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Adapting the CYRM-R for use among adolescent girls and young mothers affected by HIV in South Africa

Cognitive interview methodology and results

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Abstract

While adolescent girls and young women affected by HIV have faced barriers to engaging in HIV care and protection against unwanted pregnancies and sexually transmitted infections, adolescent mothers' abilities to overcome and withstand challenges have been largely overlooked. Little is known about appropriate methodologies to measure maternal resilience in South Africa, especially among young mothers. We aim to improve the relevance, comprehensibility and internal validity of an age-appropriate resilience measurement for use among adolescent and young mothers living with HIV in South Africa.

Cognitive interviews were conducted to inform the adaptation of the Child and Youth Resilience Measure Revised (CYRM-R), a 17-item instrument designed for use with youth aged 10-23 years old from different cultural backgrounds within the South African context. Cognitive interviewing is an approach used to identify inconsistencies and response errors that may occur between questions asked by a researcher and how the participant understands or interprets the questions being asked. A total of n=9 interviews were conducted by a researcher trained in working with adolescents that included training on approaches to cognitive interviews and probing techniques.

Overall, the process of cognitive interviewing not only offered us unique perspectives on how to modify items within the CYRM-R scale, but also provided us with extensive, additional qualitative data on the experiences of young women and the personal and relational support received from their parents/caregivers. The cognitive interviews elicited information on items that need to be modified

which informed adaptations to the scale. The participants' responses uncovered items that had similar understandings and responses. New probes or key words were added to elicit the appropriate responses. Furthermore, the participants' understanding of specific words within items revealed areas for adapting the wording. These words were changed or substituted to ensure that the participants understood the meaning of the items. The utilization of vignettes proved to be a useful technique to promote discussion and engage participants to reflect on their experiences.

Cognitive interviewing is a useful approach in improving the relevance and comprehensibility of the CYRM-R.

1. Introduction

Globally, adolescent girls and young women (AGYW) are disproportionately affected by the HIV epidemic and face enormous structural, economic and psychosocial barriers to HIV care (Harrison et al., 2015; Fleischman & Peck, 2015; Samuels & Jones, 2017). In 2018, estimates by the Joint United Nations Programme on HIV/AIDS (UNAIDS) reported that there were at least 300 000 new HIV infections among AGYW worldwide (Bajunirwe et al., 2020). Young women are also vulnerable to risks from unprotected sex and entrenched gender norms that inhibit their sexual and reproductive health, and these experiences are compounded by biological (puberty-related) as well as social factors (George et al., 2020; Suleiman et al., 2017). In sub-Saharan Africa, AGYW faces more uncertain futures as a result of poverty, health disparities and barriers to education (Lowenthal et al., 2014; Toska et al., 2017; Toska et al., 2020). Furthermore, AGYW also experience high rates of gender-based violence embedded within contextual cultural norms and traditions that make accessing HIV care especially complex and problematic, particularly within the epicenter of the epidemic– Africa–which hosts 80% of adolescents living with HIV (McCloskey et al., 2016; Becker et al., 2018; Kilburn et al., 2018).

Among South African AGYW between the ages of 15-24, there is a 16% HIV prevalence rate, which amounts to around five times that of their male counterparts (Stoner, Nguyen et al., 2019; Balkus et al., 2015). Evidence suggests that young women (aged 15-26) who have experienced intimate partner violence (IPV) have a 50% higher likelihood of contracting HIV than their female peers who do not experience IPV (Hatcher et al., 2015). Globally, in the second decade of life, adolescent girls often face complex life decisions around sexual initiation, continuation of education, becoming a part of the active labour force, childbearing, and relationships (Juárez, et al., 2008). These experiences place AGYW at an increased risk of becoming young mothers. Evidence suggests that a third of South African women will have their first child before the age of 20,

and an estimated two-thirds of these are unwanted and unplanned pregnancies (Stoner, Rucinski et al., 2019). Although there are several factors that can predict early pregnancy amongst AGYW, such as early sexual debut, abuse, and multiple partners, early pregnancy is also a strong predictor of exposure to poverty, and educational disadvantage (French & Dishion, 2003; Gunawardena et al., 2019). In turn, the children of adolescent mothers are more likely to be underweight, stunted, and have lower cognitive development and school readiness (Wemakor et al., 2018; Yakubu & Salisu, 2018). Over time, they experience lower educational achievement, higher levels of poverty, and an increased risk of becoming adolescent parents themselves (Fomby et al., 2015).

With an abundance of studies focused on barriers to engaging in antenatal and HIV care; uptake of contraception, protection measures against unwanted pregnancy and sexually transmitted infections; and drivers of HIV and stigma in AGYW, there remains a dearth of research around effective methodologies to measure and assess resilience in such contexts (Cluver et al., 2016; World Health Organization, 2017; Chikwari et al., 2018; Sherr et al., 2018). Furthermore, young women who face significant barriers and still manage to withstand and overcome challenges have often been absent from this research. The syndemic of HIV and motherhood may exacerbate risk and vulnerability but may also trigger opportunities for resilience. While study recommendations often suggest implementing interventions to combat these challenges and foster resilience—such as social protection mechanisms or education-conditional programmes—most of the questions asked by academics and research interventionists are around why AGYW are at continued risk (Cluver et al., 2019; Austrian et al., 2020).

Qualitative research speaks to the many ways in which AGYW, particularly young mothers living with HIV, struggle but also cope with challenges. Few studies investigate quantitatively why AGYW adapt, find strength, or endure despite these entrenched risk pathways. This limited literature is due to—in part—limited quantitative tools to measure resilience for different age groups and life circumstances. In this working paper, we describe the process of adapting the Child and Youth Resilience Measure-Revised (CYRM-R) in the South African context for use in interviews with adolescent mothers affected by HIV, including those living with HIV. The purpose of adapting this measure is to have an appropriate tool for inclusion in the follow-up HEY BABY study and ensure that the items within the scale are understandable and relevant to the young women within the study cohort. Through data collected via cognitive interviews, we aim to inform additional research on understanding resilience among adolescent mothers living with HIV.

2. Objectives

Our overarching objective is to adapt the CYRM-R to improve the relevance, comprehensibility, and internal validity of the scale among 15- to 24-year-old adolescent mothers affected by HIV in South Africa. We aim to do so with two aims:

Aim 1: To establish a final set of resilience items that will be easily understood by participants in order to derive the best intended responses.

Aim 2: Gather stories through responses that capture a true picture of the resilience of adolescent mothers affected by HIV in South Africa.

3. Method

This section provides an overview of the CYRM-R items that we aimed to adapt to the South African context using cognitive interviews. It is followed by a detailed discussion of the cognitive interviewing process conducted, and by a detailed description of our process of adapting the items on the scale informed by participant responses.

3.1 Step 1: CYRM overview

3.1.1 The Child and Youth Resilience Measure-Revised (CYRM-R)

The Child and Youth Resilience Measure-Revised (CYRM-R) (Jefferies et al., 2018) is a 17-item self-report revised version of the commonly used CYRM-28, designed for use with youth aged 10-23 years old from diverse cultural backgrounds (Ungar & Liebenberg, 2011; Theron et al., 2014; Theron et al., 2017; Sanders et al., 2017). It consists of two subscales: 'personal resilience' and 'caregiver resilience'. The 'personal resilience' subscale consists of intrapersonal and interpersonal items which are linked to internal skills and environmental resources such as school or peers (Höltge et al., 2020). The 'caregiver resilience' subscale focuses on characteristics associated with important relationships shared with a family member or a primary caregiver, including support, nutrition, or safety (Höltge et al., 2020). The 'caregiver resilience' subscale was also further adapted and amended to include a subscale on partners to assess what support an intimate, romantic partner could offer adolescent mothers affected by HIV. The same items that assessed relational resilience between young women and their caregivers was then adapted to account for relational resilience present between a young woman and her partner. This subscale is not included in this paper as the

process for adapting the relational items with partners involved an extensive review of literature to inform scale items and will be reported on separately.

The measure in its entirety is available in a 3- or 5-point response scale version. The 3-point Likert scale includes options of 'Yes' (1), 'Sometimes' (2) and 'No' (3). The 5-point Likert scale was labeled as 'Not at all' (1), 'A little' (2), 'Somewhat' (3), 'Quite a bit' (4), and 'A lot' (5). It is suggested that the 3-point scale can be used for individuals with comprehension difficulties. The 5-point scale provided a richer explanation of variability, where the minimum score is 17 and the maximum score is 85. A higher score indicates higher levels of resilience (Resilience Research Centre, 2018).

3.1.2 Versions of the CYRM-R

Since its initial development, the measure has been modified into a 26-item version for use among children (aged 5-9 years), and a 28-item version for use with youth (aged 10-23 years) and adults (aged 24 and older). For each of these versions (child, youth, and adult), an abbreviated 12-item resilience measure is also available (Resilience Research Centre, 2016). The CYRM-R is offered in a standard or simplified wording. We opted to make use of the simplified version of the scale because we suspected that the participants might have difficulties comprehending the questions (Resilience Research Centre, 2018). Furthermore, studies have validated the measure in 11 countries around the world, including New Zealand, South Africa, and Canada (Zahradnik et al., 2010; Liebenberg et al., 2012; Sanders et al., 2017; van Rensburg et al., 2017). However, the measure's subscales are not consistent across these different countries. For example, the study by Liebenberg et al. (2012), reported three subscales, namely 'individual resilience', 'relational resilience', and 'contextual resilience', while the study in New Zealand generated a four-factor structure through principal component analyses (Sanders et al., 2017). The CYRM-R has been found to have more robust psychometric properties after the subscales have been validated against the Rash Model (which displays the probability of a person to correctly respond to a test item, using factor analysis, and is now the recommended resilience measure for use among adolescents) (Jefferies et al., 2018).

