

VALIDATION OF THE ALABAMA PARENTING QUESTIONNAIRE AMONG
RUNYANKORE-SPEAKING CAREGIVERS IN WESTERN UGANDA: AN EXPLORATORY
SEQUENTIAL MIXED-METHODS STUDY

By

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ABSTRACT

Globally, parenting practices play a critical role in shaping children's developmental outcomes. The literature highlights poor parenting practices such as lack of parental involvement, positive parenting, inconsistent discipline, poor monitoring, corporal punishment, and others as the most likely parenting approaches to be highly associated with disruptive behaviors in children below the age of 17 years. Given the widespread cultural variations in parenting practices, the measurement of effective parenting practices is still a major challenge across cultures, particularly those in Sub-Saharan Africa. Thus, it is important to examine the validity and cultural relevance of existing measures of parenting that have been previously validated in research globally. The absence and or failure to test and examine the validity and relevance of these measures poses a challenge to the accurate assessment of parenting when these measures are being used for research and clinical purposes in diverse cultural settings, such as those in Uganda. An example of a commonly used measure of parenting is the Alabama Parenting Questionnaire (APQ) which was developed in the United States of America by Patrick Frick and colleagues in the 1990s. Although this measure has been widely adapted for use in many cultures around the world, it has not been adapted for use in African settings, and specifically in Uganda, the country of focus in this study. The present studies sought to contribute to the larger literature on the assessment of parenting using the APQ in diverse cultural settings.

In study 1, I report on findings from a qualitative examination of the cultural relevance of the 42-item APQ in a Ugandan setting. Specifically, I triangulated data through conducting semi-structured interviews with 14 local experts and 16 caregivers to understand 1) their comprehension of scale items on the APQ, and 2) important parenting practices in the target

Ugandan culture. The end goal of this study was to formulate a culturally revised APQ for larger field testing in Uganda. Of the 42 APQ items, 32 items (76.2%) were revised/deleted and only 10 items (23.9%) maintained their original wording leaving a revised measure of 32 items. Specifically, major revisions (including deleting items or merging items) were conducted with 20 items (47.6%), and minor revisions (e.g., rephrasing an item, adding examples, etc.) with 12 items (28.6%). Following participant feedback, five new items were added to the revised scale to improve scale relevance. The resulting final tool had 32 items and was named the APQ-Uganda-Revised.

In study 2, I examined the validity and psychometric properties of the 32-item APQ-Uganda-Revised resulting from study 1 using a sample of 618 Runyankole-speaking caregivers in Uganda. Results from study 2 suggested that a four-factor model, with 13 items (assessing dimensions of positive parenting, involvement, poor monitoring/supervision, and inconsistent discipline) was the best depiction of the APQ in Uganda. The measure was characterized by good fit, good predictive validity, and was able to show positive associations between parenting practices and children's psychosocial functioning in a sample of Ugandan caregivers.

This study represents a significant step in addressing the gaps in science around culturally relevant measurement instruments for assessing outcomes related to parenting in diverse cultural settings using the example of Uganda. Implications for the future research in parenting in Uganda are discussed.

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To my late mother Naiga Jovanice, every time I looked into your eyes, I always saw the purest love I could ever find on this earth. You left me at the age of 11 years to be with Jesus, Who you always loved and cherished. May God continue to hold you in His tender and loving hands. One day, I hope to be reunited with you in another life. Love you mama! To my beloved sister Macklean and beloved son, Solomon Nowamani (a. k. a. King Solo), may the Lord bless you and keep you both; may He make His face shine upon you and be gracious to you; may He turn His face towards you and give you peace in all the days of your life. To dad, Mr. Silvasta Kafumba (a.k.a silver Ke Sente, may the Lord carry you, protect you, and give you good health, even in your advanced age. May you live daily in His amazing grace and peace. May you live long enough to see the children of your son, Ronald. Love you, Dad. To my American dad and best friend, Dr. Gregory W. Bartha, your presence in my life has been such a breath of fresh you're your heart of gold has touched many lives in Uganda and in Texas. May the good Lord carry you, protect you, and give you good health, even in your advanced age. May you continue to tell those funny good ol Texas jokes even when you are 90, love you, my friend. Lastly to my three beautiful daughters, Shanita (Shanny), Faith, and Genasis Kay (Gena), you have all been a blessing to me. I have learned a lot about being a parent from watching you grow. I enjoy watching you and being involved in your growth. I will forever hold you in my heart and soul, love you girls.

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CHAPTER 1: INTRODUCTION

Globally, family researchers, sociologists, developmental psychologists, educators, and policy makers have long recognized parenting as a critical factor in shaping family well-being and child development outcomes (Kotchick & Forehand, 2002; Liu & Guo, 2010; Taliep et al., 2018). A large body of research has examined the links between various parenting practices and child and youth health outcomes in cultures across the world. In general, studies show that positive parenting practices such as parental warmth, parental involvement, supervision/monitoring, and age-appropriate discipline are associated with positive child mental health outcomes (e.g., improved conduct and academic performance, less depression and anxiety), (Cooper et al., 2015; Haller & Chassin, 2011; Holtrop et al., 2015; Liu & Guo, 2010; Spera, 2005). Conversely, studies also indicate that negative parenting practices such as inconsistent and harsh discipline, lack of parental warmth, involvement, monitoring/supervision are associated with increased child behavioral and emotional problems, academic problems, substance use, and overall psychosocial maladjustment (Callender et al., 2012).

In Africa, as many as 14.3% of children under 18 years are vulnerable to mental, emotional, and behavioral (MEB) problems (Cortina et al., 2012). Examples of these include depression, anxiety, and somatization (Patel & Stein, 2015), disruptive behavioral problems (Ward et al., 2020), and posttraumatic stress disorders (PTSD; Cortina et al., 2012). Poor parenting (e.g., child neglect and maltreatment) is one potential risk influencing these negative child MEB problems (Ashburn et al., 2017). Other risk factors include HIV/AIDS (e.g., Lachman et al., 2014) as well as living in challenging socioeconomic and political contexts (Cortina et al., 2012; Patel & Stein, 2015). Research shows that equipping parents with positive parenting skills promotes positive child development (e.g., Delvin et al., 2018; Forgatch &

Patterson, 2010; Lachman et al., 2014); as a result, several evidence-based parenting interventions (EBPIs) have been adapted and implemented in various African countries to improve parenting and child health outcomes.

While there has been remarkable progress in implementing parenting interventions on the African continent, questions have been raised regarding the overreliance on measures normed in English-speaking Western cultural settings to assess target outcomes in African settings. These measures have been criticized for their inability to capture with validity, certain parenting practices of parents in Africa and the subsequent externalizing and internalizing behaviors of children (Augustinavicius et al., 2020; Betancourt et al., 2009; Bornman et al., 2010). Because culture influences childrearing practices, the beliefs and goals of parents need to be considered (Bornstein, 2013; Parra-Cardona et al., 2016), and when it comes to measuring outcomes, psychometric testing and revisions of assessments in Africa are needed to ensure cultural relevance and usefulness (e.g., Hoosen et al., 2018; Mboya, 1993; Ogunbajo et al., 2020). The present studies seek to expand the literature on measurement of parenting in diverse cultural settings by engaging in a process of translating, culturally adapting, and testing the psychometric properties of the Alabama Parenting Questionnaire (APQ) in describing parenting practices among a sample of Runyankole-speaking caregivers in Western Uganda.

Further, parenting and child development in Ugandan families in general, exists within a social, cultural, and economic context that is largely affected by many contextual factors such as lower socioeconomic resources (Nabunya et al., 2014), diseases such as malaria and HIV/AIDS (Murray et al., 2017), and mental health challenges such as parental depression (e.g., Familiar et al., 2016; Nabunya et al., 2014), and low parenting self-efficacy (Augustinavicius et al., 2020). These contextual factors have been highly associated with less optimal parenting, and overall

poor child outcomes in Uganda (Huang et al., 2017). For example, research has showed that parents living with limited economic resources, limited family, and social support are at an increased risk of using inadequate parenting practices such as, inconsistent parenting and corporal punishments to control their children's behaviors and protect children from health risks (Boydell et al., 2017; Lokot et al., 2020). In other populations, such parenting practices have been found to expose children to the risk of developing psychological problems, including internalizing and externalizing problems. Thus, more research is needed to expand on parenting practices in Uganda and whether they are related to positive child outcomes.

Lastly, although Western society's values and conceptualizations of parenting have largely tended to dominate and shape parenting research (Weber et al., 2021), studies from Africa have provided insight into distinct parenting behaviors of African parents. For example, qualitative research from three districts in Uganda found that parenting practices such as, investing in children's future, protection, care, enterprising, good relationships with neighbors, and relationship with one's intimate partner were important to parents in these districts of Uganda (Boothby et al., 2017). In this study, both parent and child participants highlighted behaviors such as walking a child to school, sewing a child's torn clothes before going to church, and having structured study time at home as concrete indicators of positive parenting. On the other hand, negative parenting practices included child neglect and abuse, not serving as a good role model, and lack of investment in the children's future (Boothby et al., 2017). Studies from other African countries have reported similar positive parenting practices as those identified by children and parents in Uganda (e.g., Brown et al., 2020; Gould & Ward, 2015; Sherr et al., 2017; Taliep et al., 2018). Clearly, such evidence suggests that there are certain distinctions in the way parenting and childrearing practices are accomplished in African settings compared to practices

of parents in the developed world. Therefore, a study to locally validate an already existing measure of parenting might yield crucial information regarding how to improve the measurement of parenting in the diverse African cultural setting.

Statement of Research Problem

A critical gap in research on evidence-based parenting practices in Africa is a lack of measures developed and or, tested in African settings. Currently, several assessment instruments for parenting, including the Alabama Parenting Questionnaire (Frick, 1991), the Parental Authority Questionnaire (Raval, 2013), the Multiple Indicator Cluster Survey (UNICEF, 2005), the Conflict Tactics Scale (Cascardi et al., 1999), the Parent-Child Conflict Tactics Scale (Straus et al., 1998), and the International Child Abuse Screening Tool (ICAST; Runyan et al., 2009) are used in several studies conducted in various African countries. These self-report instruments are used to primarily assess outcomes such as positive parenting practices, parental involvement, child monitoring/supervision, child/youth maltreatment, improvements in parent-child interactions, and improvements in child mental, emotional, and behavioral problems. Consequently, these measures contain cultural references and colloquialisms that may not be applicable, easily understood, or culturally relevant to parents and caregivers in many African settings (Ogunbajo et al., 2020).

Overall, the APQ is by far the most used tool to assess parenting practices, including positive parenting, parental involvement, monitoring/supervision, and child discipline. For example, the APQ was used in four studies (e.g., Cluver et al., 2017, 2018; Shenderovich et al., 2019; Ward et al., 2020) that tested the feasibility and effectiveness of the culturally adapted Sinovuyo Caring Families Teen Program (Lachman et al., 2016) in South Africa. Outside of South Africa, the APQ has been used to assess outcomes in the feasibility of the Parent

Management Training Oregon (PMTO) model program in Uganda (Wieling et al., 2015) and in a cluster randomized controlled trial (RCT) of a parenting program for male caregivers in rural Tanzania (Lachman et al., 2020).

It is important to note that the APQ and its subsequent five dimensions were developed by Euro-American researchers with different views and biases around parenting (Robert, 2009). Thus, the subsequent parenting dimensions on this measure reflect parenting practices in developed countries (see Dadds et al., 2003; Shelton et al., 1996). Although validity evidence of the APQ has been established in other cultures such as in Poland (Świąćicka et al., 2019), Portugal (Nogueira et al., 2020), Spain (e.g., Molinuevo et al., 2011), and Mexico (Roberts, 2009), limited studies have examined the validity of this measure in lower-income settings of Africa. Additionally, the APQ lacks items assessing distinct parenting behaviors such as walking a child to school, sewing a child's torn clothes, and having structured study time at home that have been identified as most important for Africa's lower-income settings (See Boothby et al., 2017). The continued assessment of parenting practices in Africa using assessments such as the APQ without appropriate cultural adaptations deters the ability of researchers to decipher the nuances of how parenting practices in Africa are distinct from practices in developed countries. This can lead to making invalid conclusions about parenting in Africa, thus creating biased parenting interventions (Dawson et al., 2018).

Despite the wide utilization of measures from the developed countries in studies of parenting across Africa, there is no clarity regarding how and whether these measures are being used consistently to assess outcomes (Ertl et al., 2011). Due to cultural and linguistic differences between English and African languages, directly translating items from an assessment instrument (e.g., the APQ) whose original language is English to the language of the target population is not

enough to ensure validity. Rather, a translation (e.g., using bi-lingual experts) and field-testing process (e.g., Beaton et al., 2000) must occur to ensure linguistic appropriateness and cultural relevance of items on a measurement instrument (Wang et al., 2006). The present studies are innovative in that I employed rigorous methods including qualitative (e.g., interviews with local experts and parents) and quantitative approaches to conduct appropriate and relevant cultural adaptations of the APQ. In summary, research in parenting in Africa should, in addition to developing and implementing parenting programs, seek to culturally adapt measures of parenting for use in African contexts. To do this, researchers should incorporate local voices in identifying culturally relevant parenting practices (Betancourt et al., 2009) and whether they are related to positive outcomes in children, rather than relying on measures whose items were developed and tested in majority English-speaking parents in developed countries (Bornman et al., 2010). Without this research, there will continue to be a lack of scientific knowledge regarding how preexisting sociocultural scripts influence African parenting practices (Bornstein et al., 2013). Second, there will be a continued assumption that Western measures of parenting practices are the "gold standard" for assessing parenting behaviors globally. Such will stagnate the scientific progress of parenting research from diverse cultural settings.

Therefore, in response to calls for culturally reliable and valid measures of parenting behaviors in lower-income countries such as Uganda (e.g., Augustinavicius et al., 2020), the purposes of this study were to (1) translate and qualitatively assess the cultural relevance of the APQ as an instrument to measure parenting practices among Runyankole-speaking parents, and (2) assess the adapted instrument's validity and psychometric properties in a sample of Runyankole-speaking parents in Uganda.

Rationale for Adapting the Alabama Parenting Questionnaire in this Study

The Alabama Parenting Questionnaire is a 42-item self-report survey that was developed by Paul Frick (1991) to assess five parenting constructs namely: (1) *parental involvement* represented by 10 items, (2) *positive parenting* represented by 6 items, (3) *poor monitoring/supervision* represented by 10 items, (4) *inconsistent discipline* represented by 6 items, (5) *corporal punishment* with 3 items (see Appendix A for the full 42-item APQ and corresponding subscales). These practices have been heavily linked with disruptive behaviors among children between 6-17 years of age, primarily in High-Income Countries (Dadds et al., 2003; Shelton et al., 1996) and other cultural settings (see Cova et al., 2017; Noguero et al., 2020; Roberts, 2009). Additionally, the APQ includes 7 more items (i.e., Other Discipline Practices), which provide information on parenting on an item-by-item basis. Items on the positive parenting and involvement subscales are positively worded (e.g., “*You have a friendly talk with your child*”), while items on the monitoring/supervision, inconsistent discipline, and corporal punishment subscales are negatively worded (e.g., “*You don’t check that your child is home at the time he/she was supposed to*”) (Frick, 1999). Parents report on their parenting practices using a five-category Likert scale; *Never* (1), *almost never* (2), *sometimes* (3), *often* (4), and *Always* (5). Currently, the APQ has not been psychometrically validated for use in Uganda (Wieling et al., 2015).

The APQ was chosen as the measure for evaluation in this study because 1) it has extensive research supporting its reliability to distinguish between clinical and non-clinical samples (Frick, 1999), 2) its ability to reliably measure the same construct (commonly known as measurement invariance) across demographics (e.g., gender, age, and clinical status) (see Florean et al., 2022; Kyriazos & Stalikas, 2021), and 3) its good criterion validity, particularly of the

negative subscales which have found more disruptive behaviors for children with behavioral disorders versus children without a disorder (Shelton et al., 1996). Further, a recent meta-analysis of 32 studies using the brief APQ-9 questionnaire (Elgar et al., 2007) with three subscale found acceptable mean alphas of .84 for the positive parenting subscale, .66 for inconsistent discipline, and .70 for the poor supervision/monitoring subscale (Liang et al., 2021). Previously, studies validating the measure among samples in High-Income Countries such as the United States of America, Australia, and Germany have proposed both a five-factor structure of the APQ (see Dadds et al., 2003; Essau et al., 2006; Frick, 1999; Shelton et al., 1996) and a three-factor structure (e.g., Elgar et al., 2007; Maguin et al., 2016). In cultures outside the USA and Australia, studies of the APQ have supported multiple factorial models including the original five-factor model (e.g., Florean et al., 2022; Roberts, 2009; Świącicka et al., 2019), a three-factor model (e.g., Clayborne et al., 2021; Molinuevo et al., 2011; Noguero et al., 2020), and a four-factor model (e.g., Cova et al., 2017), as the best fitting factor structures.

The research goals of this study are worth addressing considering the dearth of research on culturally relevant measures of parenting behaviors in Africa, and in Uganda in particular (Augustinavicius et al., 2020; Wieling et al., 2015). Further, considering the historical oppression and marginalization of Africans (e.g., Bamgbose, 2011), this research project is significant because the author centers the voices of local parents and parenting experts in the process of culturally translating and adapting the APQ in an African setting. Centering the voices of caregivers and experts from diverse communities in the cultural adaptation of an existing measure is critical as it ensures that research conclusions from studies in these settings are not based solely on Western-normed assessments (Dawson et al., 2018).

