say, "**set-set: are they the same or not the same**?" Then try these: **hide-glide, bat-mat**. How many did he or she answer correctly?	Bit, pit, set, glide, bat	Change more than 2 words Elaborate the instruction	Say to your child, "Listen, are these words the same or not the same?" Then say, "fun - run: are they the same or not the same? (Your child should say "not the same") Then say, "sit-sit: are they the same or not the same?" (Your child should say "the same") Then say: mop-hop (Your child should say "not the same"), Cat – mat (Your child should say "not the same"), How many did he or she answer correctly?

Change item

For m	**Q**	**age**	**area**	**Original Questions**	**Problematic word**	**change**	**Community suggestions**
G	1	17m-19m	Fine	Can your child stack blocks?	Stack	Change the item	Can your child **build a tower with blocks**?
J	2	23m-25m	Self help	Does your child try to help when it is time to put things away?		Change the item	Does your child try to help when it is time **to pack things away or tidy up**?
K	2	2y2m-2y4m	Self help	Does your child try to help when it is time to put things away?		Change the item	Does your child try to help when it is time **to pack things away or tidy up?**

D	5	8-10m	Gross	Can your baby get around on hands and knees or by scooting on his or her bottom?	Scooting on his bottom	Change the item Describe the item	Can your baby get around by **crawling** or **by crawling on his bum**?
S	6	4y11m-5y5m	Socio	Can your child play games with rules, like board or card games, kickball, or hopscotch?	Kickball; hopscotch	Change the item Leave out confusing part	Can your child play games with rules, like card games, games with balls like soccer?
R	1	4j6m-4j10m	Fine	Can your child write any letters of the alphabet?		Change the item	Can your child **draw a person or shapes**?
Q	8	4j1m-4j5m	Lit	Point to the letters and ask, "Where's the A?... Where's the X? … Where's the O?" Keep trying to see if he or she can point to two or three correctly. How did your child do?		Change the item	Point to the **shapes** and ask, "Where's the square?... Where's the circle? … Where's the rectangle?" Keep trying to see if he or she can point to two or three correctly. How did your child do?
R	8	4j6m-4j10m	Lit	Point to a letter of the alphabet and ask your child, "What's this?" Try again with other letters to see if your child can name at least one letter correctly. How did he or she do?		Change the item	Point to a letter of the **shapes** and ask your child, "What's this?" Try again with other **shapes** to see if your child can name at least, one **shapes** correctly. How did he or she do?
PEDS	1			Please list any concerns about your child's learning, development, and behaviour:	Concerns, development	Change 1 word Change phrase	Please list any **worries** about your child's learning, **how they are growing**, and behaviour:
PEDS	2 - 9			Do you have any concerns about how…	Concerns	Change phrase	Do you **sometimes worry about** how…
D	2	8-10m	Self help	Does your baby try to get to toys that are out of reach?		Change the phrase	Does your baby try to get to toys that are **too far to reach?**
D	4	8-10m	Expres s	How many different sounds such as "muh", "bah", "duh" or "guh" does your baby say?	Muh, bah, duh, guh	Change the phrase	How many different sounds such as **"ma", "ba", "da" or "ga"** does your baby say?
H	6	20m-22m	Socio	Does your child watch people's faces for clues to how they are feeling? Can he or she tell if someone is mad, sad, or happy?		Change the phrase Change 1 word	Does your child look at people's faces to **see how they are feeling**? Can he or she **see** if someone is mad, sad, or happy?
U	8	6y1m-6y11m	Lit	Point to the word, "Exit" and say, "What does this say?" then point to "Danger", "caution", and "Poison" and ask your child to read them. How many can he or she read?		Change the pictures Elaborate the instructions	Point to the word, "Exit" and say to your child, "What does this say?" then point to "Danger" and say to your child, "What does this say?", Point to "Stop", and say to your child, "What does this say?" and point to "Poison" and ask "What does this say?". How many can he or she read? ,

V	8	7y1m-7y11m	Lit	Point to the sign for "Fire alarm," and say to your child, "Please read this to me." Try again with "Do not disturb "… and "Wait on the curb". How many were right (sounding as if he or she knew what each one meant)?		Change the pictures Elaborate the instructions	Point to the sign for "Fire alarm ," and say to your child, "Please read this to me." Now point to "Caution, wet floor ", and say to your child, "Please read this to me. Now point to "No entry", and say to your child, "Please read this to me. How many could your child read?