3.1.3 CYRM-R Application in South Africa

Höltge et al. (2020) conducted cross-country network analysis using data from 14 countries (including South Africa, Canada, New Zealand Botswana, China, Colombia, Equatorial Guinea, India, Indonesia, Italy, Jordan, the Philippines, Romania, and Syrian refugees living in Jordan) to test which network of individual, relational, and contextual (community and cultural) resources were related, and which of the resources had the most associations with other resources.

They found that having supportive caregivers was the most significant resource across countries, as this resource had the most robust positive associations with other resources.

3.2 Step 2: Cognitive interviews to adapt CYRM-R

Cognitive interviewing is a method used to identify any inconsistencies that may occur between what the researcher believes they are asking and how the participant understands or interprets the questions being asked (De Silva et al., 2006). For our design purposes, cognitive interviews included a nine-stage process to verify the CYRM-R items specifically within the South African context. The envisioned nine (9) stages were as follows:

1. Evaluation of the CYRM-R scale by exploring the literature available and consideration of various probing techniques and examples that can be used to explore each item qualitatively
2. Reviewed the literature for the use of vignettes and the drafting and reviewing of vignettes designed to accurately reflect the lives of adolescent mothers affected by HIV in our local setting
3. Translation of items and probes into local languages (i.e., isiXhosa)
4. Recruitment of 9 adolescent women between the ages of 15-24
5. Concurrent probe during cognitive interviews in the language preferred by the adolescent mothers affected by HIV
6. Revision, and response to suggestions and necessary changes made, informed by cognitive interviews
7. Pilot of the revised CYRM-R with included adaptations informed by cognitive interviews with sample of adolescent girls
8. Adaptation and revision of the CYRM-R post-pilot data collection informed by feedback from participants and fieldworkers
9. Final adaptation of the CYRM-R for the purposes of the South African cohort of adolescent girls in the resilience component of the HEY BABY study follow-up Phase 1 data collection.

Between 2020-21 we recruited nine young mothers at risk of or living with HIV from the HEY BABY longitudinal cohort study. Participants lived in urban, rural and peri-urban areas in the Eastern Cape Province, South Africa. Ethical approval was obtained from the Universities of Cape Town and Oxford. Participants provided feedback with a trained isiXhosa-speaking researcher (HM) on an approximately 30-minute questionnaire, including the CYRM-R. The interviewer co-developed the cognitive interview protocol, including facilitated self-reflection and learning on research topic introduction, probing, and what clues to focus on during the interview. Mock cognitive interviews were also conducted to test response options and test the interview flow. These mock interviews and training sessions were held prior to interviewing and iteratively as the interviews were

conducted to ensure that we were responsive to participants' issues with items. Basic probes and item-specific probes were developed by a team of mixed-methods researchers. The basic probes were developed so that all items included three general probes regardless of their topic area. Item-specific probes were created to assess understanding and were based on the specific topic area of items. Four different categories of probes were assessed as options for the basic and item-specific probes. For each item, options of probes covered these categories; the comprehension/ interpretation probes (e.g., "Could you tell me in your own words what this question means to you?"), retrieval from memory ("How did you come up with your answer?"), decision processes ("How sure are you of your answer?"), and response processes ("Why did you choose that answer?", "Give an example.") (Willis, 2005).

According to Willis (1999), a round of interviews containing 5 to 10 participants is sufficient to detect problems in the items contained in an interview tool, and it is not always necessary to conduct more than 12 to 15 interviews. Also, an interview length of more than one hour is seen as excessive and can be a burden on the participant and the interviewer and therefore needs to be avoided (Willis, 1999). Seven interviews were conducted in the first round of interviews. The length of the cognitive interviews was kept within 30 minutes for the first five interviews. However, not all the items on the scale could be covered within thirty minutes. Two more interviews were added on a rolling basis to cover all the items and based on the feedback from the researchers and on interview reflections.

After the first round of seven interviews, the interviewer completed reflection documents to reflect on each interview and on specific item responses and difficulties. The interviewer also had numerous discussions with the larger team to explore and address the problems found in the interviews. Finally, the researchers analyzed the feedback from interviews and assessed items that were problematic, and adapted them or added and/or modified probes to get a deeper understanding of the problem. The researchers then agreed to a second round of interviewing to review whether any of the changes improved understandability, and to reflect whether any further adaptations were needed.

In addition to the seven first-round interviews, during the second round of interviewing another two participants were interviewed with the revised probes (bringing the total number of interviews to nine). Again, after the second round of interviewing, the interviewer completed reflection documents and shared findings with the larger team. These inputs were reviewed and since there were no more difficulties with the included items, the study team agreed that no further improvements were needed, and no more cognitive interviews were necessary.

3.2.1 Introduction, consent, and data storage

Due to the advent of COVID-19, these cognitive interviews took place telephonically. Introductions, consent procedures, and interviews were recorded and stored on an electronic, password-protected database. Informed consent was obtained from the participant using the form included in Appendix A. The first part of this process was to describe the purpose of the cognitive interview, and request consent. Once this was done, the interviewer proceeded to confirm the researcher was talking to the correct participant by confirming her serial number, which was accessed from the database from which participants were drawn. If the participant consented, the interviewer then began reading the first part of the two-part vignette.

3.2.2 Application of vignette

Vignettes are tools used to elicit reflections, experiences, and responses to explore a particular topic. They include an 'outsider' perspective so that participants immerse themselves in a particular narrative either to respond from the viewpoint of the central participant in the narrative or alternatively from their own, subjective position (Törrönen, 2018). Pantelic et al. (2018) used vignettes as a tool when exploring HIV stigma with adolescents, due to the sensitivity that is involved with questions related to stigma. They reported that the vignettes enabled them to "reduce social desirability bias" and were used to engage with these young people.

Törrönen (2018) describes vignettes as short stories created around characters involved in specific situations. In these stories the research topic is almost implicitly embedded within the storyline so that it can stimulate participants' thinking, perceptions and beliefs in a topic area. These short stories allow researchers to elicit responses about events or situations, and try to find ways in which participants would respond or react in similar events. For Sampson and Johannessen (2020: 56), the use of vignettes produces "rich and detailed accounts more rapidly, and more effectively." It was with this in mind that we used vignettes as a methodology to elicit responses from adolescent mothers affected by HIV when conducting cognitive interviews. We aimed to see how young women responded to these narratives by reflecting on their own response subjectively, but also for how the fictitious character in the story would perceive questions asked. In order to make sure that the narrative was as true as possible for adolescent mothers affected by HIV, and central to our topic of study, the desired vignette was designed to incorporate a young woman with the following characteristics:

- Between the ages of 15-24
- Must have a child

- Must have some sort of connection with family/ partner to elicit responses based on the caregiver/ relational subscale (i.e., relates to psychological and physical resources provided by caregivers, such as safety, nutrition, or support) or on the relationship with romantic or sexual partner subscale
- Must be affected by or living with HIV

The vignette was divided into two parts so as to ease the participant into the different aspects of the interview. The first part covered the general struggles of young motherhood. The second part was based on the fictitious character 'Jabu' whom the participant could relate to in order to maintain a flowing conversation between the interviewer and the participant (see Appendix A). After each vignette, the interviewer asked a few probing questions to gain insight into the participant's understanding of the two-part vignette.

The interviewer started with the introductory vignette (the first part of the vignette), which read as follows:

"Being a young mother comes with changes, at home, with friends, or partners. Some changes are exciting, others can be difficult to handle".

The interviewer would then probe the participant's understanding of this introduction with the following questions:

- Does the introduction make sense to you?
- Do you think that being a young mother comes with changes as I have mentioned?
- What changes do you think are exciting or difficult to handle?"

Then, the interviewer would begin offering the questionnaire by first asking the participant the following question (point 1) and then by stating the relevant response options (point 2):

1. To what extent do the following statements apply to you (there are no right or wrong answers).
2. For the following items please respond by choosing between options 'Not at all', 'A little', 'Somewhat', 'Quite a bit' and 'A lot'.

The first seven items of the questionnaire with standardized probes were then presented by the interviewer. Standard probes included two probes that were compulsory for all items: 1) *Why did you choose this answer?* and 2) *Could you tell me in your own words what this question means to you?* The researchers found these two probes offered the most insight from participants, regardless of the phrasing of items. Other probes were intentionally centred around the items themselves. The interviewer used concurrent probing to inquire about the participant's understanding of the CYRM-R questions. Concurrent probing is a technique that aims to facilitate the natural flow of conversation, for the interviewer to gain immediate and natural responses based in the moment (Willis,

2005). For example, items in the CYRM-R were presented to the participant in the form of a question. The participant then responded to the question. Her response was then probed and questioned to gain a sense of her interpretation of the question rather than her actual answer itself. As such, the interviewer employed verbal probing to engage and understand how the participant came to her answer, and how she understood and comprehended the question. The aim was to assess, based on the responses during interviews, what needed to be changed and how the scale needed to be adapted to suit the target population within our study context.