Significance of the Present Study

Given the rich empirical evidence establishing the link between parenting and child development outcomes from several African countries (e.g., Lachman et al., 2016; Singla et al., 2015; Wieling et al., 2015), it is surprising that little attention has been devoted to developing locally validated instruments for assessing outcomes related to parenting or to the psychometric testing of already existing instruments. For example, although the APQ is a globally recognized measure of parenting and has been psychometrically validated in global studies of parenting such as those in Australia (See Dadds et al., 2003; Shelton et al., 1996), Poland (Świącicka et al., 2019), Portugal (Nogueira et al., 2020), Spain (e.g., Molinuevo et al., 2011), and Mexico (Roberts, 2009), its validity in African contexts remains understudied. To date, there is only one empirical study from South Africa (Madalane, 2014) that has examined the psychometric properties of the APQ on the entire African continent. It should be noted that South Africa alone does not represent the immense diversity of cultures and languages across the African continent. This eminent gap in the measurement poses great concerns related to the generalizability of findings from studies in Africa that have previously used the APQ. The current studies are relevant because they evaluate the usefulness and cultural relevance of the APQ using a sample from another sub-Saharan African country (i.e., Uganda).

Using culturally validated and reliable assessment instruments is important for several reasons. First, it ensures that study findings are reliable, and conclusions are valid (Ertl et al., 2011), second, that local voices are accurately and appropriately represented in research findings. Third, the evaluation of validity evidence of freely available measures of parenting and child outcomes reduces the cost of developing new ones and increases access to screening tools in primary care and in educational settings (Hoosen et al., 2018). Fourth, the translation of available

measures of parenting into a major local language in Uganda (i.e., Runyankole) will expand the scope of parenting research by enabling parents in rural Western Uganda, majority of whom can barely speak English, to feel comfortable communicating in their native language (Ogunbajo et al., 2020). Long-term, the current studies will serve as blueprints for researchers to engage in thorough and relevant cross-cultural adaptations of measures of parenting, as well as measures of other social science constructs.

Conversely, the continued assessment of parenting practices in Uganda using assessments developed in High-Income contexts, without conducting thorough cultural adaptations further widens the already existing health disparities. For example, it deters the ability of researchers to decipher the nuances of how parenting practices in Uganda are distinct from practices in developed countries such as those in the West. This can lead to invalid conclusions about parenting in Uganda, and subsequently lead to the creation of biased parenting interventions (Dawson et al., 2018). Given the paucity of literature regarding the cross-cultural adaptation of survey instruments for culturally diverse populations in Africa, my findings and recommendations will offer useful insights to survey developers and intervention researchers planning to conduct data-driven parenting research in Sub-Saharan contexts including Uganda.

Theoretical Framework: Foundations of the Cultural Ecological Framework

The present studies are conceptualized through the cultural ecological framework (CEF; Ogbu, 1981). The CEF theorizes that parenting and child-rearing practices are nested within and are influenced by culturally determined child and adult characteristics considered necessary for survival and success (Kotchick & Forehand, 2002; Ogbu, 1981). These characteristics are largely shaped by 1) resources available in the environment to facilitate the adoption of competencies deemed to be culturally important, and 2) the presence of folk theories of parenting that dictate

childrearing practices deemed important to instill culturally acceptable and appropriate behaviors in children. According to the CEF, children in every culture have the potential to develop into competent and positive contributing members of society largely because they (1) learn more of the same fundamental competencies, (2) are taught with the same culturally standardized techniques, and (3) the members of the cultural group share the same motivations for teaching the same competencies to their children (Ogbu, 1981). Thus, from a CEF perspective, parenting is a process of cultural transmission or acquiring of prior existing instrumental competences (moral/behavioral, social, cognitive, linguistic etc.) which are necessary for survival and success in, and outside that cultural context (Ogbu, 1981).

A cultural ecological framework is important in a study that is seeking to culturally adapt an assessment instrument for parenting practices within Runyankole-speaking families in Uganda, because it emphasizes the central role played by culture in parenting (Bornstein, 2013, 2022; Roberts, 2009). Indeed, as research (e.g., Boothby et al., 2017; Mehus et al., 2018) has shown that, certain parenting practices are unique and applicable to contexts in Uganda but not in the developed world. Hence a model such as CEF is useful to guide the exploration of how parents and experts in a Ugandan setting might understand the items on a measure such as the APQ, that was developed and tested mostly in English speaking developed countries. Such a model can help provide more insight into how these parenting practices are experienced and implemented in Ugandan settings, leading to culturally relevant revisions of the instrument. The objectives of analyzing parenting from an ecological perspective aligns with Bronfenbrenner (1977)'s work that places emphasis on viewing human behavior, including child-rearing practices as the product of the interaction between the individual (e.g., a parent) with his or her external environment (e.g., culture). By using a cultural ecological framework, the potential for

imposing preexisting suppositions of Western cultural norms around parenting onto Ugandan families is minimized.

Summary of the Study Articles and Research Questions

The purpose of this chapter was to discuss the rationale for a study to culturally adapt an existing measure of parenting in an African country. Overall, it was established that measures of parenting behaviors (e.g., the APQ) developed and tested in developed countries, lack sufficient evidence to support their cultural relevance and validity in most African settings. Hence, the proposed *sequential exploratory mixed-methods* study sought to conduct the cultural adaptation of the APQ in a Ugandan cultural setting. The first article reports findings from a semi-structured interviews with Ugandan parenting experts as well as results from cognitive interviews with Runyankole-speaking caregivers in Uganda. Specifically, the article reports on key major and minor revisions to the 42-item APQ alongside feedback related to important parenting practices of the Banyankole families. Conversely, the second article presents findings on the validity and psychometric testing of the 32-item APQ-Uganda_Revised that was developed in study one. The article particularly reports on results from factor analysis (e.g., exploratory factor analysis and confirmatory factor analysis), regression analysis, and how these methods were used to examine the factor structure and predictive validity of the version of the APQ adapted for use in Uganda.

This two-phase study was guided by the following research questions:

- 1) How do parenting experts and Runyankole-speaking parents in Uganda comprehend scale items on the Alabama Parenting Questionnaire? (Study One)
- 2) What parenting practices are do experts and parents/caregivers in Uganda consider to be the most important (priority) in supporting children's' mental, emotional, social, intellectual, and behavioral development?

3) What is the validity and psychometric properties of the Runyankole version of the APQ among a sample of Runyankole-speaking parents in Uganda? (Study two)

4) Does the adapted APQ measure predict behavioral outcomes in Ugandan children?

These research questions were worth addressing in this project considering the dearth of research in culturally relevant measures of parenting behaviors in LMICs in Africa (Augustinavicius et al., 2020; Betencourt et al., 2009; Bornman et al., 2010).

CHAPTER 2: LITERATURE REVIEW

The primary purpose of this study is to examine the cultural relevance and psychometric properties of the Alabama Parenting Questionnaire (APQ) in a sample of Runyankole-speaking parents in Western Uganda. To understand the process of culturally adapting a measure for use in another culture, it is important to review extant literature to gain insights into what is known about the topic. Therefore, this chapter discusses relevant literature on a) parenting and child outcomes, b) studies of evidence-based parenting interventions in Africa with a focus on assessment of target outcomes. Because this study is primarily focused on parenting among Runyankole-speaking families in Western Uganda, and due to the dearth of literature regarding parenting in these families, I discuss literature on parenting practices in Uganda, with a particular focus on my motivation to focus on Runyankole-speaking families. The goal is to understand existing and nuanced parenting practices as well as factors that largely shape parenting in these families. Lastly, because this study proposed to culturally adapt a measure developed and tested in English-speaking populations in developed countries, I also present relevant literature on 1) the need to culturally adapt measures of various mental health constructs in Africa, and 2) literature on cross-cultural studies validating the measure of focus for this study, that is, the Alabama Parenting Questionnaire.

Conceptualizing Parenting and Associated Child Outcomes: A Cross-Cultural Perspective

The definition of parenting used in this study is by Marc Bornstein, an influential figure in cross-cultural parenting research. Bornstein (2013) defines parenting as a process of carrying out culturally relevant child caregiving responsibilities to prepare children mentally, emotionally, psychologically, and intellectually to function at their full potential as human beings. According to Bornstein and colleagues (2022), parenting involves several stakeholders who come in many forms including biological parents, adoptive parents, single parents, divorced and remarried parents, siblings, grandparents, nonfamilial caregivers and others (Bornstein et al., 2022). A central primary task of all these types of caregivers is to “protect, nourish, regulate, educate and socialize” children to become functional and contributing members of a society (Bornstein et al., 2022, p. 189). Thus, parenting not only encompasses the caregivers who are involved in the process, but also what they do, how they do it, where they do it, when they do it, and why they do it. In the parenting process, parents require an enormous number of resources (e.g., financial, spiritual, emotional, etc.) as well as support (e.g., through parenting programs) to successfully meet the demands of childrearing. The lack of adequate support and resources carries significant negative outcomes for both the parents and recipient children in their care. Given the central role of parenting in society, is not surprising that there are increasing calls for more evidence-based programs to support parents (Sanders et al., 2022). Governments and nongovernment organizations globally have embarked on campaigns to ensure the development and widespread implementation of various scalable parenting programs. Broadly, parenting programs are meant to teach positive parenting skills with the goal of reducing parenting stress and improving overall child health outcomes. However, there have also been cases of parenting programs geared towards supporting maternal health during pregnancy, programs to prevent adolescent

pregnancy, as well as programs to support parents' incomes/livelihoods (Bornstein et al., 2022).

Although the process of parenting is complex and complicated to conceptualize, decades of research on parenting have identified several parenting constructs to help parents and parenting experts effectively understand and study the process of parenting. These parenting constructs have been grouped together under the umbrella of "parenting practices." Walker and Kirby (2010) define parenting practices as specific behavioral customs or care rituals parents in a particular context (e.g., home, culture, etc.) employ to promote children's growth and development, health, safety, and socialization. Examples of parenting practices most studied in scientific literature from developed countries include *parental involvement* (i.e., parent's participation in their children's life activities), *positive parenting* (i.e., the use of approaches that are sensitive, empathetic, and respectful when addressing challenging child behaviors), *monitoring/supervision* (i.e., parent's attention to what the child is doing), and *parental warmth* (i.e., the affection, comfort, support, and nurturance a parent gives to their child) (Forgatch & Patterson, 2010; Spera, 2005). Other parenting practices include *skill encouragement*, *child discipline* (i.e., the actions employed by the parent to encourage desired behavior and discourage problem behaviors), and *effective family problem solving* (Forgatch & Gewirtz, 2017).

In general, studies have found that parenting practices that display warmth, involvement in the child's activities, supervision/monitoring, and consistent and age-appropriate discipline strategies are associated with positive child and adolescent health outcomes e.g., greater academic performance, less child internalizing and externalizing behaviors (e.g., depression and anxiety), and higher self-esteem (e.g., Cooper et al., 2015; Haller & Chassin, 2011; Holtrop et al., 2015; Liu & Guo, 2010; Spera, 2005). Conversely, these studies have also associated harmful

parenting practices such as inconsistent and harsh discipline strategies and lack of parental warmth with increased child behavioral and emotional problems (e.g., depression, anxiety, academic, and substance abuse challenges).

Parenting practices vary based on the cultural contexts of families. Several cross-cultural studies (Bornstein, 2013; Keller et al., 2005; Liu & Guo, 2010; Mehus et al., 2018; Parra Cardona et al., 2012) have documented evidence showing variations in parenting practices. For example, a study comparing among Nso mothers of Cameroon and German mothers found that Nso mothers primarily focused on body contact and stimulation (e.g., by gently shaking the baby) and responded to the baby's distress signals through primary care (e.g., by breastfeeding the infant). Conversely, German mothers focused on distress regulation by paying attention to object stimulation, face-to-face exchange with the infant (e.g., smiles), and sensitivity to the infant's positive signals (Keller et al., 2013). German mothers described the Nso mothers' practice of body stimulation as "strange (i.e., 'they should not shake a small baby like this')" (Keller et al., 2013, p. 195). This study illustrates variations in parenting across cultures, and calls researchers to examine cultural variations in parenting consider when assessing measuring outcomes related to parenting in Africa.

Parenting in Africa; A Focus on Kinship and Multiple Caregiver Contexts

In general, parenting in many Sub-Saharan African (SSA) countries share many similarities. One experience shared across is the context of kinship and multiple caregivers (e.g., siblings, aunts, uncles, and friends in the community) (Assim, 2013; Skelton, 2012). A study from Ghana indicated that extended family members provided parental supervision, moral, emotional, spiritual, and academic support for the children whose parents were deceased or who were deemed incapable of meeting children's needs (e.g., due to extreme drug and alcohol use

(Abdullah et al., 2020). Further, in Namibia, a 2014 national demographic and health survey indicated that about 37% of children without parents were cared for by an extended family member. In these contexts, extended family members reported caring for children because of deeply held cultural and religious beliefs about caregiving and community (e.g., caring for children brings blessings) (Mann & Delap, 2020). Although several crises (e.g., HIV/AIDS, wars, and most recently, the COVID-19 global pandemic) have weighed on many families in Africa, research shows that kinship networks and the extended family still play a significant role in parenting children across Africa (Abdullah et al., 2020; Roelen et al., 2017).

Parenting in Uganda: Traditional and Contemporary Trends

Parenting in Uganda is nested within the family unit, and families are heavily influenced by existing collective cultural and religious values (Boothby et al., 2017). Collectively, most Ugandan families subscribe to values of community, responsibility, respect and care for elders, hard work, the pursuit of achievement for the collective good, and peaceful conflict resolution (Walakira et al., 2021). Although the culture and family affairs unit of Uganda's Ministry of Gender, Labor, and Social Development is tasked with programs and activities to strengthen parenting in Ugandan families, cultural and religious institutions have influenced families and parents the most (Walakira et al., 2021). Cultural and religious institutions strongly rely on pre-existing norms, beliefs, and practices to guide various aspects of the family unit including child rearing practices.

Traditionally, parenting in Uganda can be viewed as a collective responsibility where the parent, in conjunction with members of the community, are responsible for 1) caring and providing for children, 2) passing on existing cultural norms, and 3) teaching children to learn to abide by the existing societal norms and fulfill expectations (Evans et al., 2008). These values

are often expressed in African proverbs such as "it takes a village to raise a child" (Mbiti, 1990, p. 141). However, with the increased modernization, technological advancements, and the emergence of alternative childcare providers (e.g., early childhood learning centers and hired house helpers), these traditional parenting values are slowly changing in modern-day Ugandan households (Walakira et al., 2021). For example, many children, especially those living in affluent families in Uganda, have access to television, telephones, computers, and the internet. In addition to serving as sources of entertainment for children, these technologies serve as 'substitute parents' for many children in Uganda (Walakira et al., 2021). In most present day affluent Ugandan households, it is common for parents to give their children gadgets like computers and phones to entertain/educate themselves (e.g., by surfing the internet) while the parents are focusing on work and making a living for the family.

Further, the modern family in Uganda is also influenced by external forces of urbanization and globalization that have continued to redefine traditional parenting practices. Today, many Ugandan parents can watch, read, and interact with information from cultures outside of Uganda. Although globalization is a positive phenomenon, it carries some risks for contemporary Ugandan families. First is the risk of cultural fusion (i.e., the mixing of values and practices from other cultures which contradict Ugandan values) (Walakira et al., 2021). For example, traditional family values of commitment to the extended family, marriage, and the pursuit of achievement for the collective good are slowly being replaced with individualistic cultural values that often "espouse unregulated freedoms for every individual in every aspect of human life including sexuality, marriage, and parenting" (Walakira et al., 2021, p. 49). As a result, many Ugandan families are faced with phenomenon such as cohabiting and premarital sex, practices that were traditionally considered inappropriate.

Lastly, child rearing practices in Uganda are constantly being influenced and shaped by other contextual socioeconomic factors (e.g., poverty) political and health-related factors (e.g., poor caregiver health, disease like HIV/AIDS & inadequate health systems) (Murray et al., 2017). For instance, studies from Uganda (e.g., Boydell et al., 2017; Devries et al., 2014) have indicated that many parents living in poor urban areas of Uganda use harsh discipline strategies e.g., corporal punishments to control their children's behaviors. Despite efforts by the government of Uganda to limit the use of corporal punishments as a discipline practice, studies show that many Ugandan parents regard corporal punishments as inevitable and primary discipline strategies (Boydell et al., 2017).

In response to the evolving role of families and parents in Uganda, the government of Uganda through the Ministry of Gender, Labor, and Social Development established the National Guidelines for Parenting (2018) to support and strengthen parenting practices in Ugandan families. As the duty bearers in the parenting process, Ugandan parents are expected to 1) acquire parenting skills, 2) seek parenting advice, 3) be positive role models for their children, 4) treat all children equally without discrimination based on sex, gender, disability, etc., 5) participate in parent support initiatives, 6) pass on positive cultural practices, and 7) contribute to the parenting of other children in the community (Ministry of Gender, Labor, and Social Development; MGLSD, 2018).

Although Uganda is a culturally heterogeneous country (with over 100 tribal groups and 45 languages) (Tulibaleka et al., 2021), the government of Uganda's parenting guidelines expects all parents and adults in the caregiver role to meet key parenting goals, including: 1) expressing unconditional love to children (e.g., by providing resources for children, complimenting/affirming children); 2) quality time with children (e.g., parent's involvement in

children's games/activities, reading with the child, etc.); 3) effective communication (i.e., open, honest, and consistent communication); 4) building children's self-esteem and confidence (e.g., avoid comparing children unfavorably with another); 5) instilling cultural and religious values (for identity, moral, and spiritual development); 6) living by example (e.g., resolving conflicts amicably); 7) providing for the child's social, physical, economic, psychological, and spiritual needs; 8) instilling the value of wealth creation and saving in children; 9) child discipline; 10) promoting the right to play (to enhance creativity, personality, talent, social relationships, and problem solving skills); and 12) raising hardworking and ethical citizens (i.e., promotion of rights and responsibilities).