Add/Leave out

Form	**Q**	**age**	**area**	**Original Questions**	**Problematic word**	**change**	**Community suggestions**
D	1	8-10m	fine	Can your baby poke at things with just his or her first finger?	Poke	Add a picture Change 1 word	Can your baby **push** at things with just his or her first finger?
Q	5	4j1m-4j5m	Gross	Can your child walk three steps putting one foot in front of the other with heel touching toe?		Add a picture	Can your child walk three steps putting one foot in front of the other with heel touching toe?
E	6	11-13m	Socio	Does your baby look for new things to play with and try to figure out how they work – like busy boxes or squeaking toys?	Busy boxes; squeaking toys	Leave out confusing part Describe the item	Does your baby look for new things to play with and try to figure out how they work – like **toys your squeeze to make a sound**?
G	5	17m-19m	Gross	Does your child try to jump, even if both feet don't leave the ground?		Leave out confusing part	Does your child try to jump?
H	5	20m-22m	Gross	Does your child try to jump, even if both feet don't leave the ground?		Leave out confusing part	Does your child try to jump?

No input

Form	**Q**	**age**	**area**	**Original Questions**	**Problematic word**	**change**	**Community suggestions**
K	5	2y2m-2y4m	Gross	When your child tries to run, does each foot leave the ground a little, even if he or she falls often?		No input	

Q	4	4j1m-4j5m	Express	Does your child use words that tell about time like, morning, afternoon, night, yesterday, or tomorrow?		No input
U	3	6y1m-6y11m	Recep	Say to your child, "**Point to your hips**,… **wrist**,… **waist**." How many does he or she know?	Hips; writs; waist	No input

Supplementary tables: Highest ranked question after round 2 of Delphi Method

Q	Form	ages	area	Original questions	Highest ranked questions
PEDS					
1		All	General	Please list any concerns about your child's learning, development, and behaviour:	Please list any worries you have about your child's learning, how they are growing, and behaviour:
2		All	Express	Do you have any concerns about how your child talks and makes speech sounds?	Do you sometimes worry about how your child talks and makes speech sounds?
3		All	Recep	Do you have any concerns about how your child understands what you say?	Do you sometimes worry about how your child understands what you say?
4		All	Fine	Do you have any concerns about how your child uses his or her hands and fingers to do things?	Do you sometimes worry about how your child uses his or her hands and fingers to do things?
5		All	Gross	Do you have any concerns about how your child uses his or her arms and legs?	Do you sometimes worry about how your child uses his or her arms and legs?
6		All	Socio	Do you have any concerns about how your child behaves?	Do you sometimes worry about how your child behaves?
7		All	Socio	Do you have any concerns about how your child gets along with others?	Do you sometimes worry about how your child gets along with others
8		All	Self help	Do you have any concerns about how your child is learning to do things for himself/herself	Do you sometimes worry about how your child is learning to do things for himself/herself?
9		All	Pre lit/math	Do you have any concerns about how your child is learning preschool or school skills?	Do you sometimes worry about how your child is learning preschool or school skills?
10		All	General	Please list any other concerns:	Please list any other worries you have about your child:
PEDS: DM					
A	5	0-2m	gross	Does your baby try to keep his or her head steady?	Does your baby try to keep his or her head still and up?
D	5	8-10m	gross	Can your baby get around on hands and knees or by scooting on his or her bottom?	Can your baby get around by crawling or by moving on his bum?
D	6	8-10m	socio	Does your baby like to play peek-a-boo?	When you put a blanket over your face and pull it off, does your baby laugh?
E	1	11-13m	fine	Can your baby make squeeze toy squeak – or try to?	Can your baby squeeze a toy to make a sound?
F	1	14-16m	fine	Can your child unwrap food or a toy that has been loosely wrapped?	Can your child open a sweet that is covered with plastic or a packed of chips if you open it a little bit first?
J	1	23-25m	fine	Does your child try to scribble with crayons or markers?	Does your child try to draw or make marks with a crayon or pen?
H	6	20-22m	socio	Does your child watch people's faces for clues to how they are feeling? Can he or she tell if someone is mad, sad, or happy?	Does your child look at people's faces to see how they are feeling? Can he or she see if someone is angry, sad or happy
K	5	2y2m-2y4m	gross	When your child tries to run, does each foot leave the ground a little, even if he or she falls often?	When your child tries to run, he or she still falls often?