Before the interviewer continued presenting items 8-17, they read the secondary part of the vignette about the fictitious character called 'Jabu'. This vignette was designed to offer the participant an example of a young woman who has gone through significant changes and challenges and has tried to navigate these changes despite her circumstances. The interviewer proceeded by saying:

"Before we continue to the next questions, we would like to give you an example of a young mother that experienced some challenges and is now navigating her way through life.

Jabu is a young mother living in the Eastern Cape. She found out she was pregnant and tested HIV positive, while her son tested negative. She left school to care for her baby while living with her boyfriend. She then later returned home with her child, to stay with her mother. She loves music and singing."

Probing questions on this second vignette included:

- What do you think about Jabu's story?
- Do you know anyone like Jabu in your own life?
- Is Jabu's story relatable in any way? How so?
- How do you relate to Jabu?
- To what extent does the following apply to you?

After working through all remaining items of the CYRM-R, the interviewer proceeded to engage with the participant about her relationship with her romantic or sexual partner or the father of the baby (if he was not her current romantic or sexual partner). The interviewer then continued:

"If you recall in our story earlier, we spoke about Jabu and her relationships, so now we would like to ask you questions that will help us learn more about **your** relationship with your partner, boyfriend or child's father.

- Does that make sense to you? Do you have any questions about this before we continue?
- Are you still with the father of your child/children?
- Could you tell me to what extent the following applies to you?"

These questions were used to inform the development of a set of items to explore the relationship between adolescents or young mothers affected by HIV and their sexual/romantic partners or fathers of their children. The results thereof have not been reported in this paper, as a separate process was undertaken to conduct a literature review on relationship dynamics and quality, to inform relational items.

3.3 Step 3: Adaptations based on the cognitive interviews

Based on researchers' experience of using scales in a new adolescent population by (Pantelic et al., 2018) and on the fact that CYRM-R had not been validated in this age group in South Africa, we made several adjustments before piloting the questionnaire and conducting cognitive interviews.

Table 1 presents the original items of the CYRM-R scale. The table also includes distinctions between an item being part of the personal or the relational subscale, the response options, and probes for each item. The probes offered a variety of options to cover all four categories of probing techniques namely: comprehension focus, retrieval from memory, decision processes and response processes, developed by the research team using the cognitive interviews guide (Willis, 1999).

Table 1: The CYRM-R (17 items), which included the personal [P] and caregiver [C] subscales

CYRM-R ITEM	Probes	Type of probe
1. I get along with people around me [P]	What does the term "get along" mean to you? How do you think you cooperate with other people?	Comprehension focus (intention & meaning of terms)
	How did you come up with your answer?	Retrieval from memory (recallability & recall strategy)
	How sure are you of your answer? Can you repeat the item back at me in your own words?	Decision processes (motivation & sensitivity/ social desirability)
	How easy or difficult was it to choose an answer from the options provided? Why? Why did you choose that answer? Give an example.	Response processes (mapping)
2. Getting an education is important to me [P]	Could you tell me in your own words what this question means to you? Is it difficult to answer this? What does the term "education" mean to you? Why is it important to get an education? What level of education do you want to attain?	Comprehension focus (intention & meaning of terms)
	How did you come to answer this question? What was your process/ thinking of getting to your answer?	Decision processes (motivation & sensitivity/ social desirability)

CYRM-R ITEM	Probes	Type of probe
3. I know how to respond in different social situations (such as home, school, church) [P]	What did you understand by the phrase "different social situations"? What does it mean to "behave" in this question? How can one rephrase this question?	Comprehension focus (intention & meaning of terms)
	When you answered this question, did you actually mentally picture yourself behaving in different social situations? What are the "different ways" people can "behave" in different situations?	Decision processes (motivation & sensitivity/ social desirability)
4. My parent(s)/ caregiver(s) really look out for me [C]	What, to you, does "look out for me" mean? In your own words, what do you think this question is trying to ask? Do you think that the terms "parents" and "caregivers" are the right words to use here? Are there other words you would add/replace? Does the word "really" have any bearing on how you answer the question? What does it mean when they "really" look out for you?	Comprehension focus (intention & meaning of terms)

CYRM-R ITEM	Probes	Type of probe
	How do you remember all the ways they look out for you?	Retrieval from memory (recallability & recall strategy)
	Could you give us an example of why you chose this answer?	Decision processes (motivation & sensitivity/ social desirability)
5.My parent(s)/ caregiver(s) know a lot about me (who my friends are, what I like to do) [C]	What does the phrase "know a lot about me" meant to you?	Comprehension focus (intention & meaning of terms)
6. If I am hungry, there is enough to eat [P]	Was this easy or hard to answer? What does the term "there is enough to eat" mean? What does the word "enough" mean? How many meals do you usually have a day? Do you have enough food for all the meals of the day (breakfast, lunch and super)? What does the term "hungry" mean to you? Can you give us another way to ask this question?	Comprehension focus (intention & meaning of terms)

CYRM-R ITEM	Probes	Type of probe
	What kinds of food would you have at home when you say you have enough food to eat? When you say there is not enough food to eat, what food is usually not there?	
	What do you think about this question?	Decision processes (motivation & sensitivity/ social desirability)
7. People like to spend time with me [P]	In your own words, what do you think this question is trying to ask? What does it mean to "spend time" in this question? When answering this question who would you include in the "people"?	Comprehension focus (intention & meaning of terms)
	How would you remember whether someone liked to spend time with you? Did you enjoy your time with them?	Retrieval from memory (recallability & recall strategy)
	How do you know when people like to spend time with you? Do you have fun when you spend time with xx?	Decision processes (motivation & sensitivity/ social desirability)
8. I talk to my family/caregiver(s) about how I feel (for example,	Was it easy or difficult to talk to your family/caregiver(s) about how you feel? What does it mean to talk to people about how you feel?	Comprehension focus (intention & meaning of terms)

CYRM-R ITEM	Probes	Type of probe
when I am hurt or sad) [C]	How do you remember this? Why is it easier to talk to them? / Why do you prefer to talk to them? What kind of things do you talk about?	Retrieval from memory (recallability & recall strategy)
9. I feel supported by my friends [P]	What does the term "supported by friends" mean to you? Was this easy or difficult to answer? What kind of support do they give you? (The participant should be encouraged to give examples.)	Comprehension focus (intention & meaning of terms)
	How do you know that your friends "support" you?	Decision processes (motivation & sensitivity/ social desirability)
10. I feel that I belong/belonged at my school/my community [P]	Was this easy or difficult to answer? What does the term "belong/belonged at school" mean? What/ who made you belong?	Comprehension focus (intention & meaning of terms)
	How easy or difficult was it to remember? How did it (event) make it easy or help you to deal with or overcome the situation?	Retrieval from memory (recallability & recall strategy)

CYRM-R ITEM	Probes	Type of probe
	What kind of activities or things do you get up to that make you feel like you belong?	
11. My family/ caregiver(s) care about me when times are hard (for example if I am sick or have done something wrong) [C]	What, to you, are some "hard times"? What does it mean to "care about" you? Who cares about you the most during these hard times? Was this easy or difficult to answer?	Comprehension focus (intention & meaning of terms)
	How do you remember the times they stand by you? How did they help you overcome this hard time in your life?	Retrieval from memory (recallability & recall strategy)
	How do you decide what is considered "hard in this question? Why do you say this was a hard for you?	Decision processes (motivation & sensitivity/ social desirability)
12. My friends care about me when times are hard (for example if I am sick or have done something wrong) [P]	Was this hard or easy to answer? What, to you, are some "hard times"? What does it mean to "stand by" you?	Comprehension focus (intention & meaning of terms)
13. I am treated fairly in my community [P]	What does the term "treated fairly in my community" mean to you? What do you consider your "community" to be?	Comprehension focus (intention & meaning of terms)

CYRM-R ITEM	Probes	Type of probe
	What does "fairly" mean?	
	How do you decide what is fair in this question?	Decision processes (motivation & sensitivity/ social desirability)
	What made you feel that you were treated fairly?	
14. I have chances to show others that I am growing up and can do things by myself [P]	What does "growing up" mean? What does "show others that I am growing up and can do things by myself" mean? What does it mean to be doing things for yourself, can you offer examples?	Comprehension focus (intention & meaning of terms)
	How do you decide what is fair in this question? What makes you feel that you were treated fairly? Why would you want opportunities to show others that you are becoming an adult and can act responsibly?	Decision processes (motivation & sensitivity/ social desirability)
15. I feel safe when I am with my family/ caregiver(s) [C]	What does the term "safe" mean to you? What does "family" mean here? Can you please repeat the question in your own words?	Comprehension focus (intention & meaning of terms)
	How do you remember times you feel safe?	Retrieval from memory (recallability & recall strategy)