Parenting Practices and Child Outcomes in Uganda

Since the establishment of the Uganda national parenting guidelines in 2018, only one study (Kyazze et al., 2020) has examined the association between parenting practices and various child outcomes in various Ugandan households. Using a child behavior rating scale, focus group discussions, and in-depth interviews, Kyazze et al. (2020)'s recruited 100 fathers and 60 children between the ages of 3 and 5 years of age from Mityana district. The goal of the study was to understand the association between a father's parenting practices and children's curiosity (i.e., expression of the urge to acquire facts and knowledge), their learning, and their creativity (i.e., imagination or original ideas). Quantitative findings indicated a positive significant relationship between the father's parenting practices and children's curiosity ($r = .40, p < .05$), children's learning ($r = .42, p < .05$), and children's creativity ($r = .38, p < .05$). Qualitative results indicated that overall, father's practices that encouraged children to play with new objects improved the child's curiosity and eagerness to learn (Kyazze et al., 2020). Further, to stimulate creativity, fathers discussed the importance of developing "childlike inclination for play," e.g., using

building blocks with children, scribbling on a paper as practices that help children develop creativity and curiosity in preschool years. Overall, the scholars observed that few fathers were giving children opportunities to make choices, responding to their children with warmth, and talking lovingly to them, and providing constructive comments about their children. Thus, the study recommended that parenting programs that train fathers on ways to empower their children to be curious, creative, and self-reliant should be developed (Kyazze et al., 2020). There is need for more studies exploring how the various parenting practices listed in the Uganda national parenting guidelines document are employed in Ugandan families and their associated child outcomes. More importantly, there is need to include items to assess these practices in studies of parenting in Uganda.

Why is the Study of Assessing Parenting among the Banyankole People Necessary?

The Banyankole (pronounced as *bahn-yahn-koh-lay*) are the indigenous people of western and southwestern Uganda. This ethnic group are the second largest ethnic group in Uganda (15%), after the Baganda (20%) (U.S. Department of State Bureau on African Affairs (2014). Ethnically, the Banyankole traces their ancestry from the “Bantu,” ethnic group that occupies majority of the land in east, central, and southern parts of Africa. The Banyankole speak the Runyankole (*Run-yahn-koh-lay*) language, which is the third most spoken language in Uganda (after Luganda and English). My desire to explore parenting and adapt a measure of parenting among the Banyankole cultural context was inspired by a growing body of research on parenting among the Banyankole cultural group (Boothby et al., 2017; Noel et al., 2021). Given their unique context as cattle keepers and subsistence farming communities, the Banyankole are among the top tribes that place high emphasis on bearing many children. Traditionally, children were prestigious because they helped to tend cattle on the farm, a highly esteemed symbol of

wealth among the Banyankole. For example, one passage of rite of the male children in Ankole is learning to decipher the colors of cows and milking. Most Banyankole live in challenging socioeconomic contexts yet produce many children to meet the demands of a subsistence farming and cattle-keeping family. Second, the Banyankole (like in other cultural groups in Uganda) still use negative parenting practices such as physical punishment to discourage child problem behaviors (e.g., Boydell et al., 2017; Devries et al., 2014). Many Banyankole parents use the proverb “*Akati kainikwa kakiri kabisi*” loosely translated as “*you bend a tree when it’s still young,*” to rationalize their use of physical punishment. Despite efforts by the government of Uganda to limit the use of corporal punishments among school-age children between the ages of 3-18 years (e.g., Devries et al., 2015), corporal punishment is still a predominant form of child discipline in Uganda, and specifically among the Banyankole culture. Research points to the strong links between corporal punishment and poor child outcomes (Alampay et al., 2017; Cuartas, 2021; Cuartas et al., 2021; Kaltenbach et al., 2018) but this research is not well established in Ugandan settings. Thus, the study of measurement of parenting and important parenting practices among Banyankole would add new knowledge to existing literature linking parenting practices to child psychosocial outcomes. This new knowledge will help to inform the development of better and culturally relevant parenting and family interventions for these families.

Parenting practices of the Banyankole parents are embedded within the larger Ugandan cultural context. Although there are several studies of culturally adapted evidence-based parenting interventions (EBPIs) in Uganda (e.g., Ashburn et al., 2017; Sensoy et al., 2020; Siu et al., 2017; Singla et al., 2015; Wieling et al., 2015), there is a paucity of studies examining the measurement of parenting practices in Uganda, and specifically among the Banyankole people.

My literature searches identified two studies that could offer us insight into parenting practices among Runyankole-speaking families in Western Uganda. The first is a qualitative study exploring parenting practices among families from three regions of Uganda including Western Uganda (Boothby et al. (2017). In this study, Boothby and colleagues (2017) interviewed 60 caregivers and their children (n= 60) between the ages of 8 and 12 years old from Kampala district (central Uganda), Ibanda district (Western Uganda), and Lira district (Northern Uganda) about their understanding of parenting practices. The researchers explored meanings of both positive parenting practices (i.e., attitudes and behaviors that support positive child development) and negative parenting practices (i.e., attitudes and behaviors that put children at risk for maladjustment). Boothby et al. (2017)'s research identified seven themes representing parenting practices and they include (1) investing in children's future, 2) protection, 3) care, 4) enterprising, 5) good relationships with neighbors, 6) relationship with one's intimate partner, and 7) childrearing. Regarding specific positive parenting practices, both parent and child participants highlighted behaviors such as walking a daughter to school, sewing a child's torn clothes before going to church, and having structured study time at home as concrete indicators of positive parenting. Conversely, parents and children reported that behaviors such as child neglect and abuse, not serving as a good role model, and lack of investment in the children's future were markers of negative/poor parenting (Boothby et al., 2017).

The second study that helps us gain insight into parenting among parents in Western Uganda is by Noel et al. (2021). These scholars recruited parents of 290 secondary school (i.e., high school) students living in Ibanda district located in Western Uganda. The goal of the study was to understand the relationship between parenting styles (i.e., authoritative, authoritarian, permissive, and neglectful/uninvolved) and self-efficacy among these students. An additional

goal was to examine the extent to which each individual parenting style predicted a student's self-efficacy. Results indicated that only the authoritative and authoritarian parenting styles were positively correlated with the student's self-esteem. Specifically, the authoritative parenting style was moderately correlated with student's self-esteem ($r = .37, p < .01$) while the authoritarian parenting style had very low positive significant correlations ($r = .17, p < .01$). Conversely, the permissive parenting style was insignificantly associated with self-esteem on the positive end ($r = .90, p > .01$) while the uninvolved parenting style was negatively correlated with self-esteem on the lower end ($r = -.90, p > .01$). Regarding the predictive power of individual parenting styles, only the authoritative parenting style had significant scores. Based on these results, the researchers in this study recommended that combined, the authoritarian and authoritative parenting styles could enhance the self-efficacy of secondary school students in Ibanda district (Noel et al., 2021). Thus, they recommend that parents and teachers should adopt these two parenting styles because students seemed to respond positively to parents and teachers who espoused these styles. In summary, my study will contribute to the larger literature of parenting practices among in Uganda by focusing on the adaptation of an assessment instrument for practices of Runyankole-speaking parents, while at the same focusing on relevant practices unique to this cultural group.

Research in Evidence-Based Parenting Programs in Africa

Research shows that equipping parents with positive parenting skills promotes positive child development (e.g., Forgatch et al., 2009; Forgatch, & Patterson, 2010; Knerr et al., 2013). To increase the availability of affordable EBPIs in lower-middle-income countries (LMICs), in Africa, several EBPIs have been implemented in various communities in Africa. A review of existing literature identified 25 implementation studies of parenting interventions in Africa. Five

studies (e.g., Cluver et al., 2017, 2018; Lachman et al., 2016; Shenderovich et al., 2019; Ward et al., 2020) implemented the Sinovuyo Caring Families Teen Program, a 12-session, group-based parenting program designed for low-income South African communities (Lachman et al., 2016).

Studies outside of South Africa included those from Kenya that tested the feasibility of the Families Matter! Parenting Program (Poulsen et al., 2010; Vandenhoude et al., 2010), two group-based studies testing the effectiveness of the *Msingi Bora* ("Good Foundation" in Swahili) group-based parenting intervention (Luoto et al., 2021; Lopez et al., 2021), and one feasibility study of a parenting intervention for street-connected mothers (Murphy et al., 2021). Studies from Zimbabwe included a study implementing the Reach Up! Intervention (Smith et al., 2018), a study that evaluated the Families Matter! Program (Shaw et al., 2021), and one cluster-randomized controlled trial testing the effects of cash transfer intervention on child health and development (Robertson et al., 2013). In Nigeria, two studies tested a parenting intervention to support parents of children on the autism spectrum disorder (ASD; Bello-Mojeed et al., 2016; Guler et al., 2018) and two studies evaluated the effectiveness of a community-based parent education program (Ofoha et al., 2019; Ofoha & Saidu, 2021). Further, studies from Uganda included a feasibility study of a multi-family group intervention (Sensoy et al., 2020), a feasibility study of the PMTO intervention for mothers affected by war and trauma (Wieling et al., 2015), and a study implementing the Responsible, Engaged, and Loving (REAL) fathers' intervention (Ashburn et al., 2017). There were two studies from Egypt, and both were psychosocial interventions for parents of children with attention deficit hyperactivity disorder (ADHD; Shata et al., 2014; Zeinab et al., 2014). The last three studies evaluated community-based parenting interventions in Malawi, Liberia, and Rwanda (e.g., Bentacourt et al., 2014; Kim et al., 2021; Puffer et al., 2015). Other studies have implemented adapted parenting programs

across Africa in countries such as Egypt (e.g., Shata et al., 2014; Zeinab et al., 2014), Rwanda (e.g., Abimpaye et al., 2020; Jensen et al., 2021), Malawi, Liberia, and Zambia (e.g., Kim et al., 2021; Martin et al., 2021; Puffer et al., 2015; Wekulo et al., 2019).

Primary target outcomes across studies included increasing positive parenting practices, parental involvement, child monitoring/supervision, reducing child/youth maltreatment, improving parent-child interactions, improving child/youth behavior problems, and improving overall family functioning. Secondary outcomes included reducing parenting stress, parental anxiety, and depression, assessing parents' attitudes around corporal punishment, perceived social support, and exposure to intimate partner violence (IPV). Overall, the interventions implemented were feasible, efficacious, and effective. Most studies reported significant improvements in the primary target outcomes (e.g., improved positive parenting skills, improved parent-child relationships, and reduced child and adolescent behavior problems) for caregivers and children exposed to the intervention. Further, in majority of the studies, Cohen's *d* ranged between .50 to .80 for effect sizes of positive parenting practices, and between .50 to .70 for child and adolescent behavioral problems, offering further support for the efficacy and effectiveness of the target EBPI.

Measurement of Outcomes in Studies of Parenting in Africa

Self-report measures from both caregivers and children were the primary means of assessing target outcomes across all studies. Notably, the APQ (Frick et al., 1991) was the most used self-report measure for assessing primary outcomes related to changes in parenting practices. For example, all Sinovuyo Caring Families Teen Program studies in South Africa (e.g., Cluver et al., 2017, 2018; Shenderovich et al., 2019; Ward et al., 2020) used the APQ to assess outcomes related to parenting practices. The APQ was also used to evaluate outcomes in the

feasibility study of the PMTO parenting intervention in Uganda (Wieling et al., 2015) and a cluster RCT in Tanzania (Lachman et al., 2020). Further, the Parenting Stress Scale (Berry & Jones, 1995), the Center for Epidemiologic Studies Depression Scale (Radloff, 1991), and the Medical Outcome Study Social Support Survey (Sherbourne & Stewart, 1991) were the most used measures of secondary outcomes (e.g., parenting stress, depression, and anxiety).

Assessments of child outcomes included, the Conflict Tactics Scale (Cascardi et al., 1999), the Parent-Child Conflict Tactics Scale (Straus et al., 1998), the International Child Abuse Screening Tool (ICAST; Zolotor et al., 2009), the Child Behavior Checklist (CBCL; Achenbach, 1991), the Multiple Indicator Cluster Survey (UNICEF, 2005), the Strengths and difficulties Questionnaire (SDQ; Goodman, 1997), the Aggression and Self-Injury Questionnaire (ASIQ), and the Knowledge of Behavioral Management of Aggression Questionnaire (KBMAQ).

Strengths of Measures used in Studies of Parenting Programs

A few studies reported following the guidelines for cross-cultural adaptation of measurement instruments such as back translation (e.g., Beaton et al., 2000) to ensure the measures to fit the target population's culture. Adaptations were mostly linguistic and involved the use of local translators with knowledge of the local culture (Wang et al., 2006). Wieling and colleagues (2015) translated questions assessing parenting practices on the APQ into the local language Acholi/Luo. Additionally, they employed a trained native speaker to administer the assessments. Similarly, in Tanzania, Lachman and colleagues (2020) translated the items on the APQ into Kiswahili (the national language). The research assistants also explained the questions in the local tribal language, Sukuma, for participants who could not understand Kiswahili. Another strength was that most studies reported reliability estimates (e.g., Cronbach's alphas).

Critique of Measures: Issues of Reliability and Validity

Due to cultural and linguistic differences between English and African languages, directly translating items from an assessment instrument (e.g., the APQ) whose original language is English to the language of the target population is not enough to ensure validity and reliability of the instrument. Rather, a back translation process (e.g., Beaton et al., 2000) must occur to ensure linguistic appropriateness and cultural relevance of items on a measure (Wang et al., 2006). This process is best accomplished by using translators and reviewers who are familiar with the local culture and the construct under investigation, and then pilot testing the instrument on the target population (Wang et al., 2006). Except for two studies (Wieling et al., 2015 and Lachman et al., 2020), most studies of EBPIs in Africa did not clarify adaptation/translation procedures in the measures they used. This raises validity and reliability concerns about these studies.

Reliability of an instrument is concerned with the extent to which the measure can yield consistent results across different contexts. Validity, on the other hand, is the extent to which a measurement instrument measures the construct it purports to measure (DeVellis, 2017). According to DeVellis (2017) there are three types of validity that are essential in measurement. These are (1) *content validity*, the extent to which a set of items comprehensively capture a content domain, 2) *criterion-related validity* which is the extent to which an instrument can be empirically associated with an existing “gold standard,” and 3) *construct validity*, the extent to which “a measure behaves the way the construct it purports to measure behaves, with regard to established measures of other constructs” (DeVellis, 2017, p. 95). Of the three types, Bolton (2001) suggests that criterion validity is the most important form of validity to assess in cross-

cultural work. Criterion validity is assessed by an expert (e.g., a psychologist) with expert knowledge of the local culture.

Another important aspect of validity in cross-cultural research is cultural validity-the extent to which a measurement instrument incorporates the participants' sociocultural influences (e.g., different parenting practices, beliefs, experiences, communication patterns, and socioeconomic conditions) (Bolton, 2001; Jadhav, 2009). Cultural validity is evaluated by administering the translated measures to respondents from different groups with the same latent trait level and seeing if the respondents respond similarly to a particular item (i.e., differential item functioning) (Mokkink et al., 2018). In addition to cultural validity, the Consensus-based Standards for the Selection of Health Measurement Instruments (COSMIN) taxonomy guidelines (Mokkink et al., 2010) stress that researchers should examine content validity to ensure that the items on an instrument are comprehensive (i.e., include all aspects of the construct relevant to that culture) and comprehensible (i.e., are easy or possible to understand by target participants) before it is used in a cultural context. However, the studies of EBPIs from Africa reviewed did not provide evidence of validity. It was interesting that a lack of validity evidence was acknowledged, and in-depth psychometric analysis recommended in studies (e.g., Wiering et al., 2015) where “appropriate” steps were taken to ensure cultural validity of the measure (i.e., the APQ).

Related to items, studies using the APQ assessed the dimension of parental involvement using items such as *"You play games with your child"* and *"You have a friendly talk with your child."* The dimension of positive parenting was assessed with items such as, *"You reward your child for obeying you or behaving well," "you let your child know when he/she is not doing a good job,"* and *"You tell your child that you like it when he/she helps around the house"* (Frick,

1991)." Although such items are considered indicators of positive parenting practices in the developed world, they do not reflect the parenting practices of many parents in Africa. Moreover, due to the socioeconomic challenges of many parents in Africa, playing with children is not a common practice of parents. Instead, children play with their siblings or other children in the community (see Bornstein et al., 2017; Marlowe, 2017). Thus, assessing parental involvement using play might not be culturally appropriate.

Further, although studies reviewed reported high Cronbach's alphas (ranging between .60 to .80) as evidence of reliability, some researchers contend that high Cronbach alphas do not guarantee that the construct of interest was measured or that important concepts are missing (e.g., Mokkink et al., 2018). A researcher may measure the "incomplete or incorrect construct very reliably, and a real change in the construct of interest be over-or under-estimated due to irrelevant or missing concepts (Mokkink et al., 2018, p. 1173)." In agreement with Mokkink and colleagues, it is worth noting that measures such as the APQ lack items assessing parenting behaviors that have been deemed hallmarks of positive parenting in a lower income setting in Africa (e.g., Boothby et al., 2017). Thus, this study will be conducted with the idea that revisions in this measure are needed to render it culturally relevant for assessing parenting behaviors of rural Ugandan parents.