K	1	2y2m-2y4m	fine	Does your child try to scribble with crayons or markers?	Does your child try to draw or make marks with a crayon or pen?
L	2	2y5m-2y9m	self help	Can your child take off loose clothes such as pull-down pants or a coat?	Can your child take off loose clothes such as pull-down pants or take off a jacket when not zipped/buttoned?
M	5	2y10m-3y2m	gross	Can your child stand on each foot for a second?	Can your child stand on their left foot and then their right foot for a second?
N	4	3y3m-3y7m	express	Ask your child "What do we do with scissors?" and then "What are refrigerators for?" Does he/she use words like cutting, and keeping food cold or making ice?	Ask your child "What do we do with scissors?" Now ask "What is a broom for?" Does he/she use words cleaning, sweeping?
P	2	3y8m-4y0m	self help	Ask your child, "What is your name…what is your whole name?" What does he or she say? (the word last name is in the answer)	Ask your child, "What is your name…what is your name and surname?" What does he or she say?
Q	4	4y1m-4y5m	express	Does your child use words that tell about time like, morning, afternoon, night, yesterday, or tomorrow?	Does your child use words that tell about time like, morning, afternoon, night, yesterday, or tomorrow?
Q	8	4y1m-4y5m	lit	Point to the letters and ask, "Where's the A?... Where's the X? … Where's the O?" Keep trying to see if he or she can point to two or three correctly. How did your child do?	Ask you child "Do these words sound the same at the end: cat-hat?" (yes). Now say: "Do these words sound the same at the end dog-ball?" (no). Try with these words tree-fish (no). Now try with pot-dot? (yes). How many did he/she get right?
R	1	4y6m-4y10m	fine	Can your child write any letters of the alphabet?	Can your child draw a circle, a square and a triangle?
R	8	4y6m-4y10m	lit	Point to a letter of the alphabet and ask your child, "What's this?" Try again with other letters to see if your child can name at least one letter correctly. How did he or she do?	Ask your child "Clap the word apple into parts" (ap-ple = 2 claps). "Now try to clap elephant into parts" (e-le-phant = 3 claps). Try with soccer (soc-cer = 2 claps), then storybook (sto-ry-book = 3 claps). How many did he/she get right?
S	6	4y11m-5y5m	socio	Can your child play games with rules, like board or card games, kickball, or hopscotch?	Can your child play games with rules, like card games, games with balls like soccer or netball?
T	2	5y6m-6y0m	self help	Ask your child, "What is your Mom's name?" or "What is your Dad's name?" (Or other caretakers if needed). What does he or she say? (the word last name is in the answer)	Ask your child, "What is your Mom's name and surname?" or "What is your Dad's name and surname?" (Or other caretakers if needed). What does he or she say?
U	8	6y1m-6y11m	lit	Point to the word, "Exit" and say, "What does this say?" then point to "Danger", "caution", and "Poison" and ask your child to read them. How many can he or she read?	Point to the word, "Exit" and say, "What does this say?" then point to "stop", "checkers", and "Pick n Pay" and ask your child to read them. How many can he or she read?

Supplementary tables: All the adaptations on the PEDS tools to form the PEDS tolls-SA

Form	Q	age	area	Original Questions	Final Suggestion
PEDS	1			Please list any concerns about your child's learning, development, and behaviour:	Please list any worries about your child's learning, how they are growing, and behaviour:
PEDS	**2-9**			Do you have any concerns about how…	Do you sometimes worry about how your child …
PEDS	10			Please list any other concerns:	Please list any other worries you have about your child:
A	2	0-2m	Self help	Does your baby open his mouth when he sees a bottle, breast, or pacifier?	Does your baby open his mouth when he sees a bottle, breast, or dummy?
A	5	0-2m	Gross	Does your baby try to keep his or her head steady?	Does your baby try to keep his or her head still and up?
B	2	3-4m	Self help	Does your baby open his mouth when he sees a bottle, breast, or pacifier?	Does your baby open his mouth when he sees a bottle, breast, or dummy?
D	1	8-10m	fine	Can your baby poke at things with just his or her first finger?	Can your baby push at things with just his or her first finger?
D	2	8-10m	Self help	Does your baby try to get to toys that are out of reach?	Does your baby try to get to toys that are too far to reach?
D	4	8-10m	Expres s	How many different sounds such as "muh", "bah", "duh" or "guh" does your baby say?	How many different sounds such as "ma", "ba", "da" or "ga" does your baby say?
D	5	8-10m	Gross	Can your baby get around on hands and knees or by scooting on his or her bottom?	Can your baby get around by crawling or by moving on his bum?
D	6	8-10m	Socio	Does your baby like to play peek-a-boo?	When you put a blanket over your face and pull it off, does your baby laugh?
E	1	11-13m	Fine	Can your baby make squeeze toy squeak – or try to?	Can your baby squeeze a toy to make a sound?
E	6	11-13m	Socio	Does your baby look for new things to play with and try to figure out how they work – like busy boxes or squeaking toys?	Does your baby look for new things to play with and try to figure out how they work – like toys your squeeze to make a sound?
F	1	14m-16m	Fine	Can your child unwrap food or a toy that has been loosely wrapped?	Can your child open a sweet that is covered with plastic or a packed of chips if you open it a little bit first?