CYRM-R ITEM	Probes	Type of probe
	How do you decide you feel safe? How do you come to that realization?	Decision processes (motivation & sensitivity/ social desirability)
16. I have chances to learn things that will be useful when I am older (like cooking, working, and helping others) [P]	What, to you, does the "things that will be useful" mean and/or refer to? How do you know if something will be useful later? What do you want to do when you complete school? Have you acquired skills for that? How are you working towards achieving the skills you want acquire?	Comprehension focus (intention & meaning of terms)
	How do you decide when skills will be useful later in life? What do you base your answer on?	Decision processes (motivation & sensitivity/ social desirability)
17. I like the way my family/caregiver(s) celebrates things (like holidays or learning about my culture) (family gatherings where traditional ceremonies are	What did you understand by the term "culture" and "traditional ceremonies" when answering this question? Could you tell me in your own words what this question means to you? What does it mean to "enjoy" cultural and familial traditions? What cultural or traditional events have attended? Are they important for/to you?	Comprehension focus (intention & meaning of terms)

CYRM-R ITEM	Probes	Type of probe
celebrated. It could be imicimbi, family lunches, braais, weddings) [C]	How do they make you feel or help you with?	
	How do you remember the times you've enjoyed cultural/ family traditions?	Retrieval from memory (recallability & recall strategy)
	How do you know those are cultural/familial traditions? Could you give us an example of why you chose this answer?	Decision processes (motivation & sensitivity/ social desirability)

4. Results of cognitive interviews

The use of cognitive interviews offered considerable insight into the types of support (or lack thereof) that young women received from parents/caregivers. It also offered us insight into their own personal resilience in terms of their sociability, value of education, their own behaviour, connections with others, and availability of food. The interviewer also gained insight into other areas of the young women's lives, in the process of conducting the cognitive interviews in which items sparked conversation around their HIV status and the dynamics within their relationships with caregivers, partners, siblings, and friendship groups.

The process of conducting the cognitive interviews, in which items sparked conversation around the young women's HIV status and the dynamics within their relationships with caregivers, partners, siblings, and friendship groups, also allowed the interviewer to gain insight into other areas of the young women's lives.

The cognitive interviews identified a few items that needed to be improved and adapted to enhance the relevance and understandability of the measure within the South African context. The following section presents how the vignette was received. The next section presents how the items on the scale were received and changed during the cognitive pilot interviews. It contains an elaboration of how the participants understood the items and the revisions made to the items. This is followed by a subsection on how the overlaps to responses were addressed, which is followed by a subsection on language adaptations made to some of the items. The adaptations are presented in Table 2. The last section of the results is an elaboration of how the participants responded to the 3-point and 5-point Likert scale, presented in the section '4.2.3 Response options.'

4.1 The vignette

Most participants found the vignette easy to understand. The engagement in the vignette allowed for open discussion on relationships and HIV status disclosure. Participants also shared their experiences of being young parents. Some participants expressed either how they related to the story or how the narrative was completely different to their own lives. This was often noted in relation to the struggles of motherhood. For instance, some participants related to the fictitious character 'Jabu' in how she had to leave school in order to take care of her child, while other participants found differences where they did not have the support of parents in the way Jabu had when she returned home.

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The vignette on 'Jabu' also encouraged the participants to open up about their HIV status and how living with HIV made them feel. Most of the participants also commented on how it was not a good idea to stay with a boyfriend after falling pregnant as this increased the likelihood of the relationship ending. These perceptions were linked to personal, social and cultural beliefs around relationship preferences by the participants.

4.2 Participants' understanding of the items and revisions made to the items

In this section, the challenges particular items presented as well as the revisions made to these items are displayed. These revisions were informed by the participants' understanding of, responses to and interpretation of the items. Items were revised to eliminate overlaps or similarities in responses to some items. The suggested changes were made by adding probes to some items or adding key words that would enable the participants to give appropriate responses to the items. Further changes were included by adding isiXhosa translations to assist the participant and the research assistant to read and understand the items better.

4.2.1 Addressing overlaps in responses[1]

Five items had similar understanding and responses from the participants:

- Item 1: 'I get along with people around me';
- Item 2: 'Getting an education and improving qualifications or skills is important to me'
- Item 8: 'I talk to my family/caregiver(s) about how I feel (for example, when I am hurt or sad';
- Item 9: 'I feel supported by my friends,'; and
- Item 11: 'My family/caregiver(s) care about me when times are hard, for example if I am sick or have done something wrong'

Items 1, 9 and 11 had similar responses. Participants understood item 1 ('to get along') as the ability to seek support from family. This item assesses whether one can live in harmony with others. However, the response was similar to items 8, 9 and 11, which focused on the ability of the participant to talk to family and friends or get support from family and friends. To address this challenge of overlap or similar responses, we coupled item 1 with an isiXhosa probe which aims to understand how one is able to live in harmony with others. This approach was implemented to curb any confusion and help to clarify for participants what the

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[1] After the first round of cognitive interviews the interviewers decided to remove the relationship to partner items in order to rework these items and explore them further. These items will be included in Round 2 of the follow-up interviews.

item was asking about. This change in clarification to item 1 also meant that no changes were necessary to items 8 and 9.

In reference to items 2 ('Getting an education and improving qualifications or skills is important to me'), 14 ('being able to show others that they can do things for themselves') and 16 ('to have chances to learn things that will be useful when older') participants experienced these three items as overlapping in terms of how they understood these items. Participants seemed to understand Item 14 as having the opportunity to learn new skills or getting a job to support their children, which is similar to Item 2. To address this challenge, two new probes were added to Item 2. The probes asked how the participants had tried to ensure that they got an education or improved their skills. These probes were also adapted by including the 'improvement of skills' by the participant. The aim of adding these probes was to ensure that the participants' responses are exclusively related to getting an education or improving skills. Item 14 was changed to the standard wording of the item, which seeks to know if the participant can show others that they can act 'responsibly', rather than the simplified version 'I have chances to show others that I am growing up and can do things by myself. This was done to avoid confusion with items 2 and 16. This revision created an improved understanding that was different to responses given to Items 2 and 16. The participants were better able to understand that the item (14) sought to understand if the participant was able to take responsibility and to be accountable for their lives instead of being able to get an education and a job. This was also similar to item 16 where participants were able to deduce that the item (16) intended to know if the participant was able to acquire new skills, offered with the example 'such as household activities, job skills, or those involved in helping others and no further revisions were necessary to this item.

New probes were also added to Item 6 ('If I am hungry, there is enough to eat'). Item 6 seemed to be a bit complex for participants, as they would refer to specific types of food that they had at home to say that they had enough food to eat. Therefore, to address this, we added probes such as, 'do you have enough food for all the meals of the day (breakfast, lunch and super)?' and 'what kinds of food would you have at home when you say you have enough food to eat?'. These additional probes enabled and encouraged participants to reveal if they were able to have all the meals of the day and which foods would be available to say that they had enough food to eat, therefore eliminating the complexity of the original item.

One additional new probe was also added to Item 8 ('I talk to my family/caregiver(s) about how I feel (for example, when I am hurt or sad)'). Even when participants expressed that they talked to their caregivers or family about how they felt, they still said that they did not talk about things that made them

upset. Therefore, a probe asking the participant what kind of things/feelings they talk about with their caregiver or family was added.

4.2.2 Language adaptations: Change of specific words

Probing the interpretation of Item 3 ('I know how to behave/act in different situations (such as school, home and church)'), we found that the participants' understanding was mostly related to behaving well at school and at home. The objective of this item was to find out if participants were able to express themselves regardless of the various situations, they would find themselves in. For example, some may know to be respectful to elders, or to be quiet in church. Therefore, to address this challenge the item was revised to being able to 'respond appropriately' to different situations.

Item 10 ('I feel that I belong/belonged at my school/my community') was also revised as this item created difficulty for participants to establish what it meant 'to belong'. The main objective of this item is to understand if participants felt that they fit in with their communities. To address this challenge, the item was revised to ask if participants felt that they fit in at school or in their communities.

The last revisions that were made were done on all the relational/caregiver subscale items that aimed to understand the participants' relationship with their parent or caregiver. When asked about relationships with parents and caregivers, participants mostly brought up extended family and siblings. They further expressed that even though they stayed with their parents, they would mostly seek assistance from siblings or extended family. Therefore, items that had parent or caregiver were revised to 'family/parent/caregiver'.

When the revised items were presented in Round 2 of the cognitive interviews, there was an improved understanding of items and more clarity in responses from participants. Participants were able to provide responses that were more related to the item. In addition, interviews were shorter in length which may be attributed to less time spent on explaining the items and probes by the interviewer and easier comprehension of the items by the participant (Table 2).

Table 2: Revisions made to the CYRM-R items

Original item	1. I get along with people around me
Problems uncovered in cognitive interviews	Participants' understanding or responses to this item were not related to cooperation. Participants mostly related "getting along" with people around them to being able to ask for help from family. Others understood this as living in harmony (because they "don't fight with them") with those around them, such being able to make friends with neighbors. We thought that the responses to "getting along" were similar to the responses and understanding we got from item 4.
Action taken	We thought it be simpler to stick to the original item. Instead of changing the original item, the team agreed that the item would remain as it is. Instead, Xhosa translation was added to create a better understanding for the participants. The Xhosa translation that was added translates "to live in harmony" with others.
Revised or added question or phrase	Added an isiXhosa probe that means: "to live in harmony with others"- "..ukuphilisana nabanye abantu"
Implication	This will ensure that participants do not think that this item is trying to understand whether they are able to get help from people around them, which is what is asked in item 4.
Original item	2. Getting an education is important to me
Problems uncovered in cognitive interviews	Some participants struggled to rephrase this item; however, they were able to say why and what it meant to get an education or improve their skills to them. Some related this to passing at school, others related this item to "graduating" and other related the item to enrolling in skill development or Learnership programmes.
Action taken	We added a further probe that would encourage the participant to recall action/incident/ experience related to getting an education.
Revised or added question or phrase	Added a probe: How have you tried to ensure that you get an education or improve your skills?
Implication	This will encourage the participant to easily relate this item to their experience and possibly be better able to interpret it.