Theories of Assessing the Validity of a Measure: Which is Better?

The term "measurement" is often used broadly to refer to the entity that focuses on the measurement (i.e., object of measurement; Marcus & Borsboom, 2013). This entity could be a person, a family, a company, neighborhood. On the other hand, an attribute (commonly referred to as a latent construct or trait) is the characteristic of the measured entity (Machleit, 2019). Scholars contend that for a measure to be deemed high quality, its validity and reliability need

examination using existing literature, robust theories, and measurement models (Scholtes et al., 2011). Measurement literature discusses two approaches of measurement that are commonly used. The first is classical test theory (CTT; Kline, 2005). Believed to be historically the oldest theory, an underlying foundation of CTT is the idea of a total score (DeVellis, 2017; Kline, 2005). Classical test theory assumes that an observed score (x) for a person (n) is equal to that individual's actual score (T) plus a measurement error (e) for that person (DeVellis, 2017). Measurement error could occur due to: (1) the measurement instrument, (2) the measurement context, and (3) the person being assessed. Thus, according to CTT, it is considered reliable if a measure has minor errors (Scholes et al., 2011). Consequently, most models of reliability testing (e.g., test-retest, inter-rater, and internal consistency; Scholtes et al., 2011) are based on CTT.

The second type of measurement theories are item response models (IRM). Item response models encompass a family of models in which an item response is considered an outcome (Peeraer & VanPetegem, 2012; Wilson et al., 2006). The two most used IRM approaches are Rasch measurement (Andrich, 1978, 2011) and item response theory (Embretson & Reise, 2013; Hambleton & Swaminathan, 2013). The main idea underlying both IRM approaches is that respondents will answer items on a measure based on their ability level (commonly known as theta level) and that item's level of difficulty (Wilson et al., 2006). For example, in a testing situation, say of parent's level of parental involvement (assessed on a continuum of "*never*," "*sometimes*," "*often*," and "*always*"), if we have parents that are highly involved in various activities of their children (i.e., has high ability level) and an easy item (e.g., "I play games with my child"), the probability of that parent selecting a response on the high end of the scale (i.e., *always*) is high compared to the parent who is never or rarely involved in their child's life and/or activities. The IRM approaches are unique to establishing the validity of a measure in that

considerable attention is paid to the properties of individual items that make up a measure and characteristics of the person taking the measure, rather than the total score as is the case in CTT. Considering properties of individual items enables instruments to be equated or cross-calibrated, especially when a measure is used across cultures (Embretson & Reise, 2013).

Although the two approaches share several fundamental characteristics and assumptions, IRM approaches have received increasing attention as modern and superior in the psychology and humanities fields in recent years (Reise & Revicki, 2014). This is because IRM models offer the researcher an opportunity to investigate items on the measure and the respondent interacting with the item compared to CTT models that can only examine test level properties. Thus, Wilson and colleagues (2006) argue that IRM approaches are best-suited models for assessing the validity and reliability of a measure because "one can measure properties of the measure at any selected critical cutoff (p. 1)."

What is Considered a Good Measurement Instrument?

Developing strong measures for assessing latent constructs is a highly daunting task that requires an excellent theoretical understanding of the underlying construct of interest and good knowledge of measurement models (Andrich, 2011). This is because certain constructs are abstract and extremely difficult to define and operationalize. Take, for example, the construct of parenting. Although decades of research have developed various theories to help scholars better study parenting and underlying constructs, there is still no agreement on the exact definition of the term "parenting." While some scholars view parenting as a process comprised of several activities' parents do to raise their children in a given context (O'Conner, 2002), others (e.g., Bornstein, 2013) view parenting as "a process through which parents pass on their individual, family, and sometimes societal, cultural values to their children" (p. 213). Thus, measuring a

construct such as parenting is challenging because it is a construct with varying definitions, constructs, and ways to measure it. Thus, assessing abstract constructs such as parenting means that a researcher would have to use indirect means to determine the latent construct by examining its indicators (Fried et al., 2016). The study of parenting in Africa should carefully consider these varying theoretical views because theory affects how measurement instruments are developed (Andrich, 2011).

Generally, measurement scholars contend that for a measure to be considered good, it must meet three critical characteristics of 1) specific objectivity, 2) unidimensionality, and 3) invariance of scores (Neumann et al., 2011). The idea of *specific objectivity* is that "a person's trait is independent of the specific set of items used to measure it" (Green & Frantom, 2002, p. 5). Consider, for example, measuring an individual's weight; an individual can use any weighing scale, and this scale would remain independent of the person's weight. Related to the idea of specific objectivity is the concept of *invariant scores* (Borsboom, 2006; Engelhard, 2013). According to the oxford dictionary, the term "invariance" means that something remains unchanged even when a specific translation is applied. A measure will be of good quality if it produces identical scores regardless of the context or participants. Staying with the example of a weighing scale which provides the weight in pounds, the "weight" scores are invariant in the sense that regardless of the weighing scale used, the person's weight does not change, and an individual can use the same scale to measure the weight of another person. The third characteristic of a good measure is *unidimensionality* (DeVellis, 2017). Unidimensionality is the idea that a set of items on a measure should share one common underlying construct (Hattie, 1985; Fried et al., 2016). Most measurement research contends that unidimensionality is the most

critical assumption of measurement because if a measure is multidimensional, conclusions made cannot be generalizable (Andrich, 2011).

Regarding response processes, most measurement scholars seem to agree that between 4 and 7 rating scale categories are adequate for use on a Likert-type rating scale (see Andrich, 2011; Van Zile-Tamsen, 2017). Generally, most scholars seem to support a rating with 5 categories as the ideal. Consider, for example, the APQ (Frick, 1991), which is the focus of the current study. The APQ assesses parenting using five rating scale categories: *Never (1)*, *Almost Never (2)*, *Sometimes (3)*, *Often (4)*, and *Always (5)*. Logically speaking, one would expect that parents responding with a higher category (i.e., always, for example) would have more parenting behavior (e.g., parental involvement) assessed than parents responding with a lower category.

The Adaptation of Measures for Behavioral Constructs among Culturally Diverse Samples

With increased globalization and cross-cultural transmission and exchange of scientific knowledge, the critical need for culturally adapted and relevant instruments for use in cultures and languages, other than the original language/culture has grown tremendously (Beaton et al., 2000; Lenderink et al., 2012). There is a consensus among scholars that assessment instruments originally developed in one culture must be culturally translated and validated before they are used in another cultural setting (Beaton et al., 2000; Oliveira et al., 2018; Tuthill et al., 2014). This ensures 1) that study findings are reliable, and conclusions are valid (Ertl et al., 2011). Second, it reduces the cost, saves the time, and efforts of developing new ones, and increases access to screening tools in primary care settings (Hoosen et al., 2018). Third, it expands the scope of research by enabling participants who are not fluent in the original language of the measure (e.g., English) to feel comfortable communicating in their native language (Ogunbajo et al., 2020). Lastly, having culturally validated and reliable measures further enables researchers to

be able to compare research findings across cultures for use in international clinical trials (Beaton et al., 2000).

The cross-cultural adaptation of an assessment instrument for use in a new culture requires rigorous methods to ensure equivalence between the new and the original versions of the instrument (Arafat et al., 2016; Beaton et al., 2000). According to Byrne (2008), the term equivalence denotes to the idea that “a given measurement instrument has the same psychological meaning across various groups of interest” (p. 873). Because of linguistic and cultural differences in the way various mental health constructs are conceptualized in various cultures globally, the process of translating, adapting, and culturally validating an instrument ensures 1) *semantic equivalence* (i.e., no multiple meanings to a given item), 2) *idiomatic equivalence* (i.e., that idioms and colloquialisms translated appropriately), 3) *experiential equivalence* (i.e., that the items match the daily lived experiences of the target population?), and 4) *conceptual equivalency* (i.e., that the words in an item mean the same thing) between the original and adapted instrument (Beaton et al., 2000).

Further, although the terms “translation” and “adaptation” tend to be used interchangeably in the literature, the former is merely the first stage in the adaptation process of any assessment instrument while the latter involves “all the processes concerning the culture fit of the instrument beyond mere translation” (Arafat et al., 2016, p. 129). Often, adaptations of assessment instruments for mental health constructs are comprised of mere translation of items on the instrument into the new language of the target population. This kind of translation is usually done by researchers themselves who tend to rely only on back-translation without rigorous validity field testing of the instrument. Research shows that mere translation of an instrument does not offer contrast validity, cultural relevance, and measurement reliability

(Borsa et al., 2012). Although there is no consensus on the “right” process for adapting an instrument for cross-cultural use (Borsa et al., 2012), psychometric research seems to agree that a process involving initial translation, synthesis, back-translation, expert review, and field testing of validity (e.g., construct, face, criterion, and content validity) and reliability is sufficient to ensure that an instrument is culturally relevant for assessing a given health construct in a new culture/population (Beaton et al., 2000). Further, the process of translating, adapting, and culturally validating an instrument offers the research more opportunities to deeply explore issues of equivalence (i.e., *semantic equivalence*, *idiomatic equivalence*, *experiential equivalence*, and *conceptual equivalency*) between the original and adapted instrument (Beaton et al., 2000).

Cross-Cultural Validation Studies of the Alabama Parenting Questionnaire in Global Samples

A massive advantage of research in evidence-based parenting practices is that it has allowed clinicians and researchers to understand better, various parenting practices and ways to operationalize them. To better understand how to assess parenting practices within the ecological cultural framework, it is important to examine the extant literature validating the APQ in diverse populations and cultures across the globe. As previously discussed, the APQ (see appendix A) is a 42-item self-report measure of parenting practices. Frick (1991) developed this measure to assess five parenting practices which include (1) parental involvement, (2) positive parenting, (3) poor monitoring/supervision, (4) inconsistent discipline, and (5) corporal punishment. These five parenting practices have been associated with the likelihood of externalizing behavioral problems (e.g., conduct disorder, juvenile delinquency) among children under the age of 18 years (Dadds et al., Shelton et al., 1996). Parents self-report on the items on the APQ using a five-

category Likert scale; *Never (1), almost never (2), sometimes (3), often (4), and Always (5)*.

Although the total APQ scale has 42 items, seven of the 42 (i.e., items 34, 36, 37, 39, 40, 41, and 42) are included as “Other Discipline Practices” (e.g., timeouts, loss of privileges, plan to ignore etc..) and are not usually included in studies assessing the five core APQ subscales. According to Roberts (2009), the seven items are used as “distracters to buffer the negative connotations of the Corporal Punishment subscale” (p. 30). So, most studies using the APQ to assess parenting practices often use 35-items.

Since its development in 1991, the APQ has been widely used and validated in several cultures both within and outside of the origin culture, the United States of America. The first study to validate the APQ was conducted in the State of Alabama in the U.S.A. In this study, Shelton and colleagues (1996) assessed parenting practices of 160 primary custodial caretakers of clinic-referred elementary school-age (ages 6 to 13) children from Alabama. Using a multi-informant and multi-method system, findings from this study indicated that the three items assessing Corporal punishment, the poor parental monitoring/supervision subscales all had low internal consistency across the sample. However, Parental involvement and Positive Parenting subscales both high correlations across the sample, indicating that the APQ was a useful self-report measure for assessing parenting practices.

Outside of the United States, the APQ’s psychometric properties have been tested in many studies; only five of these from countries of Mexico, Spain, Poland, Portugal, and South Africa will be discussed. First, Roberts (2009) studied the psychometric properties (e.g., factor structure and predictive validity) of the APQ in a sample of 862 female caregivers and their 5th grade children in the State of Nuevo León, Mexico. In this study, the APQ was first translated into Spanish and back-translated into English by a bi-lingual expert. The translated measure was

then pilot tested on ten Spanish-speaking mothers to identify items that needed further modification to ensure cultural fit. In the adaptation process, it was decided that a 4-point rating, rather than a 5-point rating scale was culturally appropriate for the Mexican sample (Roberts, 2009). Results from factor analysis indicated that all the items on APQ positive subscales (i.e., Parental Involvement and Positive Parenting) and the and negative subscales (i.e., Poor Monitoring, Inconsistent Discipline, and Corporal Punishment) all had good factor loadings of 0.4 or higher in a Mexican sample. Further, regarding predictive validity, results indicated that both positive and negative APQ subscales offered good predictive validity in determining the risk of externalizing and internalizing problem behaviors among children in Mexico. Overall, the researcher concluded that the APQ was a good measure for understanding parenting practices of Mexican parents.

In Spain, Molinuevo et al. (2011) established good convergent and discriminant validity of the 3-factor structure of the Catalan-APQ corresponding to subscales of Positive Parenting Practices, Inconsistent and Negative Discipline, and Poor Monitoring and Supervision. The study recruited a sample of 364 children between the ages of 10-15 years old, and their parents. The original APQ scale was first translated into the Catalan language and was revised by a bi-lingual translator. Revisions led to the development of a final Catalan APQ with 35 items. Upon conducting the first round of exploratory factor analysis, three items (25, 28, and 32) of the original 35 items were deleted because they produced significantly low factor loadings (i.e., below .03). Another item (item 5) removed because it produced similar loadings on two factors (Molinuevo et al., 2011). Further analysis comparing the parent and child reports of the APQ resulted in the elimination of eight more items (4, 8, 11, 15, 17, 24, 26, and 38). This left the final version of the Catalan-APQ with 23 items which loaded perfectly onto three subscales of

Positive Parenting Practices, Inconsistent and Negative Discipline, and Poor

Monitoring/Supervision. Overall, the authors concluded that the Catalan-version of the APQ's parent global and child global report forms were culturally appropriate for assessing the association between parenting practices and children's behavior problems. Specifically, negative parenting practices (i.e., inconsistent, and negative discipline, and poor monitoring/supervision) were significantly associated with more problem behaviors in children between the ages of 10 and 15 years in the Catalan region of Spain.

Further, in Poland Świącicka et al. (2019) examined the five-factor structure and the construct validity of the Parent-version of the APQ in a Polish sample (n= 911 mothers) and (n= 497 fathers) of children between the ages 6 to 13 years old. Results from confirmatory factor analysis (CFA) indicated initial unsatisfactory fit indices for the APQ's five-factor structure in a Polish sample compared to fit originally confirmed in initial APQ studies (e.g., Dadds et al., 2003; Shelton et al., 1996). However, upon further modifications (e.g., revising of models), acceptable fit indices were detected in both samples of Polish mothers and fathers (TLI= .82 and CFI= .84). The authors concluded by confirming a five-factor structure and good construct validity of the Polish version of the APQ. Symptoms of oppositional defiant disorder (ODD) among children were most strongly correlated with negative parenting practices (particularly, with inconsistent discipline subscale) and negatively correlated with positive parenting practices. Regarding reliability, Świącicka et al. (2019)'s study revealed that four of the five APQ subscales had acceptable reliability. Apart from the *inconsistent discipline* subscale (Alpha= .53), the Cronbach alphas for the remaining four subscales ranged between .75 to .86 for mothers and from .67 to .79 for fathers.

Similarly, another study in Portugal (Nogueira et al., 2020) translated and evaluated the psychometric properties of the Portuguese version of the APQ using confirmatory factor analytic techniques. Their study recruited a community sample of 499 Portuguese mothers of children and adolescents between the ages of 10 to 17 years old. Contrary to the CFA results in the Polish study of the APQ, the CFA results from the study in Portugal revealed a three factor-structure of the APQ in a Portuguese sample. Initial attempts to test the five-structure model (with all 35 items) revealed poor fit to the data. After several modifications to the scale e.g., by discarding items (e.g., 26, 5, 3, 22, 31, 33, 35, and 38) with poor factor loadings below .35), the three-factor model (20-items) with subscales of positive parenting, ineffective parenting, and poor monitoring/supervision had good fit. Nogueira and colleagues concluded that the 20-item version of Portuguese APQ was an appropriate measure for assessing parenting practices of Portuguese parents. Because the study was conducted among parents of children of the same age groups (i.e., ages 13 and 14 years old), the scholars suggested that the validity of the 21-item Portuguese APQ in assessing parenting practices needs to be assessed using parents of children of varying age groups (e.g., 3 to 8 years and 8 to 12 years old).

Lastly, in Africa, a literature search found only one study by Madalane (2014) that validated the APQ among Xhosa-speaking parents in South Africa. In this study, Madalane (2014) used sequential exploratory mixed-methods approaches (e.g., Creswell & Clark, 2017) combining qualitative and quantitative methods to examine the cultural relevance and psychometric properties of the APQ among Xhosa-speaking people in South Africa. In phase one, Madalane conducted 10 cognitive interviews to assess the participant's comprehension, difficulties in comprehension, and responses processes of the 42 items on the APQ. Results from cognitive interviews indicated that several items did not culturally fit and had to be modified to

fit the local cultural context. The quantitative study recruited 133 caregivers and collected data on parents' parenting practices as well data on their children's externalizing problems using the Child Behavior Checklist (CBCL). Results from the exploratory factor analysis (EFA) suggested a new five-factor solution of the APQ among Xhosa-speaking caregivers. Further, when matched with the CBCL, the APQ had good criterion validity, showing that negative parenting practices were associated with aggression among children in this sample (Madalane, 2014). Consequently, the entire study led to the development of a shorter Xhosa version of the APQ for assessing parenting practices in this population.