F	3	14m-16m	Recep	If you hold out your hand and ask your child to give you something, does he or she give you something even if it is not the right thing?	If you hold out your hand and ask your child to give you something like a toy, does he or she give you something in your hand even if it is not the toy?
G	1	17m-19m	Fine	Can your child stack blocks?	Can your child build a tower with blocks?
G	5	17m-19m	Gross	Does your child try to jump, even if both feet don't leave the ground?	Does your child try to jump?
H	5	20m-22m	Gross	Does your child try to jump, even if both feet don't leave the ground?	Does your child try to jump?
H	6	20m-22m	Socio	Does your child watch people's faces for clues to how they are feeling? Can he or she tell if someone is mad, sad, or happy?	Does your child look at people's faces to see how they are feeling? Can he or she see if someone is angry, sad, or happy?
J	1	23m-25m	Fine	Does your child try to scribble with crayons or markers?	Does your child try to draw or make marks with a crayon or pen?
J	2	23m-25m	Self help	Does your child try to help when it is time to put things away?	Does your child try to help when it is time to pack things away or tidy up?
K	1	2y2m-2y4m	Fine	Does your child try to scribble with crayons or markers?	Does your child try to draw or make marks with a crayon or pen?
K	2	2y2m-2y4m	Self help	Does your child try to help when it is time to put things away?	Does your child try to help when it is time to pack things away or tidy up?
K	5	2y2m-2y4m	Gross	When your child tries to run, does each foot leave the ground a little, even if he or she falls often?	When your child tries to run, he or she still falls often?
L	1	2y5m-2y9m	Fine	Can your child scribble with a crayon or marker without going off the page much?	Can your child draw with a crayon or pen without going off the page much?
L	2	2y5m-2y9m	Self help	Can your child take off loose clothes such as pull-down pants or a coat?	Can your child take off loose clothes such as pull-down pants or take off a jacket when not zipped/buttoned?
M	1	2y10m-3y2m	Fine	Can your child scribble with a crayon or marker without going off the page much?	Can your child draw with a crayon or pen without going off the page much?
M	5	2y10m-3y2m	Gross	Can your child stand on each foot for a second?	Can your child stand on the right foot for a second, then on the left foot for a second?
N	4	3y3m-3y7m	Express	Ask your child "**What do we do with scissors**?" and then "**What are refrigerators for**?" Does he/she use words like cutting, and keeping food cold or making ice?	Ask your child "What do we do with scissors?" Does h/she use words like cutting? Now ask "What is a broom for?" Does he/she use words cleaning, sweeping?

N	7	3y3m-3y7m	Math	If you showed your child a coin and asked, "**What's this**?", would he or she say coin?	If you showed your child money and asked, "What's this?", would he or she say money?
P	2	3y8m-4y0m	Self help	Ask your child, "**What is your name…what is your whole name**?" What does he or she say? (the word last name is in the answer)	(the word surname is in the answer)
P	8	3y8m-4y0m	Lit	Say to your child, "Listen, are these words the same or not the same?" Then say, "**bit-pit: are they the same or not the same?** Then say, "**set-set: are they the same or not the same**?" Then try these: **hide-glide, bat-mat**. How many did he or she answer correctly?	Say to your child, "Listen, are these words the same or not the same?" Then say, "fun - run: are they the same or not the same? (Your child should say "not the same") Then say, "sit-sit: are they the same or not the same?" (Your child should say "the same") Then say: mop-hop (Your child should say "not the same"), Cat – mat (Your child should say "not the same"). How many did he or she answer correctly?
Q	4	4j1m-4j5m	Expres s	Does your child use words that tell about time like, morning, afternoon, night, yesterday, or tomorrow?	Does your child use words that tell about time like, morning, afternoon, night, yesterday, or tomorrow?
Q	5	4j1m-4j5m	Gross	Can your child walk three steps putting one foot in front of the other with heel touching toe?	Can your child walk three steps putting one foot in front of the other with heel touching toe?
Q	6	4j1m-4j5m	Socio	When playing, does your child try not to hurt others? If playmates are hurt, does he or she seem concerned?	When playing, does your child try not to hurt others? If playmates are hurt, does he or she seem sorry?
Q	8	4j1m-4j5m	Lit	Point to the letters and ask, "Where's the A?... Where's the X? … Where's the O?" Keep trying to see if he or she can point to two or three correctly. How did your child do?	Ask you child "Do these words sound the same at the end: cat-hat?" (yes). Now say: "Do these words sound the same at the end dog-ball?" (no). Try with these words tree-fish (no). Now try with pot-dot? (yes). How many did he/she get right?
R	1	4j6m-4j10m	Fine	Can your child write any letters of the alphabet?	Can your child draw a circle, a square and a triangle?
R	4	4j6m-4j10m	Expres s	Tell your child, "**Say what I say: Jane likes to throw and catch a ball**." If your child made mistakes, try again with this: "**Say what I say: Bob reads good books every time he can**." How did your child do?	Tell your child, "Say what I say: Tumi likes to throw and catch a ball." If your child made mistakes, try again with this: "Say what I say: Sipho reads good books every time he can." How did your child do?
R	7	4j6m-4j10m	Math	Ask your child to give you 2 of something (like toys, coins or books). Then ask for 1, 3, 5 and 4 of something. Does he or she give you the right number of things each time?	Ask your child to give you 2 things (like toys, rocks or books). Then ask for 1 thing, then ask for 3 things, then ask for 5 things and then ask for 4 things. Does he or she give you the right number of things each time?