Original item	3. I know how to respond in different social situations (such as home, school, church)
Problems uncovered in cognitive interviews	Participants tend to confuse this item with the ability to stick to rules set out at school and at home. They mostly related their examples or responses according to their behaviour at school or doing house chores and schoolwork.
Action taken	To address this, the word "appropriately" was added to the sentence in order to make the participant understand that the way they responded to situations was dependent on the different contexts they found themselves in.
Revised or added question or phrase	Revised item: I know how to respond appropriately in different social situations (such as home, school, church)
Implication	This addition will also enable participants to understand that there are several ways of responding to different situations. For example, some expressed that they were allowed to express their views and feelings of disagreement at home whereas this might not be appropriate in church.
Original item	4. My parent(s)/ caregiver(s) really look out for me
Problems uncovered in cognitive interviews	Participants were able to respond to this item very well. However, their responses were like responses in item 1. At times they said that they were more looked out for by siblings and extended family, even though they lived with parents. For example, they expressed that their older sisters and brothers helped them financially and with looking after their children when they went to look for work or were not around or when the baby was ill.
Action taken	We added "family" to the item.
Revised or added question or phrase	Revised wording: My parent(s)/ caregiver(s)/family really looks out for me.
Implication	This will also give the participants an option to talk about getting help from other people when they are not getting help from parents.
Original item	6. If I am hungry, there is enough to eat
Problems uncovered in cognitive interviews	Participants would refer to specific types of food that they had at home to say that they had enough food to eat but did not respond as to whether there really is enough to eat.
Action taken	We added a probe that would make the participant expand further on what it means to have enough food.

Revised or added question or phrase	Added probes: How many meals do you usually have a day?
	Do you have enough food for all the meals of the day (breakfast, lunch, and supper)?
	What kinds of food would you have at home when you say you have enough food to eat?
Implication	This probe was helpful in getting the participants to identify what type of food they regard as being at home when they have enough.

Original item	8. I talk to my family/caregiver(s) about how I feel (for example, when I am hurt or sad)
Problems uncovered in cognitive interviews	We thought the responses or understanding for this item were similar to item 1 "getting along" as the participants expressed that they were able to talk to their family about how they feel and when they needed help with something.
Action taken	We added a probe that encourages the participant to give an example about experiences or feelings they talk about with their family or caregiver
Revised or added question or phrase	Added a probe: What kind of things do you talk about?
Implication	This would avoid similarity or overlap with other item responses, would help to understand what participants mean when they are able to talk with family and would show how personal/intimate the topics of discussions are with family.

Original item	10. I feel that I belong/belonged at my school/my community
Problems uncovered in cognitive interviews	Participants largely struggled to explain their understanding of this item.
Action taken	We added a probe that would encourage the participants to better explain their understanding.
	This item was workshopped further and was revised, and a probe was added to support it.
Revised or added question or phrase	Revised item: I feel like I fit in at school/in my community

	Probe: What does it mean to 'fit in' at school/ community mean?
Implication	This revised item offered clearer direction for participants as we made the switch from belonging to fitting in. The additional probe then encouraged the participant to give examples and reflect on past experiences when they felt that they fit in. This then abled us to establish some form of understanding and explanation to this item.
Original item	14. I have chances to show others that I am growing up and can do things by myself
Problems uncovered in cognitive interviews	We thought that it would be advisable that we go back to the standard wording of the item to keep the word "responsible" because this will avoid confusion between this item and items 16 and 2.
Action taken	We went back to using the standard language of the item.
Revised or added question or phrase	Revised item: I have opportunities to show others that I am becoming an adult and can act responsibly
Implication	This is to ensure that the specific term 'opportunities' rather than 'chances' is used to clearly differentiate the item and allow participants to understand what the item is looking for, namely opportunities to demonstrate responsibility (such as financial responsibility, and that you are able to look after others).

4.2.3 Response options

The 5-point Likert scale (i.e., 1. 'Not at all', 2. 'A little', 3. 'Somewhat', 4. 'Quite a bit', and 5. 'A lot') was applied in five interviews. However, participants did not consistently apply all options of the 5-point scale; more often, they would select the following: 1. 'Not at all', 3. 'Somewhat', 5. 'A lot'. It is possible that it was easier to think of those three distinct categories rather than having to recall all five. Furthermore, the 30-minute length of interview did not allow for all the items to be covered. Potential reasons for this include that the amount of time spent on reminding the participant about the 5-point Likert scale response options extended interviews, the additional probes lengthened the interview timespan and, finally, the complexity and inaccuracies in understanding items required a longer interview time. It was therefore decided to test the 3-point response scale (i.e., 1. 'No', 2. 'Sometimes' and 3. 'Yes') in 2 interviews and explore its use to cover the entire scale. For instance, the use of the 3-point response scale on the sixth interview allowed for all the items on the scale be covered in just over 30 minutes. However, on the seventh interview the 5-point response scale was once again

applied to check if the 30 minutes time length covered all the items. When all the items of the scale were covered, the length of the sixth and the seventh interviews were both approximately 35 minutes long.

In the second round of interviews, we once again trialed and applied the 5-point response scale, and the interviews were approximately 30 minutes long. The reduction in time and length of the last two interviews could have been due to four reasons. Firstly, the final two interviews did not cover the 'boyfriend' section. Secondly, the last two interviews applied the revised items and additional probes which might have made the participant understand the items and probes better. Thirdly, the researcher was more experienced than before in using the interview guide and spoke in the preferred language of the participant, which was mostly isiXhosa. Lastly, the 5-point scale provided a richer explanation of variability. Therefore, there was a general consensus to keep to the 5-point response scale.

5. Limitations

Cognitive interviews conducted telephonically presented challenges due to difficulties posed by connectivity, engagement and building rapport. In some cases, the interviewer and participant had difficulties hearing one another, which resulted in some interviews taking place in two parts rather than over one single conversation. Engaging with the participant over the phone came with further drawbacks, such as not being able to follow behavioral cues often evident in body language, not being able to see the participants reaction to questions or discussion points and finally, not being able to offer support in a less impersonal way during difficult conversations that arose. The cognitive interviews were also the interviewer's first time engaging with the participants and, as interviews took place telephonically, the distance in terms of relationship-building that often takes place in-person was not only different, but also required the interviewer to be creative about how to build connection with the participant in a short time span. This included sharing some details about the interviewer's own experience of motherhood to create relatability, and using the vignette as a tool to engage the participant.

While not a study limitation, research on resilience cannot be conducted without acknowledging adversities and risks faced by young South Africans. Some participants disclosed financial difficulties. While every effort was made to refer participants to relevant channels (such as counselling services related to sensitive topics), participants who struggled financially could not be supported adequately due to the limitations imposed by the research study. Researchers could only offer advice or link participants with support channels. Where the situation was assessed as particularly urgent, relevant referral channels may have provided food vouchers to support households.

6. Recommendations

Cognitive interviewing should be integrated during the research design phase when validating measurement instruments within the population of interest. Training researchers should be a priority when conducting future cognitive interviews, and this training should ideally include mock interviews with different team members to inform them of the process and the possibilities of responses. The approach used in cognitive interviewing methods usually requires participants to share personal stories and problems. While telephonic interviews can be challenging to implement effectively, it is important to communicate to the participant beforehand that finding a convenient time that works for them is essential. Furthermore, the interviewer needs to be flexible to online, remote research when childcare or home duties might mean that the interview takes place over several calls rather than a single interview.

During our interviews, several participants described sensitive and intimate details related to their relationship, their health or their living situation. It is important that referral methods be offered for those who struggle emotionally. Debrief support is also an essential approach to be undertaken with the interviewer, particularly when participants describe sensitive information that could be hard for the interviewer to process without facilitated support.

It is noteworthy that the scale was cross-culturally adapted within a sample of isiXhosa-speaking adolescent mothers. Future research can benefit from learning how to adapt and translate this scale for further adaptations in their local contexts.

7. Conclusion

Cognitive interviews have been demonstrated here to be a feasible approach to improve the comprehensibility of the CYRM-R questionnaire items. The probing techniques used were effective in identifying areas for measurement adaptation, which included linguistic adaptation, and addressing similar responses to items. The use of vignettes proved to be a useful method to facilitate discussion and enable the participant to engage on issues that are pertinent to the target group. Conducting research with adolescents and young mothers living with and affected by HIV within the South African context requires careful consideration for how to engage participants in a way that applies questions to their real-life experience. Cognitive interviews have proven to be a useful tool in engaging this group of participants within the South African context to not only refine items and better understand the personal and relational support they are able to access, but also to learn about the prerequisite information needed when informing interventions with this group.