Although the APQ has been widely used to assess parenting outcomes in many studies of evidence-based parenting interventions in different African countries (See Cluver et al., 2017, 2018, 2020; Lachman et al., 2017; 2020; Shenderovich et al., 2019; Ward et al., 2020; Wieling et al., 2015), the scale's full validity and cultural relevance is still understudied in several African contexts. In the studies of EBPIs that used the APQ, the researchers merely translated the APQ items in the local languages. And although most of these studies reported measures of internal consistency (i.e., acceptable Cronbach alphas), "mere translation does not guarantee construct validity or measurement reliability" (Borsa et al., 2012, p. 15). Further, Maneesriwongul and Dixon (2004) also argue that merely translating a measurement instrument into a local language is not sufficient to provide parameters for evaluating whether the results from a study are due to differences or similarities between the different samples or translation errors. With these considerations, this study is therefore critical because it will follow a rigorous process to translate/adapt, and culturally validate the APQ in Uganda, an African country. In general, other validity studies of the APQ were conducted in Australia (Dadds et al., 2003; Elgar et al., 2007;

Hawes & Dadds, 2006), Chile (Cova et al., 2017), Germany (e.g., Essau et al., 2006) and these did not include African populations.

The studies validating the APQ reviewed had the following common themes: First, these studies modified the original APQ measure with 42-items into some form of a shorter version. For example, 19 items were eliminated in Molinuevo et al., (2011) study in Spain leaving the final scale with 23-items, 12 were eliminated in Nogueira and colleagues (2020)'s study, and only two items were discarded (e.g., in Hawes & Dadds, 2006; Zlomke et al., 2014). Second, all studies reviewed, items 5 representing positive parenting, item 25 for inconsistent discipline, items 24 and 32 for poor monitoring, item 26 for involvement, and 38 corporal punishments were the most discarded items. The number one reason cited for removing these items was that they produced extreme participant responses (i.e., Never or Always) and/or unacceptably low factor loadings. Third, except for the Świącicka et al. (2019) study in Poland, most studies did not include the additional seven items on the APQ scale representing "Other Disciplinary Practices" (e.g., planned ignoring, timeouts, loss of privileges) because most of the practices these items represented were not culturally applicable in those contexts. Lastly, except for Madalane (2014)'s validation study in South Africa that utilized a sequential exploratory mixed-methods approach (e.g., Creswell & Clark, 2017), the remaining studies validating the APQ have used only quantitative approaches. The most used quantitative approaches were factor analysis, including exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Based on the common factor model (Lubke et al., 2003), these factor analytic techniques are used to determine appropriate factor structures and measured variables that can reasonably indicate an underlying latent construct (Brown, 2015).

Although quantitative approaches such as EFA and CFA are useful for providing data for assessing the factor structure, which is an important aspect of a scale's validity, they are limited in that they cannot be used to understand how participants in a given culture comprehend scale items, including words and phrases on a measure such as the APQ. Particularly, when a researcher needs to explore the usefulness and cultural relevance of an instrument because one is not available, it is important to use sequential exploratory mixed methods design approaches (e.g., Creswell & Clark, 2017) that combine qualitative and quantitative methods in the adaptation process. This design approach is appropriate for identifying important variables to explore quantitatively the process of developing or culturally adapting a measure to a new culture. Thus, the present study is unique from the previous cross-cultural validations of the APQ because it will employ the two-phase sequential exploratory mixed methods approach in accomplishing study goals.

Summary

This chapter highlighted extant literature on parenting practices globally and in Africa, with a focus on parenting practices of parents in Uganda. Using existing literature on parenting in Africa, the researcher further emphasized the critical need of measures of parenting practices tested and validated in African settings. Particularly, cross-cultural studies validating one of the internationally used measures of parenting practices, the Alabama Parenting Questionnaire was discussed. The review of these studies further enhanced the researcher's understanding of the eminent gap in science around assessment of parenting in diverse settings of Africa, such as Uganda. Although the factor structure and psychometric properties of the APQ measure have varied in cross-cultural studies, research shows that the APQ is overall a relevant measure for assessing parenting practices and if appropriately culturally adapted could be useful for both

research and clinical purposes (Cova et al., 2017; Roberts, 2009). The diversity in children's age range and in psychometric testing procedures (e.g., cognitive interviewing, EFA and CFA) used in the studies discussed above further explain that the APQ is a relevant measure for assessing parenting behaviors of parents of children of different age groups. Thus, the study serves an important purpose in improving our understanding regarding the assessment of parenting practices in Uganda using the adapted APQ.

CHAPTER 3: METHODOLOGY

Study Design

The Exploratory Sequential Mixed-Methods Approach

Given the dearth of research regarding the adaptation of measures for parenting in diverse settings in Africa, it is critical to engage in rigorous processes and procedures for cross-cultural adaptation of measurement instruments. The present study utilized an exploratory sequential mixed method design approach (Creswell & Clark, 2017) (see diagram 1.1) to complete the cultural adaptation and validity testing of the APQ using a sample from Uganda. Sequential exploratory mixed methods combine qualitative and quantitative data techniques to collect, analyze, and interpret relevant data. According to Creswell and Clark (2017), sequential exploratory-mixed design approaches are useful when “a researcher needs to develop or test the validity of an instrument because one is not available (p. 75).” Thus, this design approach was chosen as the appropriate design because (1) there is no available culturally adapted measurement instrument for assessing parenting practices among Runyankole-speaking parents in Uganda. Moreover, the validity and psychometric properties of the APQ, a commonly used measure of parenting, have not been established in Uganda. Very little is known regarding whether the items on this measure are culturally relevant in a diverse setting such as Uganda. Additionally, the psychometric properties of this measure such as, its factor structure and ability of its subscales to predict child behavioral outcomes is not known. The current study occurred in two phases. In study 1, I collected qualitative data from local experts as well as local parents through semi-structured interviews and cognitive interviews. A combination of both expert interviews and cognitive interviews is highly recommended by most survey experts and developers for the pretesting of any new, and/or, existing instrument in a new culture/population

(Ouimet, 2004). Subsequently, I used expert and parent feedback in study one to culturally adapt the APQ into a shorter version for larger field testing. In study two, I used a modified APQ scale to collect quantitative data on parenting practices from 618 Runyankole-speaking caregivers of children under the age of 18 years. I used this data to examine the validity and psychometric properties of the modified APQ.

In general, sequential exploratory-mixed methods have extant literature supporting their applicability assessing the validity and cultural relevancy of various measures of psychosocial constructs in Africa. For example, Ogunbajo and colleagues (2020) used this approach to assess the validity of measures of depression, social support, and minority scales among gay, bisexual men in Nigeria, Africa (see Ogunbajo et al., 2020). In the first part of their study, a sample of 30 men, identifying as LGBT in Nigeria, were recruited through community-based organizations (CBOs) to participate in one-on-one cognitive interviews assessing the comprehension of scale items and elicit suggestions for scale modifications of three scales including, the Center for Epidemiologic Studies Depression scale (CESD-R; Eaton et al., 2004), the Perceived Social Support Scale MSPSS (MSPSS; Zimet et al., 1988), and the LGBT Minority Stress Scales (Outland, 2016). Findings from the CIs indicated that many words and phrases on the three scales needed to be changed to make the phrases more understandable to the men in the Nigerian context (Ogunbajo et al., 2020). For example, on the CESD-R scale, the item, “I had trouble keeping my mind on what I was doing” was changed to “I had trouble concentrating on what I was doing.” The second part of the study used the modified versions of each scale to gather quantitative psychosocial health data and test the psychometric properties and construct validity of the scales in a sample of 406 gay and bisexual men in Abuja, Nigeria.

Further, within the parenting research, Madalane (2014) took an exploratory sequential mixed methods approach to examine the psychometric properties of the APQ among Xhosa-speaking people in South Africa. Similar to Ogunbajo and colleague's (2020) study in Nigeria, Madalane's study first conducted 10 cognitive interviews to assess the participant's understanding of scale items on the APQ. Cognitive interview results led to modifications of the APQ scale items which were later used in the second quantitative study. The quantitative study recruited 133 parents/caregivers and collected data on parents' parenting practices. Subsequent exploratory factor analysis (EFA) was conducted to identify the factor structure of the APQ in South Africa. Further, when matched with the data from the Child Behavior Checklist (CBCL), the APQ subscales had good criterion validity, showing that negative parenting practices were associated with aggression among children in this sample (Madalane, 2014). Consequently, the entire study led to the development of a shorter Xhosa version of the APQ for assessing parenting practices in this population. Clearly, there is strong empirical evidence that sequential exploratory mixed methods approaches are useful for assessing the cultural relevance and validity of measures of various psychosocial health constructs in diverse contexts such as those in Africa. The present study uses this approach to build on research related to the assessment of parenting practices in another African setting, Uganda.

Research Methodology for Qualitative Study 1

Study Setting. This study took place four randomly selected districts of Western Uganda. These districts were chosen because they are the primary home for the Runyankole-speaking people of Uganda.

Parent participants for cognitive interviews. The first set of participants involved in study one were caregivers of children under the age of 18 years (see Table 1.2). These were recruited primarily using purposeful sampling techniques. (Palinkas et al., 2015). Purposive sampling involves the researcher relying on their judgement and knowledge of the target population to recruit “information-rich” participants, that is, participants who are knowledgeable or experienced with a phenomenon of interest (Patton, 2002). Specifically, because the first study aimed to identify areas for modification in the APQ scale to make it a culturally useful measure of parenting in the target population, purposeful sampling was helpful to identify and recruit participants who are experienced and knowledgeable about the construct of parenting practices (Suri, 2011; Palinkas et al., 2015). The majority of the parents in the sample for study one were experienced leaders of community-wide parent support groups, heads of local schools, and trained local counselors who worked with children. They were recruited primarily from local community-based organizations (CBOs) who work closely with families in the target districts. In the recruitment process, I collaborated with heads of these CBOs and partners in the various communities to identify potential participants.

Inclusion criteria for parent participants (both studies 1 & 2). To be included in the study, caregiver participants were required to be: (1) 18 years or older at the time of data collection (i.e., with the ability to provide informed consent); (2) a parent or a caregiver of a child or children below the of 18 years old; and (3) residents of a district in Western Uganda

(preferably Ibanda and Mbarara district; and 4) able to read and speak fluent Runyankole, the regional language. Regarding sample size, there is no consensus about participant selection and/or adequate sample sizes for cognitive interviews for scale validation (Rayan et al., 2012). In general, most cognitive interview research (e.g., Ryan et al., 2012; Peterson et al., 2017) recommends sample sizes ranging from 5 participants for a single round of CIs and 15 participants for multiple rounds of CIs. Further, scholars Beatty and Willis (2007) recommend that researchers planning to utilize the CI approach must consider the amount of time and resources available to determine the number of cognitive interviews to be conducted. Thus, following the current practice, considering resources (time and finances) available, and suggestions from the literature (e.g., Peterson et al., 2017; Ogunbajo et al., 2020; Ryan et al., 2012), my study recruited and engaged 16 caregivers in cognitive interviews to understand their comprehension of scale items. The final sample included 8 women and 8 men; most (81.3%) were between ages 35 and 44 years of age.

Experts for study 1. The second set of participants in study one were local experts (Table 1.1). The final sample included 8 women and 6 men: 85.8% were between the ages of 35-54 years old. Nine were mental health professionals (e.g., child psychologists, counselors, and social workers), two parenting researchers, two religious' leaders, and one university professor. Most experts (n= 8) had a master's degree in a mental health field, three had a doctorate degree, and 2 had a bachelor's degree. To be included in the study, experts had to have 1) a minimum of a master's degree in a mental health field, 2) clinical or research experience with children and families in Uganda, and 3) be bilingual speakers of English and Runyankole languages.

General Procedures for Study 1 and 2.

Informed consent procedures. Eligible participants were required to provide informed consent before participating in study procedures. A sample draft of the informed consent protocols for parents and experts can be found in appendices F and G. At the start of every meeting with a participant (s), the researcher reviewed informed consent procedures with participants and asked for their verbal as well as written consent. Important participant rights such as benefits and risks involved in participating in the study, limits to confidentiality, voluntary participation in research procedures, and others were reviewed by the researcher. Participants were also advised that they could request a copy of the consent form if they needed one.

Study team. The research team included me as the lead investigator, Dr. Adrian Blow as my mentor, and four additional research assistants. As the team leader, I was tasked with ensuring that all the study materials were ready, ethical protocols are met, staff are trained in the ethical conduct of research procedures, and the overall implementation of study goals. Prior to this study, I had led various research teams and had published numerous qualitative and quantitative manuscripts in top-tier journals, mostly as the first author. Additionally, I have experience conducting both qualitative processes such as interview guide development, conducting in-depth interviews, data transcription, and data analysis using software such as MAXQDA as well as quantitative methodologies (e.g., factor analysis). My interests in parenting in historically underserved communities and the fact that I belonged to the target culture for this study (i.e., the Banyankole) made it important for me to remain attuned. Eventually, I documented my reactions and experiences during the various stages of this study. The other members of the research team included three master's level research assistants with experience

in conducting qualitative research in social sciences and one undergraduate research assistant, who I brought on board to support the team with logistical needs (e.g., printing of materials, purchasing equipment). Prior to the study, I conducted a two-day training for research assistants. The training included an orientation session about the purposes of the study, the cognitive interview process, issues related to confidentiality, administering survey questionnaires, and protection of study participants, and other relevant topics pertinent to the study. The research assistant received ongoing supervision from me during the various stages of the project. Each RA was compensated for their time in the study.

Translation of the Measures and Language Considerations. Runyankole was the primary language used in this study. Occasionally, some participants mostly experts and parents in study 1 preferred to use both Runyankole and English in the process. Prior to any study procedures, all study materials including consent forms, study measures, and other related documents were translated in the local regional language, Runyankole. Specifically, the target measure, the APQ was translated by experienced bi-lingual translators following guidelines for cross-cultural adaptation of self-report measures (e.g., Beaton et al., 2000) (Figure 1.4). These guidelines served as a template to adapt questionnaire individual items on the APQ. Details of the step-by-step adaptation process are described in study one and in figure 1.2.

Ethical considerations. This study was approved by the institutional review boards of Michigan State University and Makerere university in Uganda, the study setting. Additionally, the lead author's major professor was available to provide further ethical oversight of the study in case it was needed. Safeguarding participants' confidentiality is paramount to the ethical conduct of research (Sutton & Austin, 2015). As a researcher, it is my responsibility to protect the confidentiality of research participants and the data they provide. To protect the

confidentiality of participants in this study, received an ID number. Additionally, all participants' documents pertinent to this study (e.g., informed consent forms, the research questionnaires, and audio-recordings) were stored in a safely locked drawer that I only could access. Other members of the team needed to seek permission from me to access this folder.

A final issue regards the conducting of cross-cultural research. The 2019 APA guidelines for multicultural research cautions researchers to critically examine their research designs (APA; Clauss-Ehlers et al., 2019). Because a researcher's values, beliefs, and biases are inherent in all research design decisions, the APA guidelines emphasize the importance of cultural factors, clearly defining concepts of interest, and reflectively deciding assessment instruments they will use to operationalize constructs of interest. Although I am Ugandan and are well versed in the culture of study setting, I was intentional to minimize the potential for methodological bias. For example, I involved local stakeholders (e.g., local research assistants, parenting scholars, leaders of parent groups, etc.) during the data collection phases of this study. Additionally, I ensured that all participants were compensated for their time and input to the study. Compensation was primarily in cash, and in some cases, participants received refreshments in the form of water, soda, and a snack. Finally, during data analysis (both qualitative and quantitative), I remained open and curious in my interpretation of the findings by recognizing the cultural diversity (i.e., individual and family values) among parents even within the same region of Uganda.

With awareness that confirmation bias (i.e., interpreting of data in ways partial to existing expectations and hypothesis of the study) is a common phenomenon in the research process, I analyzed and coded qualitative data with a second coder (Peterson et al., 2017).

Data Collection Procedures for Study 1

I collected two types of qualitative data: first was data from experts through semi-structured interviews and second, was through cognitive interviews with parents. All data was related to participants comprehension of the scale items on the APQ. In addition to feedback on the items, participants were also asked to provide feedback regarding important parenting practices in the target culture. To guide the data collection, I developed two interviews' protocols, one for cognitive interviews with parents (appendix G) and the other for expert interviews (appendix F).

Parent Cognitive interviews. During cognitive interviews, I mostly used think-aloud and verbal probing techniques to elicit responses from participants. Both techniques were useful to 1) identify participants' errors in cognition, 2) clarify the reasoning participant's choice of responses to an item/question, and 3) make suggestions for modifications in an item or response (Peterson et al., 2017; Ryan et al., 2012). In the think aloud (TA) technique, I asked parents minimal prompts (e.g., did the item or the response feel awkward to you?). I listened as I took notes related to the main areas of confusion and/or further probing. To ensure consistency during interviews, I adapted and followed a structured protocol adapted from Ryan et al., (2012) throughout all the 42-items on the APQ scale. Sample probing questions included, "How was the statement/item easy or hard to understand?" "Were there any words that were confusing or offensive to you?" and "What does this statement mean to you?" First, I read aloud instructions for completing the APQ to each participant. Next, I read aloud each item and probed for participant's understanding and areas of confusion of the item. Occasionally, I would ask participants to repeat back the item I just read to ensure they heard me. At the end of each CI

interview, I asked participants for suggestions for modifying the items on the APQ alongside important parenting practices in the target setting.

Expert interviews. Like parent cognitive interviews, experts were asked to provide feedback on the comprehensibility and relevance of scale items on the APQ. The structure of expert interviews was slightly different from that of parents. To guide interviews with experts, I used a semi-structured interview guide with questions such as, what were your first impressions of the tool? What items do you think are relevant in the Ugandan context and which ones are not? to guide the process. Like parent participants, experts were also asked to provide feedback on parenting practices they thought were important in the target culture. Interviews with experts and parents lasted between 45-60 minutes; they were audio-recorded for later transcription. Participants in study one received 30,000 Ugandan shillings (approximately \$8.33) as compensation for their time.