R	8	4j6m-4j10m	Lit	Point to a letter of the alphabet and ask your child, "What's this?" Try again with other letters to see if your child can name at least one letter correctly. How did he or she do?	Ask your child "Clap the word apple into parts" (ap-ple = 2 claps). "Now try to clap elephant into parts" (e-le-phant = 3 claps). Try with soccer (soc-cer = 2 claps), then storybook (sto-ry-book = 3 claps). How many did he/she get right?
S	3	4y11m-5y5m	Recep	Tell your child, "**Put your hands above your head**," and then, "**Put your fingers below your eyes**." Now point to a page in a book and say, "**point to the center of this page**," and then, "**point to the corner**." How many did he or she get right?	Tell your child, "Put your hands above your head," did your child do it right? Now say: "Put your fingers under your eyes." did your child do it right? Now point to a page in a book and say, "point to the middle of this page," and then, "point to the corner." did your child do it right? How many did he or she get right?
S	6	4y11m-5y5m	Socio	Can your child play games with rules, like board or card games, kickball, or hopscotch?	Can your child play games with rules, like card games, games with balls like soccer or netball?
S	7	4y11m-5y5m	Math	Point to the logs and then to the number 5. Say, "Show me this many." Do this again by pointing to the 6 and then to 7. How many did your child get right?	Point to the trees and then to the number 5. Say, "Show me this many." Could your child show 5 trees?Point to the trees again and then to the number65. Say, "Show me this many." Could your child show 6 trees?How many did your child get right?Point to the trees and then to the number 7. Say, "Show me this many." Could your child show 7 trees?
T	2	5y6m-6y0m	Self help	Ask your child, "**What is your Mom's name**?" or "**What is your Dad's name**?" (Or other caretaker if needed). What does he or she say? (the word last name is in the answer)	Ask your child, "What is your Mom's name and surname?" or "What is your Dad's name and surname?" (Or other caretakers if needed). What does he or she say?
U	3	6y1m-6y11m	Recep	Say to your child, "**Point to your hips**,… **wrist**,… **waist**." How many does he or she know?	Say to your child, "Point to your hips,… wrist,… waist." How many does he or she know?
U	4	6y1m-6y11m	Expres s	Point to the picture of the puppy and tell your child, "**Say what I say: 'Puppies make nice pets but need lots of love**'." If there were any mistakes, try again with this: "**Say what I say: 'The girl went swimming in the lake with friends**'." How did your child do?	Point to the picture of the puppy and tell your child, "Say what I say: 'Puppies make nice pets but need lots of love'." If there were any mistakes, try again with this: "Say what I say: 'The girl went swimming in the pool with friends'." How did your child do?

U	8	6y1m-6y11m	Lit	Point to the word, "Exit" and say, "What does this say?" then point to "Danger", "caution", and "Poison" and ask your child to read them. How many can he or she read? 	Point to the word, "Exit" and say to your child, "What does this say?" then point to "Checkers" and say to your child, "What does this say?", Point to "Stop", and say to your child, "What does this say?" and point to "Pick n Pay" and ask "What does this say?". How many can he or she read?
V	8	7y1m-7y11m	Lit	Point to the sign for "Fire alarm," and say to your child, "Please read this to me." Try again with "Do not disturb "… and "Wait on the curb". How many were right (sounding as if he or she knew what each one meant)? 	Point to the sign for "Fire alarm," and say to your child, "Please read this to me." Now point to "Caution, wet floor ", and say to your child, "Please read this to me." Now point to "No entry", and say to your child, "Please read this to me. How many could your child read?