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Appendix A

HEY BABY Follow-up: Adolescent Parent Questionnaire Round 1

INTRODUCTION

Before the interviewer begins reading the consent section, they would have to present the purpose of the interview. All translations into Xhosa have been italicized. The statement should be as follows:

CONSENTING

Hi (participant), how are you doing today? You are speaking to Hlokoma Mangqalaza from HEY BABY. I called yesterday to organise this appointment with you. Are you ready for the call? Please be aware that I will be recording this conversation.

Molo (ntombi), kunjani namhlanje? Uthetha no Hlokoma Mangqalaza wase HEY BABY. Bendikhe ndafouna izolo ukulungiselela oludliwano ndlebe nawe. Ulilungele oludliwano ndlebe? Ndicela uyazi uba le ncoko ndizauyi shicilela.

We are part of a research team from the Universities of Oxford and Cape Town and are looking to learn what it is like to be a young parent in your community. We would love to hear your voice and invite you to take part in our research study again - HEY BABY, to continue to learn about the kind of support you currently have and what additional support you may need in caring for your child.

Siyinxalenye ye qela yabaphandi base yunivesithi zase Oxford nase kapa. Sifunda ngendlela ulutsha oluthe lafumana abantwana bese lula uba bamelana njani nee ngxaki abadibana nazo kwindawo abahlala kuzo. Sinomdla woluvo lwakho ngoko ke siyakumema uba ubeyi nxalenye yoluphando ekuthwa ngu HEY BABY, ukuze siqubeke sifunda ngohlobo loxhaso olufumanayo nolunye ongalidinga ukukhuliseni umntwana.

As a first step, we would like to talk to you on the phone to get your thoughts, since we cannot meet physically at this time.

Okokuqala, ukuva luvo lwakho, ndicela ubanoludliwano ndlebe (okanye incoko) nawe ngo mnxeba kuba singazukwazi ukudibana.

We will be audio-recording our conversation and/or taking notes. All of you and your child's personal information will be kept entirely confidential. It will only be used by our Research team to keep in touch with you and as long as is required to conduct our research.

Le ncoko izaurecordwa ndibale nezinye iincukacha. Zonke iinkcukacha zakho no mntana wakho zizaugcinwa emfihlakalweni. Zizausetyenziswa li qela lethu

xakusenziwa uphando. Si zaumane sinxulumana nawe xasi dinga uphinde senze oluphando.

As part the research, we would like to access your clinic records and those of your child from National Health laboratory and clinics.

Nje nge nxaenye yoluphando, Sicela nokujonga incwadi zakho zase kliniki ne mntwana kunye nezase National Health laboratory and clinics.

If any of the questions are upsetting, you can stop at any point, and you don't have to give a reason.

Ukuba kukhona umbuzo ongaku phathi kakuhle okanye ongawuthandiyo, uvumelekile ukuyeka ngaphandle kokunika isizathu.

You can also contact the research team at any point and say that you want your answers about certain questions to be removed, which we will do straight away. You can do this by sending a 'Please Call Me' to the Project Managers (076 197 7541).

Ungasi founela nanini na ukuba kukhona iimpendulo osinike zona ufuna zikhtshwe sizikhuphe ngoko nangoko Ungenza oku ngothumela nje u'Please Call Me' ku mpathi wethu ethi (076 197 7541).

RA: Do you have any questions about how the study will be conducted and how you will participate*?*

RA addresses any questions

Ingaba ikhona imibuzo onayo ngoluphando ne ndima ozauyi uydlala?

RA: Do you understand and agree to participate in the study?

Uyayiva kakuhle yonke into uvuma nokubayinxalenye yoluphando?

Participant response: YES   NO

For adolescents who are under 18, call caregivers first to gain caregiver consent, then proceed to get adolescent assent.

Kwabo bangaphantsi kwe minyaka eyi 18, founela umgcini ukufumana imvume, uqhubeke ke ukufumana imvume emntwini omtsha.

Adolescent under 18?/ *Umntu ofikisayo ongaphantsi kweminyaka eyi 18*
        YES/*EWE*   NO /*HAYI*

Caregiver's response/Impendulo yomgcini: YES /*EWE*   NO /*HAYI*

Relationship to the adolescent parent /*Ubudlelwane nomntu ofikisayo*

	1 Biological Mother/*Umama*	7 Cousin /*Umzala*
	2 Biological Father/*Utata*	8 Neighbour/ *Umakhelwane*
	3 Aunt/*A anti*	9 Family Friend/ *Isihlobo sosapho*
	4 Uncle/ *Umalume*	10 Sister/ *Udadewenu*
	5 Grandmother /*Umakhulu*	11 Brother /*Umnakwenu*
	6 Grandfather/*UTamkhulu*	12 Other caregiver /*Omnye umgcini*

End of consenting / *Ukuphela kocelo lwemvume*

Thank you. We shall now move to the questions. Do you need a minute or a break? / *Siyabulela. Ngoku sizaudlulela emibuzweni. Udinga umzuzu okanye ikefu?*

Who is conducting the interview? / *Ngubani oqhuba udliwanondlebe?*

_____

Please enter the SERIAL NUMBER for the participant you are interviewing:/ *Sicela ufake iSERIAL NUMBER yomntu owenza udliwano ndlebe naye*:

_____

Please CONFIRM SERIAL NUMBER for the participant you are interviewing:/ *Qinisekisa iSERIAL NUMBER yomntu owenza udliwano ndlebe naye*:

_____

Date of Birth / *Usuku lokuzalwa*

_____

Please select the participant's animal: This information is provided in the roster. / *Khetha isilwanyana se participant: Ezincukhacha ziyafumaneka kwi roster*.
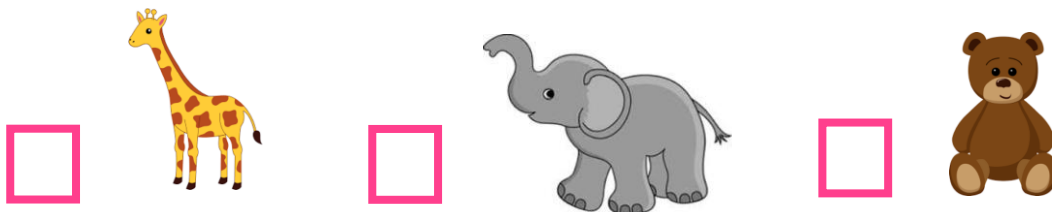
Please enter today's date: / *Cela ufake usuku lwanamhlanje*:

Section 6: Resilience

Vignette or Scale Introduction (all items before 8)

Being a young mother comes with changes, at home, with friends, or partners. Some changes are exciting, others can be difficult to handle. *(Ukuba ngu mama osemncinci kuba/ kuza notshintsho, ekhaya, kwi tshomi napakathi kwakho nomntu oncuma naye. Olunye utshitsho luyonwabisa olunye kubanzima ukumelana nalo.)*

- Does the introduction make sense to you? / *Iyavakala le ngxelo kuwe?*
- Do you think that being a young mother comes with changes as I have mentioned? / *Ucinguba ukuba ngu mama osemncinci kuza nezi nzima ndithetha ngazo?*
- What changes do you think are exciting or difficult to handle? / Loluphi utshintsho ocinga ukuba lumandi iphinde ibeloluphi olunzima ukumelana nalo?

To what extent do the following statements apply to you. There are no right or wrong answers:

Ingaba le ngxelo iyafana ne simo sakho okanye imeko yakho? Akho mpendulo iright ne rongo:

#	Item wording/ *Indlela imibuzo ebekwe ngayo*	Answer options/*Impendulo ekukhethwa kuyo*	Compulsory probes/ *Imibuzo enyanzelekileyo*	Additional probes/ *Imibuzo eyongezelelweyo*
1	I get along with people around me *Ndiyakwazi ukuphilisana nabanye abantu*	Not at all [1] A little [2] Somewhat [3] Quite a bit [4] A lot [5] *Hayi* [1], *Kancinci* [2], *Ngandlela ithile* [3], *Kancincane* [4],	•Why did you choose this answer?/ *Kutheni ukhethe lempendulo?* •Could you tell me in your own words what this question means to you?/ *Ungandixelela ngama gama wakho*	• What does the term "get along" mean to you?/ *Kuthetha ukuthini ukukwazi ukuphilisana nabanye abantu kuwe?* • How did you come up with your answer?/ *Ufike njani kule mpendulo?* • Can you repeat the item back at me in your own words?/ *Ungandiphindela lombuzo ngama gama akho?*

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		Kakhulu [5]	*ukuba lombuzo uthetha ukuthini kuwe?*	• How easy or difficult was it to choose an answer from the options provided? Why?/ *Bekulula okanaye bekunzima kangakanani ukukhetha lempendulo uyikhethileyo kolu luhlu ubulunikiwe?* • Why did you choose that answer, give an example?/ *Kutheni ukhethe lempendulo uyikhethileyo?*
2	Getting an education and improving qualifications or skills is important to me *Ukufumana imfundo okanye ukuphuhlisa izakhono kubalulekile kum*	Not at all [1] A little [2] Somewhat [3] Quite a bit [4] A lot [5] *Hayi* [1], *Kancinci* [2], *Ngandlela ithile* [3], *Kancincane* [4], *Kakhulu* [5]	•Why did you choose this answer?/ *Kutheni ukhethe lempendulo?* •Could you tell me in your own words what this question means to you?/ *Ungandixelela ngama gama wakho ukuba lombuzo uthetha ukuthini kuwe?*	• How have you tried to ensure that you get an education or improve your skills?/ *Ukhe wazama ukuqiniseka ukuba uyayifumana imfundo okanye uphuhlisa izakhono zakho?* • What does the term "education" mean to you?/ *Lithetha ukuthini igama elithi "imfundo" kuwe?* • Why is it important to get an education?/ *Kutheni kubalulekile ukufumana imfundo kuwe?* • What was your process/ thinking of getting to your answer?/ *Ufike njani kwimpendulo yakho?*