Data Management and Analysis for Study 1

Qualitative interviews were recorded using an electronic voice recorder and the researcher's phone. I also kept field notes and memos during interviews. These memos helped to remind me of key moments during interviews with experts and parents. Audio-recorded interviews were stored on a password protected computer via Team, a safe online drive provided by Michigan State University. All audio-recorded interviews were transcribed verbatim by a trained bilingual research assistant and imported into the MAXQDA software. Each participant was assigned an ID number to protect their confidentiality. I conducted data analysis together with a second coder, who was part of the research team. Because there is no agreement in the literature on the appropriate structure for analyzing cognitive interviews, or expert data (Peterson et al., 2017), we followed the I five-step framework analysis (FA) approach (Goldsmith, 2021;

Parkinson et al., 2016) using a coding scheme. Details of how FA was applied in this study are in study one under “data analysis.” Our coding scheme was organized to reflect data on 1) key participant phrases or statement relevant to item interpretation, 2) comprehensive list of suggestions for modification of each item, and 3) important parenting practices. As the data analysis team, we engaged in cross-analysis (Ryan et al., 2012) to examine the domains in an item across participants and establish if we were seeing the same themes across transcripts. The final stage of qualitative data analysis involved cross-referencing expert feedback with feedback from cognitive interviews with parents. The steps that followed included making decisions on problematic items (e.g., delete, keep, and modify, etc.) based on participant feedback. In CI literature, the minimum number of suggestions for an item to be revised on a scale is two or more suggestions on a given item (see Peterson et al., 2017; Story et al., 2015).

Trustworthiness and Credibility of Study Findings

Issues of trustworthiness, credibility, and authenticity of findings (i.e., confidence in research findings) are key issues of consideration in qualitative research (Anney, 2014). These issues were first highlighted in a publication entitled “*Criteria for assessing the trustworthiness of naturalistic inquiries*” by Guba (1981) and later expanded by Wallendorf and Belk (1989). Ever since the 1980s, several strategies have been proposed to increase the credibility, trustworthiness, and authenticity of qualitative researcher findings. In the sections below, I describe only the strategies I used to increase trustworthiness of results in the present study.

Prolonged engagement in the research site and participants. One advantage of qualitative research is that the researcher immerses themselves in the participant’s world, which reduces the risk of participants distorting information (Anney, 2014). During this study, I spent an enormous amount of time during visits to participant sites. According to Anney (2014),

spending as much time as possible in the participants' context helps the researcher to "understand the core issues that might affect the quality of the data because there is trust built with study participants (p. 276)." One advantage I had was that I am a native of one of the districts involved in the study, I am fluent in Runyankole language, and familiar with the cultural context. Over the course of my professional career, I have established professional networks with some of the parents and experts I interviewed in my research. Although I have not lived consistently in the area for the past seven years, I am still connected and maintain those existing networks.

Peer debriefing. Research suggests that peer debriefing provides opportunities for a researcher to seek insightful information to strengthen project processes and study findings (Guba, 1981). In addition to consulting with my dissertation committee members, I also consulted with one other parenting expert from Makerere University, a research university in Uganda, and with another researcher who is experienced in conducting qualitative research in Runyankole.

Persistent observation and reflexivity. According to Anney (2014), persistent observation helps the researcher to discover "qualities and unusual characteristics that could influence the participant's responses (p. 277)." Thus, during the qualitative interviews, I observed and noted participant's nonverbal and verbal qualities related to the items and responses on the scale. Additionally, I engaged in ongoing reflexivity throughout data collection, development of the coding schemes, during data analysis, and interpretation stages of this project. Lastly, I held team meetings weekly with other members of the research team to reflect on our experiences in the field as we prepared for the next set of interviews.

Study 2 Procedures

The aim of the second study was to assess the validity and psychometric properties of the modified APQ scale from the first study. Study setting, inclusion/exclusion, and ethical considerations in study two are similar to those in study one.

Participants. A big difference between study one and study two was the sample size. While study one had 30 participants (14 experts and 16 parents), study two had a larger sample. I recruited a sample ($n = 618$) for a study to assess the psychometric properties of the adapted APQ scale in Uganda (see appendix B for list of the 32-item adapted APQ). Because I wanted a larger sample for study two, I used convenience sampling techniques (Etikan et al., 2016; Farrokhi & Mahmoudi-Hamidabad, 2012) to recruit participants for study two. Convenience sampling largely relies on the researcher's convenience (i.e., recruiting participants that are easily accessible by the researcher; Farrokhi & Mahmoudi-Hamidabad, 2012). The technique was chosen because it is by far, the most used technique for recruiting large samples of participants in most quantitative studies validating measurement instruments studies in Africa (e.g., Hapunda et al., 2016; Madalane, 2014; Ogunbajo et al., 2020) and in other countries outside of Africa (e.g., Story et al., 2015; Willis & Zahnd, 2006). The final sample included 379 women and 236 men. The majority ($n = 426$) resided in rural areas, and the rest ($n = 164$) lived in urban areas. The sample size for the second study was informed by existing research in psychometric testing of measurement instruments. For example, according to research by Comrey (1988), a sample size of 200 plus participants is sufficient to produce reliable factor estimates in factor analysis. Given that I recruited 618 parents, I had a large enough sample to detect reliable estimates.

Recruitment strategies. Due to the demands of needing a much bigger sample for study two, recruitment was done by three members of the research. Each member was assigned a

district to cover. Participants were recruited mainly from local public places of gathering including local health center clinics, parent support groups, and places of worship (e.g., churches). The research team distributed information about the study at various community-centered events (e.g., health education and advocacy events), public gathering places (e.g., churches and mosques), and at offices of community-based organizations that work with families in the selected districts. Eligible participants were required to provide informed consent in verbal or written form before participating in any study procedures. Upon identification of potential participants, the research team screened and collected demographic information of participants.

Data Collection Procedures in Study 2

Quantitative data regarding parenting practices was collected using the revised APQ questionnaire adapted in study one. Three members of the research team administered survey instruments in-person. Data was collected in group format with groups ranging between 20 to 40 participants. Groups of caregivers gathered at a public place (e.g., a church) where they met the research team member for survey procedures. Although participants were in groups, each participant independently completed a survey. At the start of each meeting, an assigned member of the research team was available to review study instructions, consent procedures, and guide the group in completing the survey. The three members of the data collection team were bilingual and native speakers of the Runyankole language. In addition to data on parenting practices, I also collected data on parent self-reports of their children's psychosocial functioning (i.e., emotional, and behavioral problems) using the 17-item pediatric symptom checklist (PSC; Gardner et al., 1999; Stoppelbein et al., 2012) (see appendix D). Data was collected between January and March 2023. Each data collection session lasted approximately 90 to 120 minutes. Participants in study two received 5,000 Uganda shillings (approximately \$1.5), as compensation

for their time.

Data Management and Analysis in Study 2

First, raw data was entered into a computer using the excel program by research assistants before analysis. After data cleaning excel spread sheets, data was imported into the SPSS software for further cleaning and analysis. SPSS entries were checked against the hard copy of the actual APQ questionnaire to identify and correct missing data. Once missing values were detected, an X was put to replace missing values to ease analysis in the Mplus software. After correcting missing data issues, I split the sample into two subsamples. I used one subsample to conduct exploratory factor analysis (EFA) and the second subsample to conduct confirmatory factor analysis (CFA) (Brown, 2015). I used the Mplus software to analyze for the second study. Factor analysis was conducted to examine the first, the dimensionality/factor structure and second, to confirm or identify a meaningful factor structure of the APQ in Uganda. Details of hypothesis tested are explained in study two. After identifying a meaningful factor structure for the sample, reliability analysis (e.g., Henson, 2001) was computed using McDonald Omega coefficients to assess the internal consistency of the factor model identified. Data analyses for study two ended with an examination of the predictive validity of the adapted APQ by testing if the identified factor model of the APQ subscales predicted child behavioral outcomes in Uganda.

Rationale for Using Factor Analytic Techniques in Study 2

EFA and CFA were chosen as the analytic approaches because they are by far the most empirically validated and commonly used methods for examining patterns of relationships among items, establish dimensionality, and verify the factor structure of a measurement instrument (Brown, 2015). Additionally, EFA and CFA techniques have been used to examine

and confirm the APQ's five-factor structure in clinical samples of parents in countries of Australia (e.g., Dadds et al., 2003; Shelton et al., 1996), Spain (Molinuevo et al., 2011), Poland (Świącicka et al., 2019), and recently in Portugal (Nogueira et al., 2020). However, a review of literature showed no studies have used EFA and CFA to validate the APQ's factor structure in Uganda. Thus, EFA and CFA were chosen as appropriate analytic approaches for first establishing initial relationships among items on the APQ and verifying if the APQ holds the same structure using a sample from Uganda.

Threats to Reliability and Validity

Issues of validity and reliability are major consideration in mixed-methods research (Krawczyk et al., 2019). While reliability of an instrument is concerned with the extent to which the measure can yield consistent results across different contexts, validity is concerned with the extent to which a measurement instrument measures the construct it purports to measure (DeVellis, 2017). There are two important aspects of validity that tend to be affected in research. These are 1) internal validity, the characteristic of a clinical study to produce valid results, and 2) external validity- the extent to which results of a study can be generalized. In conceptualizing and planning a mixed methods study, researchers must anticipate these threats to these two aspects of validity and develop a plan minimize these them (Krawczyk et al., 2019; Onwuegbuzie & Johnson, 2006). Bias (error) is by far the number one threat to validity (Krawczyk et al., 2019). Bias refers to the researcher's "deviation in study methods such as, selection of participants, analysis methods, and interpretation of data in a manner that systematically undermines or overestimates the true study outcomes" (Tripepi et al., 2010, p. 95). In research, bias can either be random (i.e., error by chance) or systematic (i.e., error in any of the researcher's study methods e.g., selection of participants). For example, the convenience

sampling techniques used in study 2 are non-probability sampling techniques (i.e., they consist of samples based on a non-random criteria). In general, non-probabilistic sampling techniques have high selection probability and often, certain members of the target population have limited chances of being selected to participate in the study. High selection probabilities are susceptible to outliers, and outliers can adversely affect sample statistics and overall study outcomes (Farrokhi & Mahmoudi-Hamidabad, 2012). To reduce the risk of biased selection in my study, I ensured to find and recruit diverse participants (e.g., in age, gender).

Conclusion

The goal of the present study was to culturally adapt and test the psychometric properties of the APQ in Uganda. This study accomplished these goals in two ways. First, I translated and adapted the APQ following rigorous procedures for cross-cultural adaptations of measurement instruments (e.g., Beaton et al., 2000). Then, I examined the psychometric properties of the resulting tool developed from study one. Answering the research questions in this study was very critical given the paucity of culturally and psychometrically validated measures of parenting in diverse contexts of Africa, and specifically in Uganda. Further, sequential exploratory mixed methods approach integrating qualitative and quantitative methods was a useful approach to enhance the rigor and trustworthiness of study findings. The use of experts alongside parent feedback in the adaptation process was an important data triangulation methodology. A comprehensive description of the cultural adaptation process of the APQ and the procedural testing of the resulting tool will make significant contributions to research on assessment of parenting in the diverse contexts in Africa. Such is the highlight of the next two chapters.

CHAPTER 4: STUDY ONE

**A QUALITATIVE EXAMINATION OF THE COMPREHENSIBILITY AND
CULTURAL RELEVANCE OF THE ITEMS ON THE ALABAMA PARENTING
QUESTIONNAIRE AMONG RUNYANKOLE-SPEAKING EXPERTS AND
CAREGIVERS IN UGANDA**

Parenting plays a critical role in shaping child health outcomes globally (Bornstein et al., 2022). In Sub-Saharan Africa (SSA), as many as 14.3% of children below 18 years are vulnerable to mental, emotional, and behavioral (MEB) problems (Cortina et al., 2012). Examples of these include depression, anxiety, and somatization (Patel & Stein, 2015), disruptive behavioral problems (Ward et al., 2020), and posttraumatic stress disorders (PTSD; Cortina et al., 2012). Poor parenting (e.g., harsh discipline strategies, child neglect and maltreatment) is one potential risk influencing these negative child problems (Ashburn et al., 2017). While parenting research has shown that positive parenting practices can mitigate these issues, there is extensive empirical evidence supporting the need for the cultural adaptation of parenting interventions so that they are well aligned with diverse contexts (Delvin et al., 2018; Sherr et al., 2017).

Despite the immense progress made in the scientific study of parenting in African settings, gaps still exist when it comes to the cultural relevance and usefulness of measurement scales used to assess various parenting practices in African populations. Most studies implementing evidence-based parenting interventions (EBPIs) in Africa utilize measurement scales developed and tested largely in populations in English-speaking developed countries. Cross-cultural researchers (e.g., Augustinavicius et al., 2020; Betancourt et al., 2009; Bornman et al., 2010) have criticized measurement scales due to their inability to capture with validity

certain parenting practices in Africa. Further, there is a general lack of qualitative studies to thoroughly examine the cultural relevance (e.g., cognitive response processes of participants/what happens when a participant interacts with a given set of items on a measure) of items on Western developed measures in target African settings. The most notable adaptations of measures are direct language translations from English to the language of the target populations and reliability analysis of items (e.g., Noel et al., 2021; Wieling et al., 2015). Due to cultural and linguistic differences between English/western and African cultures/languages, directly translating items from an assessment instrument whose original language is English to the language of the target population is not enough to ensure cultural relevance. Rather, a translation (e.g., using bi-lingual experts) and field-testing process (e.g., Beaton et al., 2000) must occur to ensure linguistic appropriateness and cultural relevance of items on a measurement instrument (Wang et al., 2006).

Further, because culture influences childrearing practices (Bornstein, 2013, 2022), it is critically important that the beliefs, and goals of various local stakeholders (e.g., parents and local experts) be considered when it comes to the assessment of parenting across cultures. Thus, culturally appropriate revisions of available assessment instruments for parenting are needed to improve comprehensibility, acceptability, and relevance of the tools in target diverse settings. Finally, although several studies of parenting in African contexts often mention translating and adapting the instruments used in their studies, researchers rarely publish articles detailing the process of their adaptation (Van Ommeren et al., 1999). A common thread I observed in my review of literature from Africa was that many authors often briefly report that they translated and adapted the instrument following guidelines outlines (e.g., by Beaton et al. (2000). For example, when Wieling et al. (2015) used the APQ in one Ugandan cultural context, they had

parent participants respond to a set of items assessing parental involvement on the APQ and run reliability estimates for establishing internal consistency of the APQ in the target Ugandan sample. However, the scholars lacked detailed explanations of procedures they followed to ensure cultural and linguistic relevancy beyond mentioning that they followed the guidelines for cross-cultural adaption of survey instruments by Beaton and colleagues (2005). My online search did not reveal any published reference on how the cross-cultural translation of the measure was conducted beyond mentioning language translation using bi-lingual experts. I question this practice as it leaves the reader unclear and wondering as to what the specifics of the adaptation were. Given these gaps in science, the current study aims to detail the step-by-step process that guided the adaptation of the 42-item Alabama Parenting Questionnaire (APQ; Frick, 1991) for use in a Ugandan cultural context.

Measures of Parenting Constructs in Uganda

Accurate assessing of parenting in Uganda is necessary to ensure that research findings are reliable, and conclusions are valid (Ertl et al., 2011). A wide range of self-report measures for parenting can be found in extant literature on parenting in Sub-Saharan Africa (SSA) contexts, including in Uganda (Augustinavicius et al., 2019). The most frequently used measures are the Parenting Sense of Competence (PSOC; Gibaud-Wallston & Wandersman, 1978), the parental authority questionnaire (Raval, 2013), the parenting styles four-factor-questionnaire (Shyny, 2017), and the Alabama Parenting Questionnaire (APQ; Frick, 1991). In general, these measures have been used to assess parenting constructs including, parenting self-efficacy, positive parenting, involvement, parental warmth, and various parenting styles. My review of studies examining various parenting constructs in Ugandan samples found low values of internal consistency for parent self-report measures. Using Nunnally and Bernstein (1994)'s Cronbach

alpha value of .70 or greater as acceptable and Anastassi (1988)'s Cronbach's alpha value of .80 and higher as desirable, I reviewed select studies of parenting in Uganda, with a focus on the reliability estimates for the measures used.

First, Noel and colleagues (2021) used the parental authority questionnaire (Raval, 2013) and the parenting styles four-factor-questionnaire (Shyny, 2017) to explore the relationship between parenting style and student's self-efficacy among a sample of 290 secondary school students in Ibanda, Uganda. Although the authors conducted multi-collinearity tests to ensure the independent variables (the four parenting styles) were not highly correlated, the authors did not report evidence of internal consistency or factor analysis of any of the measures they used. In another study, Augustinavicius and colleagues (2020), examined the factor structure, internal consistency, and convergent construct validity of the of the Parenting Sense of Competence (PSOC; Gibaud-Wallston & Wandersman, 1978) in a sample of 155 HIV-affected caregivers in Uganda. The authors reported acceptable Cronbach alphas of .73 for the PSOC efficacy subscale, .53 for the satisfaction subscale, and .67 for the PSOC overall. However, the confirmatory factor analysis (CFA) demonstrated adequate model fit for only a one-factor model, with only items from the efficacy subscale (Cronbach's alpha= .73) being included in the analysis (Augustinavicius et al., 2020). In other studies (e.g., Mahuro & Hungi, 2016), there were no reports of internal consistency coefficients or factor analysis. Other studies (e.g., Ashburn et al., 2017) only reported Cronbach's alphas for one dimension of parenting, positive parenting, while other studies (e.g., Boothby et al., 2017; Boydell et al., 2017) of parenting in Uganda were qualitative.

Despite the high Cronbach's alphas (ranging between .60 to .80) as evidence of reliability reported in studies I reviewed, Cronbach alphas do not necessarily guarantee unidimensionality

(i.e., that the items on a given measure are measuring only that target construct) or that important concepts are not missing (e.g., Mokkink et al., 2018). In fact, a researcher may measure the "incomplete or incorrect construct very reliably, and a real change in the construct of interest be over-or under-estimated due to irrelevant or missing concepts" (Mokkink et al., 2018, p. 1173).

To expand this discussion, my review of studies across the SSA region found only one unpublished study (Madalane, 2014) that used qualitative methods to examine the validity evidence of a measure of parenting, the Alabama Parenting Questionnaire. Overall, the most notable cultural adaptations across studies were the linguistic translation of the measures from English to the native language of the target population by native speakers. Due to significant cultural and linguistic differences between English and African languages, directly translating items from an assessment instrument (e.g., the APQ) whose original language is English to the language of the target population is not enough to ensure validity. Rather, a systematic adaptation process (e.g., using bi-lingual experts and parents living in the culture) must occur to ensure linguistic appropriateness and cultural relevance of items on a measurement instrument (Wang et al., 2006).

Rationale for Cultural Adaptation of the APQ in Uganda

Given the ongoing and recent increased efforts to improve parenting in Uganda through the implementation of culturally adapted parenting and family interventions (e.g., Siu et al., 2017; Walakira et al., 2021; Wieling et al., 2015; Wight et al., 2022), it is critically important to have culturally tested measures for assessing target outcomes among various cultures in Uganda. This ensures that study findings are reliable, and conclusions are valid and generalizable (Ertl et al., 2011). Preliminary evidence from Uganda shows that the APQ might be a useful tool to assess parenting practices. For example, three of APQ's five subscales have been previously

used to assess parenting in a sample of war-affected families in Northern Uganda (see Wieling et al., 2015). In their study, Wieling and colleagues conducted language adaptations to the APQ items. Reliability analyses of three out of the five APQ subscales showed acceptable Cronbach's alpha estimates ($< .50$ cutoff; Gliem & Gliem, 2003). In the study, the alpha for the APQ's *positive parenting* subscale (consisting of 6 items) was .70 and .75 at pre-and post-test respectively; *positive parenting subscale* (4 items) was .60 and .70; and the poor monitoring subscale (5 items) was .67 and .60. The authors removed the items on the *inconsistent discipline* subscale because the subscale produced low alpha coefficients at each time point (i.e., pre-test and-at follow up) (Wieling et al., 2015). Unfortunately, the authors did not provide a detailed process of the steps they followed in their adaptation of the APQ for use in northern Uganda. A further literature search could not trace evidence of this information. Nonetheless, Wieling and colleague's study offers us some initial validity evidence for the APQ in the Ugandan cultural setting that necessitates further exploration and evaluation. The current study aims to build on the extensive literature supporting the usefulness of the APQ in measuring parenting across cultures globally. A unique feature of the present study is that it took a qualitative approach as a first step to translating and adapting the APQ in Uganda culture before embarking on assessing psychometric properties such as factor structure and item functioning.

Considerations for Translation and Adaptation of Measures to a New Culture

Due to the immense diversity in terms of ethnicity, language, traditions, and practices in cultures globally, international scholars (e.g., Augustinavicius et al., 2019; Borsa et al., 2012; Carvahal-Velez et al., 2023; Sousa & Rojjanasrirat, 2011) as well as African scholars (e.g., Namisango et al., 2022) have increasingly called for the cross-cultural adaption of measurement instruments to ensure the accurate reliability and validity of findings. The main goal of

translating and adapting a measurement instrument is to achieve cross-cultural equivalence (i.e., that the same construct is being measured across two different cultures, the source culture, and the target culture; Sousa & Rojjanasrirat, 2011).

There are several types of cross-cultural equivalence discussed in general literature but only four that were important for this study. The first is *conceptual equivalence*, which refers to the ability of the target instrument to measure the same construct regardless of cultural context. According to Beaton et al., (2000) words carry “different conceptual meanings between cultures (p. 3189).” I will discuss some of the conceptual differences I found in my adaption process of the APQ in Uganda. A second aspect of equivalence is *semantic and idiomatic equivalence* which examines if words, colloquialisms, and idioms can maintain the same meaning after translation into a different language and culture. It is not uncommon to find a word or a phrase that could mean one thing in one culture carrying multiple meanings in another culture. A third type of equivalence is *content equivalence*. Content equivalence means that the content of each item of the target instrument should be relevant to the phenomena of the culture being studied” (van Ommeren et al., 1999, p. 286). A final type of equivalence relevant to this study is *experiential equivalence*. In most cases, certain items seeking to capture an experience or construct in one culture may be rendered irrelevant because that experience is nonexistent or not translatable in a different country or culture. In this case, such items may need to be eliminated from the target measure and replaced with new items that represent culturally resonant experiences of the target population (Beaton et al., 2000). One example that Beaton et al. discuss is asking participants if they have difficulty using a fork to eat when people from that culture never used a fork to eat food. There are certain examples I found in my adaptation of the APQ to Uganda that resonate with Beaton and colleague’s examples.

Other scholars (e.g., Carvahal-Velez et al., 2023; Manson, 1997; Sealy et al., 2018) have used terminologies such as item comprehensibility, relevance, and acceptability to attempt to address the same issues of cross-cultural equivalence. Item *comprehensibility* refers to the idea of an item from a source language having a meaning that is clearly understood in the target culture. *Item relevance* on the other hand has to do with ensuring that an item or a statement is alluding to a construct that exists or is relatable in the target culture. Thus, according to van Ommeren et al. (1999), an item would be considered culturally irrelevant if “it assesses a phenomenon unrelated to the underlying construct in the target culture” (p. 286). Finally, *item acceptability* underscores the idea that an item must ask about a construct in ways that respects and honors the target culture. Taking this definition, an item would be considered unacceptable if it uses phrases or words that may be interpreted as offensive, discriminatory, or derogatory in the target culture (Manson, 1997). In general, items that are incomprehensible, irrelevant, or culturally unacceptable can be considered lacking cross-cultural equivalence (i.e., semantic, content, conceptual, and experiential; Flaherty et al., 1988).

In summary, although the cross-cultural adaptation of measurement instruments is time-consuming and usually expensive, it is the “best way to get an equivalent and reliable metric for assessing any target attribute or construct (Beaton et al., 2000, p. 3190).” This process minimizes selection bias in that a translated version of the questionnaire is often developed in the process and ensures that data collection efforts are somewhat similar across cultures. Additionally, choosing experienced and well-qualified translators, experts, and key informants are key steps in ensuring high quality translation, backtranslation, cross-validation, and evaluation of the target instrument (Sousa & Rojjanasrirat, 2011). Ultimately, being able to pilot test the target measure with the target population using empirically validated approaches to test the measure’s

psychometric properties enhances the quality of the adaptation and the final version of the measure. This study details a thorough process in the qualitative evaluation of the APQ using local experts and parents in a diverse cultural setting in Uganda. My systematic cultural adaptation procedures ensured that issues of cross-cultural equivalence, acceptability, comprehensibility, and cultural relevance were addressed in the revised measure. Results of the larger quantitative pilot testing of the adapted instrument are discussed in another unpublished manuscript.

Study 1 Aims and Research Questions

Given the paucity of studies conducting cross-cultural adaption of measures for parenting in Africa, the current study aims to 1) use qualitative methodologies to explore how local parenting experts and parents in Uganda comprehend scale items assessing five parenting practices on the Alabama Parenting Questionnaire, 2) identify important parenting practices pertinent to the target Ugandan cultural setting, and finally, 3) develop a culturally adapted version of the APQ suitable for Uganda, using feedback from Ugandan caregivers and local experts.

Research Questions

1. How do parenting experts and Runyankole-speaking parents in Uganda comprehend scale items on the Alabama Parenting Questionnaire?
2. What are important (priority) parenting practices among the Banyankole people of Western Uganda?

Study Setting and Rationale.

The study took place in four main districts of Ankole region in Uganda. The Banyankole (pronounced as *bahn-yahn-koh-lay*) are the indigenous people of Ankole region of western and southwestern Uganda. This ethnic group are the second largest ethnic group in Uganda (15%), after the Baganda (20%) (U.S. Department of State Bureau on African Affairs (2014).

Study Design

In this study, I adapted and translated the 42-item APQ (see **Appendix A** for full APQ measure and subscales). The adaptation process was guided by a modified hybrid seven-step process that integrated Beaton et al. (2000)'s and Sartorius and Janca (1996)'s guidelines for cross-cultural adaptation of self-report measures. The study took place between June 2022-January 2023 in Uganda.

The Sample, Recruitment, and Data Collection

The sample included 14 local experts and 16 parent participants who were recruited primarily using purposeful sampling techniques (e.g., Palinkas et al., 2015). Purposive sampling involves researchers relying on their judgement and knowledge of the target population to recruit “information-rich” participants, that is, participants who are knowledgeable or experienced with a phenomenon of interest (Patton, 2002). Data were collected by three (2 males and 1 female) members of the research team. I (RA) conducted all the 14 expert interviews and five of the 16 cognitive interviews with caregivers. The remaining 11 CIs were conducted by the two research assistants. At the time of data collection, I was a Ph.D. candidate in Human Development and Family Studies program at a research university in the United States of America with expertise in various qualitative research methods, survey design, and psychometric testing. Further, the female research assistant, held a bachelor's degree in arts with a minor in Runyankole language

from Makerere University in Uganda. She also served as one of the translators for the measure. The second RA (male) held a master's degree in public health Promotion from Leeds University in the United Kingdom. Both RAs had considerable experience (of over 5 years) working on a research team and in conducting qualitative research among communities in Western Uganda. Each RA received 5 hours of training (e.g., using roleplays and mock interviews) from the lead researcher to prepare for the study process. Further, RAs received training in ethical research practices involving human subjects. We met on a weekly basis to discuss experiences from the field. All three interviewers were multi-lingual and native speakers of the Runyankole language, the primary language used in this study. Lastly, one bi-lingual RA was hired to transcribe the data back to English. At the time of the project, he was a master's student of Clinical Psychology at Makerere University with extensive research experience.

Data Management and Analysis

After transcription, I reviewed transcripts against the audio recordings for accuracy. After this, all data were imported into the MAXQDA software for further organization, charting, and analysis. Data were stored on a password-protected computer for safety of participant information. I conducted data analysis following a five-step framework analysis (FA) approach (Goldsmith, 2021; Parkinson et al., 2016). I chose this approach because of its iterative nature which allowed me the flexibility to begin data analysis while I was still conducting more interviews. Second, the fact that I had certain predefined items on the APQ assessing various aspects of parenting that I wanted to explore while remaining open to discovering new or other relevant parenting practices in the target context, FA was the best fitting analysis framework (Parkinson et al., 2016). First, we spent two weeks reviewing transcripts alongside audio recordings from both caregivers and experts to get familiar with the data (step 1). Next, we

developed initial framework analysis categories (e.g., acceptability and relevance of items, revision areas, and important parenting practices in the target culture, etc.) to facilitate appropriate data organization (step 2). After identifying an analysis framework, data were indexed and organized in chart forms to facilitate smooth data management and interpretation (steps 3 & 4). Specifically, data from experts was charted using a modified translation monitoring form (van Ommeren et al., 1999) whereas data from cognitive interviews were charted using a form based on the four-step information processing model (e.g., Tourangeau et al., Ryan et al., 2012). The model in my study included questions such as 1) did the participant understand the question? 2) Did the participant choose an appropriate answer to the item? 3) Did the participant comment on problematic items? 4) Did the participants comment on important parenting practices? Coders used Yes/No response options. My fifth and final step involved “pulling together key characteristics of the data to map and interpret the data as a whole” (Parkinson et al., 2016, p. 122). During this step, findings from expert interviews were cross-referenced with those from caregiver cognitive interviews CIs and the synthesis of both guided the necessary modifications. Different from the qualitative gold standard of interpreting themes, my interpretation focused mainly on identifying content and contextual problems related to comprehension, acceptability, and relevance of the APQ items, areas of revision, and themes related to important aspects of parenting in the target culture. I employed a further method of triangulation by collecting expert ratings of APQ items to further identify problematic items. Saturation was achieved when 1) key problem areas for modification were identified, and 2) important parenting practices in the target group were clearly identified.

Trustworthiness

Interviewers took hand-written notes during interviews and met bi-weekly as a research team to discuss their observations. In addition to meetings with members of the research team, I met virtually with my dissertation chair to discuss observations from the data collections and troubleshoot challenging scenarios.

Informed Consent and Ethical Considerations

Participants (experts and caregivers) gave written informed consent to participate in the study activities. The researcher had a list of contacts for mental health professionals for referral if a study participant experienced distress related to the study. This study was approved by the institutional review boards of Michigan State University) and Makerere university in Uganda, the study setting. Additionally, the lead author's major professor was available to provide further ethical oversight of the study in case it was needed. Expert and caregiver participants received 30,000 Ugandan shillings (approximately \$8.33) as compensation for their time.

Translation and Adaptation Process of the APQ

Step I: Identification of bilingual experts and caregiver participants.

My process began with identifying bilingual experts and local key informant parents who would review the conceptual structure of the original APQ (Sartorius & Janca, 1996). Although Sartorius and Janca (1996)'s framework includes only bilingual experts at this phase, I added cognitive interviews with Key Informant (KI) caregivers as a method of data triangulation (Bekhet & Zauszniewski, 2012; Hapunda et al., 2016). Additionally, survey development research supports combining expert feedback with cognitive interviews for the pretesting of new, and/or, existing instruments in a new population (Ouimet, 2004).

Experts: Table 1.1 includes expert demographic data. Experts were identified through two primary avenues, 1) reading research articles that were published on a parenting topic in Uganda, and 2) the lead author's local networks of mental health professionals working with children and families in Uganda. Experts were included in the study if they: 1) held a minimum of a graduate degree in a mental health field, 2) had clinical or research experience with children and families in Uganda, and 3) were bilingual speakers of English and Runyankole languages. Twenty potential experts were identified, and I contacted each by phone to explain the study and solicit their participation. Of the 20 experts contacted, 16 gave verbal consent via phone to participate in the review of the measure. Next, I emailed experts a list of study materials including, a) a consent form, b) a copy of the target measure (i.e., the 42-item APQ), and c) a cover letter detailing the purpose of the study and specific instructions of what the experts were to do. The letter also explained the reasons why the expert was chosen and asked the expert to suggest dates for an in-person interview.

The final sample included 8 women and 6 men: 85.8% were between the ages of 35-54 years old. Nine were mental health professionals (e.g., child psychologists, counselors, and social workers), two parenting researchers, two religious' leaders, and one university professor. Most experts (n= 8) had a master's degree in a mental health field, three had a doctorate degree, and 2 had a bachelor's degree. The majority of participants (71.4%) had more than 10 years' experience in their role and about 28.6% had been in their role between 4 and 10 years. The majority (85.7%) worked with both children and parents, and some (42.9%) were in government settings, while 28.6% worked in NGO and private settings.

Caregivers: Table 1.2 includes sociodemographic details of caregiver participants. Caregivers for cognitive interviews were purposefully identified and recruited through the

researcher's local connection with parenting groups in Uganda. I recruited a diverse sample in terms of age, level of education, literacy, and socioeconomic status. For inclusion, caregivers had to be: 1) 18 years or older at the time of data collection; 2) in the full-time caregiver role of a child or children ages 6-18 years; 3) a resident of a district in Western Uganda, and (4) be fluent Runyankole language. The final sample included 8 women and 8 men; most (81.3%) were between ages 35 and 44 years of age. Thirteen (81.3%) were married, and the majority (87.6%) were caretakers of more than 4 children. Most parents (50%) were from low-income families, with 62.5% having an education level lower than a bachelor's degree. Finally, the percentage of parents caring for biological children only (i.e., 43.8%) was equal to that of those parents who cared for a combined biological and non-biological child (43.8%).

After recruiting caregivers, I contacted each parent to explain the study purpose and set up a meeting date to conduct the interview. Unlike experts, caregivers were not emailed study materials prior to the interview. Rather, I printed and handed a copy of the APQ to the parents at the time of the interview. Before the start of every interview, I allowed caregivers between 10 and 15 minutes to quietly review and make notes on the measure. All caregivers gave informed consent in writing to participate in the study.