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| 3 | I know how to respond appropriately in different social situations (such as home, school church)

Ndiyakwazi ukuziphatha ngokufanelekiley o kwi meko ezohlukeneyo(nj e ngase khaya eskolweni nase caweni). | Not at all [1]
A little [2]
Somewhat [3]
Quite a bit [4]
A lot [5]

Hayi [1],
Kancinci [2],
Ngandlela ithile [3],
Kancincane [4],
Kakhulu [5] | •Why did you choose this answer?/ *Kutheni ukhethe lempendulo?*
•Could you tell me in your own words what this question means to you?/ *Ungandixelel a ngama gama wakho ukuba lombuzo uthetha ukuthini kuwe?* | • What does it mean to "respond appropriately" in this question?/ *Kuthetha ukuthini "ukuziphatha ngokufanelekileyo" kulo mbuzo?*
• How can one rephrase this question?/ *Omnye umntu angwubeka njani lombuzo?*
• What are the "different ways" people can "respond appropriately" in different situations?/ *Zeziphi ezinye iindlela " ezohlukileyo" abantu "abangaziphatha ngakufanelekileyo" kwi meko ezohlukeneyo?*
• Can you repeat the item back at me in your own words?/ *Ungandiphindela lombuza ngamagama akho?* |
| 4 | My parent(s)/ caregiver(s)/ family really look out for me

Abazali kunye nabagcini bam bayandikhathale la | Not at all [1]
A little [2]
Somewhat [3]
Quite a bit [4]
A lot [5]

Hayi [1],
Kancinci [2],
Ngandlela ithile [3], | •Why did you choose this answer?/ *Kutheni ukhethe lempendulo?*
•Could you tell me in your own words what this question means to you?/ *Ungandixelel* | • What, to you, does "look out for me" mean?/ *Kuthetha ukuthini "ukukhathalelwa" kuwe?*
• What does it mean when they "really" look out for you?/ *Kuthetha ukuthini xa ukhathalelwe "nyani"?* |

		Kancincane [4], *Kakhulu* [5]	*a ngama gama wakho ukuba lombuzo uthetha ukuthini kuwe?*	
5	My parent(s)/ caregiver(s)/ family know a lot about me (for example, who my friends are, what I like to do) *Abazali kunye nabagcini bam bazi kakhulu ngam (umzekelo uba ngobani itshomi zam nezinto endithanda ukuzenza)*	Not at all [1] A little [2] Somewhat [3] Quite a bit [4] A lot [5] *Hayi [1],* *Kancinci [2],* *Ngandlela ithile [3],* *Kancincane [4],* *Kakhulu [5]*	•Why did you choose this answer?/ *Kutheni ukhethe lempendulo?* •Could you tell me in your own words what this question means to you?/ *Ungandixelel a ngama gama wakho ukuba lombuzo uthetha ukuthini kuwe?*	• Do you think this is a positive or negative or neutral question? Why do you say so?/ *Ucinga ukuba lo ngumbuzo olungileyo okanye ongalunganga okanye ongathathi cala? Kutheni usitsho nje?* • What does the phrase "know a lot about me" meant to you?/ *Ungathi "ukwazi kakhulu ngam" kuthetha ukuthini kuwe?* • Could you please paraphrase this question in your own words?/*Xa unawubeka ngamagama akho ungawubeka njani lombuzo?*
6	If I am hungry, there is enough to eat *Xa ndilambile,kuhla la kukhona ukutya okwaneleyo*	Not at all [1] A little [2] Somewhat [3] Quite a bit [4] A lot [5] *Hayi [1],* *Kancinci [2],*	•Why did you choose this answer?/ *Kutheni ukhethe lempendulo?* •Could you tell me in your own words what this question means to	• How many meals do you usually have a day? /*Zingaphi izidlo/meals oqhele ukuba nazo ngosuku?* • Do you have enough food for all the meals of the day (breakfast, lunch and supper)?/ *Ingaba unokutya okwaneleyo kuzo zonke izidlo zemini*

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		Ngandlela ithile [3], *Kancincane* [4], *Kakhulu* [5]	you?/ *Ungandixelela ngama gama wakho ukuba lombuzo uthetha ukuthini kuwe?*	(*isidlo sakusasa, isidlo sasemini kunye nephezulu*) • What kinds of food would you have at home when you say you have enough food to eat?/ *Loluphi uhlobo lokutya onokuba nalo ekhaya xa usithi unokutya okwaneleyo?* • What does the term "there is enough to eat" mean?/ *Kuthetha ukuthini ukuba "noukutya okwaneleyo"?* • What does the word "enough" mean?/ *Igama elithi "ukwanela" kuthetjha ukuthini* • What does the term "hungry" mean to you?/ *Igama elithi "indlala" lithetha ukuthini kuwe?* • What were you thinking when we asked this question?/ *Uye wacingantoni ngoku besibuza lombuzo?*
7	People like to spend time with me *Abantu bayathanda ukuchitha ixesha nam*	Not at all [1] A little [2] Somewhat [3] Quite a bit [4] A lot [5]	•Why did you choose this answer?/ *Kutheni ukhethe lempendulo?* •Could you tell me in your own	• In your own words, what do you think this question is trying to ask?/ *Ngamagama akho, lombuza uthetha ukuthini kuwe?* • When answering this question who would

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		Hayi [1], *Kancinci* [2], *Ngandlela ithile* [3], *Kancincane* [4], *Kakhulu* [5]	words what this question means to you?/ *Ungandixelel a ngama gama wakho ukuba lombuzo uthetha ukuthini kuwe?*	you include in the "people"? /*Ngoku ubuphendula lombuzo ngobani abani "abantu" oye waba faka?* • How do you know when people like to spend time with you?/ *Ubona njani abantu ukuba bayathanda ukuchitha ixesha nawe?*

Before we continue to the next questions, we would like to give you an example of a young mother that experienced some challenges and is now navigating her way through life.

Pambi kokuba siqubeleke kwimibuzo elandelayo, sicela ukukunika umzekelo womama oselula othe naye wadibana nee nzima ngoku ozama iindlela zokuphila apha ebomini.

Jabu is a young mother living in the Eastern Cape. She found out she was pregnant and tested HIV positive, while her son tested negative. She left school to care for her baby while living with her boyfriend. She then later returned home with her child, to stay with her mother. She loves music and singing.

U Jabu ngu mama ose mncinane ohlala e Mpumakoloni. Wafumanisa ukuba ukhulelwe kwaye uphila ne HIV, ngelixesha unyana wakhe e teste negative. Washiya isikolo ukuyonakekela umntana wakhe ngelixesha ahlala kunye nomlingani wakhe. Uthe ekuhambeni kwexesha wabuyela ekhaya nomntwana wakhe eyokuhlala no mama wakhe.Uyawuthanda umculo kunye nokucula.

- What do you think about Jabu's story? / *Ucinga ntoni nge bali lika Jabu?*
- Do you know anyone like Jabu in your own life? / *Ingaba ukhona umntu omaziyo ofana no Jabu ebomini bakho?*
- Is Jabu's story relatable in any way? How so? / *Ungathi ibhali lika Jabu liyelelene kwelakho ibali? Kanjani?*
- How do you relate to Jabu? / *Liyelelene kanjani kwelakho ibali?*

To what extent do the following apply to you? / *Ingaba ezi ngxelo zilandelayo zikuchaphazela kangakanani?*

8	I talk to my family/caregiver(s) about how I feel (for example when I am hurt or sad) *Ndiyathetha nosapho kunye nabagcini bam ngendlela endiziva ngayo(umzekelo xandikhathazekile okanye ndibuhlungu)*	Not at all [1] A little [2] Somewhat [3] Quite a bit [4] A lot [5] *Hayi* [1], *Kancinci* [2], *Ngandlela ithile* [3], *Kancincane* [4], *Kakhulu* [5]	•Why did you choose this answer?/ *Kutheni ukhethe lempendulo?* •Could you tell me in your own words what this question means to you?/ *Ungandixelela ngama gama wakho ukuba lombuzo uthetha ukuthini kuwe?*	1. What kind of things do you talk about?/ *Zizinto ezinjani enithetha ngazo?* 2. What does it mean to talk to people about how you feel?/ *Kuthetha ukuthini ukuthetha nabantu ngendlela oziva ngayo?*
9	I feel supported by my friends *Ndiziva ndixhaswa ngabahlobo bam*	Not at all [1] A little [2] Somewhat [3] Quite a bit [4] A lot [5] *Hayi* [1], *Kancinci* [2], *Ngandlela ithile* [3], *Kancincane* [4], *Kakhulu* [5]	•Why did you choose this answer?/ *Kutheni ukhethe lempendulo?* •Could you tell me in your own words what this question means to you?/ *Ungandixelela ngama gama wakho ukuba lombuzo uthetha ukuthini kuwe?*	3. What does the term "supported by friends" mean to you?/ *Kuthetha ukuthini "ukuxhaswa ziichomi" kuwe?* 4. What kind of support do they give you? (the respondent should be encouraged to give examples)./ *Injani ixaso abakunika yona? (Umphenduli maka khuthazwe ukuba anike imezekelo)* 5. How do you know that your friends "support" you?/ *Uyazi njani ukuba iichomi zakho ziyakuxhasa?*

10	I feel like I fit in at school/in my community *Ndiziva 'fitta' eskolweni nase kuhlaleni*	Not at all [1] A little [2] Somewhat [3] Quite a bit [4] A lot [5] *Hayi* [1], *Kancinci* [2], *Ngandlela ithile* [3], *Kancincane* [4], *Kakhulu* [5]	•Why did you choose this answer?/ *Kutheni ukhethe lempendulo?* •Could you tell me in your own words what this question means to you?/ *Ungandixelela ngama gama wakho ukuba lombuzo uthetha ukuthini kuwe?*	6. What does it mean to 'fit in' at school/community mean?/ *Kuthetha ukuthi kuwe uku "fitta in" eskolweni nasekuhlaleni?*
11	My family/caregiver(s) care about me when times are hard (for example if I am sick or have done something wrong) *Usapho lwam kunye nabagcini bayandikhathalela kumaxesha anzima(umzekelo ukuba ndiyagula okanye ndenze into engalunganga)*	Not at all [1] A little [2] Somewhat [3] Quite a bit [4] A lot [5] *Hayi* [1], *Kancinci* [2], *Ngandlela ithile* [3], *Kancincane* [4], *Kakhulu* [5]	•Why did you choose this answer?/ *Kutheni ukhethe lempendulo?* •Could you tell me in your own words what this question means to you?/ *Ungandixelela ngama gama wakho ukuba lombuzo uthetha ukuthini kuwe?*	7. What, to you, are some "hard times"?/ *Zizinto ezinjani kuwe "amaxesha anzima"?* 8. How do you decide what is considered "difficult" in this question?/ *Uwabona njani amaxesha anzima?* 9. Why do say this was a difficult for you?/ *Kutheni usithi eli yayili xesha elizima?*

12	My friends care about me when times are hard (for example if I am sick or have done something wrong) *Abahlobo bam bayandikhathalela kumaxesha anzima(umzekelo ukuba ndiyagula okanye ndenze into engalunganga)*	Not at all [1] A little [2] Somewhat [3] Quite a bit [4] A lot [5] *Hayi* [1], *Kancinci* [2], *Ngandlela ithile* [3], *Kancincane* [4], *Kakhulu* [5]	•Why did you choose this answer? / *Kutheni ukhethe lempendulo?* •Could you tell me in your own words what this question means to you?/ *Ungandixelela ngama gama wakho ukuba lombuzo uthetha ukuthini kuwe?*	10. What, to you, are some "hard times"?/ *Zintoni kuwe ämaxesha anzima"?* 11. May you give an example of when you experienced a hard time and friends supported/ *Unganika umzekelo wexesha apho ubukwixesha elinzima abahlobo/iichomi zakuxhasa?*
13	I am treated fairly in my community *Ndiphathwa ngendlela elungileyo ngabantu basekuhlaleni*	Not at all [1] A little [2] Somewhat [3] Quite a bit [4] A lot [5] *Hayi* [1], *Kancinci* [2], *Ngandlela ithile* [3], *Kancincane* [4], *Kakhulu* [5]	•Why did you choose this answer? / *Kutheni ukhethe lempendulo?* •Could you tell me in your own words what this question means to you?/ *Ungandixelela ngama gama wakho ukuba lombuzo uthetha ukuthini kuwe?*	12. What does the term "treated fairly in my community" mean to you?/ *Kuthetha ukuthini " ukuphathwa ngendlela elungileyo ekuhlaleni" kuwe?* 13. How do you decide what is fair in this question?/ *Uye ubone njani ukuba kulungile kule meko?* 14. In whose eyes do you think this question refers to? In whose eyes would you be treated fairly?/ *Ngubani ongakwenza uzive uphetheke ngendlela elungileyo? Ngubani ongakwenza uzive*

				uphetheke ngendlela elungileyo? 15. How/What make you feel that you were treated fairly?/ *Kunjani/kukwenza njani ukuziva uphetheke ngendlela elunggileyo?*
14	I have opportunities to show others that I am becoming an adult and can act responsibly *Ndinamathuba okubonisa abanye ukuba ndiyakhula, futhi ndiyakwazi ukuthatha uxanduva ngo bom bam*	Not at all [1] A little [2] Somewhat [3] Quite a bit [4] A lot [5] *Hayi* [1], *Kancinci* [2], *Ngandlela ithile* [3], *Kancincane* [4], *Kakhulu* [5]	•Why did you choose this answer?/ *Kutheni ukhethe lempendulo?* •Could you tell me in your own words what this question means to you?/ *Ungandixelela ngama gama wakho ukuba lombuzo uthetha ukuthini kuwe?*	16. What does it mean to act responsibly?/ *Kuthetha ukuthini ukuthatha uxanduva ngendlela oziphatha ngayo?* *17.* Why would you want opportunities to show others that you are becoming an adult and can act responsibly? / *Kutheni ufuna ukufumana amathuba wokubonisa ukuba uyakhula nokuba uykwazi ukuthatha uxanduva lendlela oziphatha ngayo?* 18. What do you think it mean to be 'becoming an adult'?/ *Ucinga ukuba kuthetha ukuthini ukuba ngumntu omdala?*
15	I feel safe when I am with my family/caregiver (s) *Ndiziva ndikhuselekile xa ndikunye nosapho nabagcini bam*	Not at all [1] A little [2] Somewhat [3] Quite a bit [4] A lot [5] *Hayi* [1], *Kancinci*	•Why did you choose this answer? / *Kutheni ukhethe lempendulo?* •Could you tell me in your own words what this question	19. What does the term "safe" mean to you?/ *Kuthetha ukuthin ukukhuseleka kuwe?* 20. How do you decide you feel safe? How do you come to that realization?/ *Uziva ukuseke kanjani? Uye uyione kanjani?*

		[2], *Ngandlela ithile* [3], *Kancincane* [4], *Kakhulu* [5]	means to you?/ *Ungandixelel a ngama gama wakho ukuba lombuzo uthetha ukuthini kuwe?*	
16	I have chances to learn things that will be useful when I am older (like cooking, working, and helping others) *Ndinamathuba okufunda izinto ezizobaluncedo xa sendikhulile (ezifana nokupheka,ukus ebenza nokunceda abanye)*	Not at all [1] A little [2] Somewhat [3] Quite a bit [4] A lot [5] *Hayi* [1], *Kancinci* [2], *Ngandlela ithile* [3], *Kancincane* [4], *Kakhulu* [5]	•Why did you choose this answer?/ *Kutheni ukhethe lempendulo?* •Could you tell me in your own words what this question means to you?/*Ungandi xelela ngama gama wakho ukuba lombuzo uthetha ukuthini kuwe?*	21. How do you know if something will be useful later?/ *Ubona njani ukuba izinto zizaubaluncedo ekuhambeni kwexesha?* 22. How do you decide when things you learn will be useful later in life? What do you base your answer on? / *Ubona njani ukuba izinto ozifundayo zizaubaluncedo ukuhambeni kwe xesha? Uyibona njani lonto?*
17	I like the way my family/caregiver (s) celebrates things (like holidays or learning about my culture) (family gatherings where traditional ceremonies are celebrated. It	Not at all [1] A little [2] Somewhat [3] Quite a bit [4] A lot [5] *Hayi* [1], *Kancinci* [2], *Ngandlela*	•Why did you choose this answer?/ *Kutheni ukhethe lempendulo?* •Could you tell me in your own words what this question means to you?/*Ungand*	23. What does it mean to "enjoy" cultural and familial traditions? /*Kuthetha ukuthini "ukkonwabela lemicimbi/ezizithethe?* 24. What cultural or traditional events have you attended?/*Yeyiphi imicimbi okhe wayi hamba?*

could be *imicimbi*, family lunches, braais, weddings) *Ndiyayithanda indlela usapho nabagcini bam abazi bhiyozela ngayo izinto(ezifana nehoilide, okanye ukufunda malunga ne culture yam, nendibano zosapho apho kubhiyozelwa khona imicimbi yesintu) ingaba zizidlo zosapho, umojo, nemitshato*	*ithile* [3], *Kancincane* [4], *Kakhulu* [5]	*ixelela ngama gama wakho ukuba lombuzo uthetha ukuthini kuwe?*	25. Are they important for/to you? / *Zibaluleke kangakanani kuwe?* 26. How do you know those cultural/familial traditions? /*Uwazi njani ezi zizithethe/iinkcubeko?*

THANK YOU very much for your time. We appreciate your time and honesty. We will use this information to tell government and organizations how to help young parents and their children, like you. We will try to come back to visit you in the next three years and see how you and your child(ren) are doing.

Remember that you are an amazing young woman. Being a mother is not easy, but it is such an important job to do. And we are proud of you for all the care and love you give.