Table 1.1. Socio-demographic characteristics of expert participants (N= 14)

Variable	Frequency (n)	Percentage (%)
Gender		
Women	8	57.1
Men	6	42.9
Expert Age (years)		
35-44	6	42.9
45-54	6	42.9
55-65	2	14.3
65+	-	-
Marital status		
Single	2	14.3
Married	11	78.6
Divorced/separated	1	7.1
Education level		
Less than a bachelor's degree	1	7.1
Bachelor's degree	2	14.3
Master's degree	8	57.1
Doctorate or advanced degree	3	21.4
Expert's Tribe/Region or Origin		

Table 1. 1. (cont'd)

Western	6	42.9
Eastern	4	28.6
Central	4	28.6
Language (in addition to English)		
2-3 languages	14	100
No. of Children		
No children	1	7.1
1-3 children	5	35.7
4-5 children	5	35.7
More than 5	2	14.3
Undisclosed	1	7.1
Professional Role		
Child and adolescent psychologist	5	35.7
Parenting Researcher	2	14.3
University lecturer	1	7.1
Mental health practitioner	4	28.6
Other professional (e.g., religious leader)	2	14.3

Table 1. 1. (cont'd)

Type of clients

Children and adolescents only	2	14.3
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A combination of both parents & children	12	85.7
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Duration in the Role (years)

Less than 2	-	-
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Between 4-10	4	28.6
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10+	10	71.4
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Practice setting

Government employee	6	42.9
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NGO employee	4	28.6
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Private practice	4	28.6
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Location of Clients

Urban	6	42.9
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Semi-urban	1	7.1
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Rural and Urban	7	50.0
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Note. Participants who indicated being married, cohabiting, and or, having a partner were considered to be married and/or, in a relationship.

Table 1.2. Socio-demographic characteristics of parent participants in cognitive interviews (N=16)

Variable	Frequency (n)	Percentage (%)
Gender		
Women	8	50.0
Men	8	50.0
Age (years)		
18-24	1	6.3
35-44	13	81.3
45-54	1	6.3
55-64	1	6.3
Marital status		
Unmarried	1	25.2
Married	13	81.3
Education level		
Less than bachelor's	10	62.5
Bachelor's degree	5	31.3
Master's degree	1	6.2
Doctorate or advanced degree	3	21.4
Employment status		
Unemployed	2	12.5
Employed	14	87.5

Table 1. 2. (cont'd)

Income level

Low income	8	50.0
Lower-middle-income	4	25.0
High income	4	25.0

No. of Children under care

2-3 children	2	12.5
4-5 children	7	43.8
More than 5	7	43.8

Relationship with children

Biological	7	43.8
Biological & non- biological combined	7	43.8
Non-biological	2	12.5

Residence

Mbarara	7	43.8
Sheema	7	43.8
Ibanda	2	12.5

Note. All parents in the sample were native Runyankole speakers. Their children were

Table 1.2. (cont'd)

between the ages of 3-17 years. Parents who indicated being divorced/separated, single, but cohabiting, single, and never married or having multiple partners are all coded as “unmarried.”

Step II: Examination of the APQ’s conceptual structure by experts and parents

In this step, I collected feedback on the original measure’s face and content validity from local experts and caregivers through semi-structured interviews and cognitive interviews respectively. Feedback from these interviews was used to address various issues related to equivalence (Van Ommeren et al., 1999), improve acceptability, comprehensibility, and relevance (Carvajal-Velez et al., 2023), and to gain an in-depth understanding of important parenting practices in the target Ugandan culture. Given that this was the first study to attempt to adapt the APQ in Uganda, there were two primary reasons why this step was important. First, I wanted to ensure that I captured important concepts that were locally relevant to parenting in Uganda that were missing on the original APQ measure (Carvahal-Velez et al., 2023). Second, I wanted to use feedback from the interviews to conduct culturally relevant modifications (including deleting, merging, and adding new items) of the APQ items before proceeding with formal translations and large pilot testing.

Expert Interviews

Experts’ interviews were used to examine the various aspects of cross-cultural equivalence (i.e., conceptual, semantic, experiential, and content). We asked experts to evaluate based on 1) *comprehensibility* (i.e., whether an item was clear and understandable to the local population, 2) *acceptability* (i.e., whether the item would be unacceptable or acceptable, e.g., would some respondents feel uncomfortable responding to a particular items), and 3) *relevance* (i.e., whether the item represented an aspect of parenting considered relevant in the Ugandan

context; Ommeren et al., 1999). I also collected expert's feedback on 1) suggestions for modifications (e.g., additions, deletions, or word changes), and 2) important parenting practices in the target culture. To minimize the risk of overwhelming participants, I asked experts to prioritize items they perceived as difficult, culturally irrelevant, or those they felt could be rephrased for better clarity (Carvajal-Velez et al., 2023). Expert interviews were conducted in two languages, English and Runyankole. Interviews lasted between 45-60 minutes and were all audio-recorded for later transcription. Experts received a \$10 (Approx. 40,000 Uganda shillings) for their participation.

Caregiver Cognitive Interviews

In addition to expert feedback, I collected local parent's feedback through cognitive interviews (CIs). Specifically, CIs aimed to examine parents' understanding and interpretations of the items (Fowler et al., 2016; Peterson et al., 2017). To ensure consistency of interviews (Ryan et al., 2012), I followed an interview protocol which was adapted from the four-step question-answer framework (e.g., Tourangeau, 1984). The four steps in the framework are: 1) understanding of the question being asked, 2) retrieving information from memory, 3) judgement (i.e., using judgment as necessary to organize information in a manner that is appropriate to answer the question), and 4) answering the question. The protocol was comprised of overall target questions and follow up probing questions. The researcher used CI techniques including general probing, think-aloud, and paraphrasing to facilitate the process (Latcheva, 2011). To minimize the risk of overwhelming participants, I prioritized asking parents about items they perceived as difficult or those they felt needed rephrasing or revision (Carvajal-Velez et al., 2023). Participants received 15,000 Ugandan shillings (approximately \$4.50) as appreciation for their time. All cognitive interviews were conducted in Runyankole language, lasted between 60-

90 minutes, were audio-recorded, and transcribed verbatim by a bilingual graduate student.

Step III: Data Triangulation and Integration of qualitative findings

Qualitative data collected in step III were analyzed and synthesized by two independent coders following a five-step framework analysis approach (e.g., Parkinson et al., 2016). To facilitate data organization, findings from expert interviews were cross-referenced with results from CIs and the synthesis of both guided the modification (e.g., merging items, adding culturally relevant examples and phrases, or completely deleting items or phrases) of the APQ. When saturation was achieved, we reached a consensus regarding problem areas in the measure and important parenting aspects in the target language, which would inform further revisions of the APQ. The resulting measure had 32 items and was translated into the target language, Runyankole as described in the next step.

Step IV: Translation of the adapted measure

The 32-item adapted version of the APQ (see Appendices B & C) was forward translated from the source language English into the target language, Runyankole. Translations were conducted by two bilingual local experts (T1 & T2), whose mother tongue was Runyankole but were also fluent in English (Beaton et al., 2000; Carvahal-Velez et al., 2023; Sousa & Rojjanasrirat, 2011). The two translators had different professional profiles and backgrounds. Translator one (T1), female, held a bachelor's degree in social sciences from a national research university and a post-graduate certificate in mental health counseling. She had over 7 years of field experience in social science research, including conducting qualitative research in local communities of the target culture. She was overall knowledgeable with health and social science concepts, including the concept under investigation in this study (i.e., parenting practices), the target measure, and study processes (Beaton et al., 2000). The second translator (T2), male, was

a professor of linguistics at a local research university. He had more 30 years of experience in university teaching and translating into Runyankole/Rukiiga, the various instruments for professional entities in Uganda. As a professional translator, he was very familiar with Runyankole colloquialisms, jargons, idioms, and phrases used to express various concepts and ideas in this culture (Sousa & Rojjanasrirat, 2011). In line with Beaton et al.'s recommendation, I purposefully selected T2 was not informed of the construct under investigation (i.e., parenting practices) or the study processes. The main task for T2 was to provide "a translation that best reflected the language used by the target population with less influence of an academic goal" (Beaton et al., 2000, p. 3188). The two translators (T1 & T2) used the modified translation monitoring form to conduct translations independently. They each produced an independent report of their translations, which included additional comments regarding potential problematic items and phrases (Carvahal-Velez et al., 2023; Sousa & Rojjanasrirat, 2011).

Step IV: Synthesis of translations

In this step, I met with translators 1 and 2 to review and examine their translation reports and process. In addition to reviewing and discussing T1 and T2's translation reports, we also worked with the original adapted APQ to make comparisons and draw conclusions (Beaton et al., 2000). Subsequently, we consolidated translations, identified, and resolved discrepancies in terminology, phrases, and jargon, and produced a preliminary initial translated APQ for the next step.

Step V: Blind-back translation of the preliminary measure

To establish conceptual equivalence and ensure high-quality translations of the adapted APQ (e.g., Carvahal-Velez et al., 2023), I used another bilingual individual (T3) to translate the initial adapted APQ back into the source language, English (Beaton et al., 2000). T3 was completely unfamiliar with the APQ and with the study processes; however, she was a parenting scholar at a research-intensive university located in the target population region of Uganda. Additionally, she is an experienced local translator of measures for health and social science and therefore was very familiar with Runyankole colloquialisms, jargons, idioms, and phrases (Sousa & Rojjanasrirat, 2011). After T3 completed back translations, I and one of the coders reviewed the back translations, paying particular attention to differences and discrepancies between the back translated and the original APQ highlighted in step V (Carvahal-Velez et al., 2013). After reaching a consensus on what errors we needed to correct based on comparisons of two measures, we then collaboratively drafted a final measure for further validity checks.

Step VI. Expert validity checks

As a further measure of cross-cultural equivalence, I sent the adapted tool drafted in steps II through V to four experts who had been involved in the study process from the beginning to examine its face and content validity (Beaton et al., 2000). The experts were from the two cultures (i.e., the source language culture of the measure and the target language culture). The source language experts (AB and RB) are researchers at a research-intensive university in the United States. Additionally, both were members of my dissertation committee. Conversely, the local experts from the target language culture (RK & RN) were bilingual mental health professionals in Uganda. I emailed both versions (original version and the adapted version) of the measure to experts for comparison. Their main role was to “consolidate revisions of the

questionnaire and facilitate the development of a prefinal version of the tool for field testing” (Beaton et al., 2000, p. 3188).

Study One Results

The cultural adaptation process of the 42-item APQ to Uganda produced important information that was used to inform the scale modification. Feedback from participants is organized in four main categories: a) item comprehensibility, b) acceptability, c) cultural relevance, and d) important parenting practices. Revisions to the APQ were categorized into two main categories: *major revisions* and *minor revisions*. Major revisions included, 1) merging an item with another or others that seemed to address the same underlying construct to reduce scale redundancy, 2) completely deleting the item for lack of cultural relevance, and 3) adding completely new culturally relevant items to the scale. Conversely, minor revisions included, 1) maintaining an item but adding culturally relevant examples or phrases and, 2) rephrasing the item to improve clarity.

Of the 42 original items on the APQ, 32 items (76.2%) were revised, merged, or deleted, and only 10 items (23.8%) (namely items 3, 10, 17, 21, 24, 26, 32, 34, 39, and 40) maintained their original wording (Appendix B). In total, 20 items (47.6%) (namely 1, 2, 9, 13, 14, 16, 19, 20, 23, 27, 28, 29, 30, 33, 35, 36, 37, 38, 41, 42) were heavily revised (e.g., merged to reduce redundancy or deleted because participants deemed them culturally irrelevant) while 12 items (28.6%) (namely, numbers 4, 5, 6, 7, 8, 11, 12, 15, 18, 22, 25, 31) were either rephrased or new words and examples were added to improve clarity and relevance. Finally, following participant feedback and research on important parenting practices in Uganda (e.g., Boothby et al., 2017), five items (namely, 2, 12, 17, 18, 25) were added to the revised scale to improve scale relevance. The resulting scale had a total of 32 items, and this was subjected to larger field testing in study

2.

Item Comprehensibility

Overall, participants found the scale items to be clear and comprehensible but still suggested further changes to poorly worded items to improve comprehensibility. For example, participants found item 12, “*You feel that getting your child to obey you is more trouble than it’s worth*” hard to comprehend and was therefore changed to read “*It is difficult for you to discipline your child.*” Similarly, participants found item 23 “*Your child helps plan family activities*” challenging, because it was not related to the parent’s behavior but the children, yet the APQ is a tool to assess parenting practices not children’s behaviors. Based on participant feedback, we revised it to, “*You involve your child in planning family activities*” to reflect the fact it was the parent seeking to involve the child in the planning family activities and not the reverse. Further, one participant (expert 8) felt item 23 was not necessary because in Ugandan culture, parents do most of the planning as reflected in “normally the parents will have done all the planning, yeah the child participation is really rare or not sought after.” Because only one had an issue with this item, I chose to keep it in the revised scale.

Additionally, several phrases in certain items could potentially cause comprehension issues either because they were redundant or contained American idioms of communication, so these were revised. For example, item 8, the phrase “*talks you out of being punished*” from the item “*Your child talks you out of being punished after he/she has done something wrong*” was locally confusing and instead, the word *persuade* was preferred for clarity. The revised item read “*Your child persuades you not to punish them when they have done something wrong.*” Similarly, the phrase *call off or stop punishing* was preferred in item 22 which originally reads “*You let your child out of a punishment early.*” Participants viewed the phrase “*let your child out of*

punishment” as more applicable to American settings.

In another instance, participants suggested we include culturally appropriate examples to expand or clarify on certain items. For example, most participants felt that the use of the word *mood* in item 31 which reads “*The punishment you give your child depends on your mood*” was not necessarily clear as expert 8 stated, “what do kind of mood do you mean?” Specifically, experts felt there needed to be clarity on whether the item meant “*bad mood*” or “*good mood*” because “Banyankole parents don’t usually punish their children when in good mood” (parent2). Conversely, the parent is more likely to issue harder punishment when they are in a bad mood for example, if they are sick, have work stress, or have no money to provide for the family. Participants suggested using these as examples of bad mood to improve the comprehensibility of item 31. Other minor revisions to improve item comprehensibility were suggested in items 4, 5, 11, 18, and 25.

Acceptability of Items

Participants (both experts and parents) reported some phrases within some items were culturally offensive or inappropriate, and therefore were removed to improve the item’s acceptability. For example, the phrase “*leaving a note*” or “*letting the parent know where child is going*” in item number 6, “*Your child fails to leave a note or to let you know where he/she is going*” were considered culturally disrespectful as in “*we do not leave notes informing our parents where we are going in our culture. That is so disrespectful. We instead ask for permission in the presence of the parent*” (Exp9). Another participant emphasized “*leaving a note in Africa is considered rude*” (Exp6) and another “*...leaving a note is not relevant for us, our children ask for permission*” (parent3). Based on this input, we revised this item to read, “*Your child fails to ask for permission or inform you where he/she is going.*”

Similarly, participants found the phrase “*kissing child*” in item 18 which originally reads, “*You hug or kiss your child when he/she does something well*” culturally inappropriate as reflected in statements such as “*In our culture, it’s actually like an abomination to kiss your child*” (Exp1), “*we simply do not kiss our children; that’s not African*” (Exp4), “*...surely kissing is anti-African parenting*” (Exp9), “*...a man never kisses his female children*” (parent1), and “*...kissing isn’t usual to Banyankole*” (parent8). Although participants found the word kissing culturally inappropriate, they recognized the larger intent of the item and hence suggested replacing the word “*kissing*” with culturally relevant examples of affection or touch connected to “*positive parenting through praising or acknowledging the child when they do something good*” (Exp9 and parent16). Some examples suggested to replace kissing included, “*giving a high-5,*” “*hugging the child*” and “*giving them a pat on the back.*” Subsequently, this item was revised to “*You hug, give a high-5, or pat your child when he/she does something well.*”

Cultural Relevance

Participants found several items or phrases that were potentially irrelevant, and these were either 1) changed to ensure their content was culturally relevant to the Ugandan context, or 2) deleted completely. For example, item number 15 “*You drive your child to a special activity*” was revised by adding examples of other ways parents support their children to attend special events if they do not own a car or do not know how to drive, which is common in Uganda. Although participants found this item clear, the use of the word *drive* was considered discriminatory or insensitive because “*Driving is mainly for high-income urban parents*” (Exp5) or “*many children walk to major activities. Many parents don’t own cars*” (parent3). Consequently, the words “*support or arrange for your child*” were preferred because these were considered inclusive of other means of the parent ensuring the child gets to a special activity

besides driving. The revised item read *“You support or arrange for your child to attend a special activity e.g., by walking with the child to the activity, giving them transport, or paying a motorcycle rider (i.e., boda-boda) to take the child.”*

Similarly, in item number 7, *“You play games or do other fun things with your child”* the word *“engage”* was preferred because *“playing games with child”* tends to be interpreted by many Ugandans as *“childish”* and playing is *“mostly left to fellow children in the neighborhoods and not parents”* (parent3). Further, participants suggested adding more culturally relevant examples of the ways parents engage or have fun with their children e.g., telling stories, jumping ropes, and others to improve the relevance of this item. In another example, in item 11 *“You help your child with his/her homework,”* participants suggested adding more examples to expand the meaning of a parent helping their child with homework in the case of when the parent is illiterate or busy attending to survival needs. Participants interpreted this item to mean that the parent must sit and do the homework with the child which they considered *“unfair”* to illiterate parents. Additionally, even among the literate (mostly urban parents), participants said it’s unfair to assess their involvement using the act of sitting with the child to do homework because *“the urban parents are actually busy, and they don’t have time but probably they may want to pay someone to take the child through their homework, and this is how they show their involvement”* (Exp5). Subsequently, this item was revised to include other ways (e.g., hiring a person to coach the child) a parent might help their child with homework even when they are illiterate or busy. Further, items number 19, 28, 29, 30, 37, and 41 were completely removed from the scale because participants considered them inapplicable or irrelevant to the Ugandan parenting context. Specifically, items 19 *“Your child goes out without a set time to be home,”* item 28, *“You don’t check that your child comes home at the time she/he was supposed to,”* and item 30,

“Your child comes home from school more than an hour past the time you expect him/her,” were deleted because *“the concept of time is mostly fluid in Uganda”* (Exp13), and many parents are busy focused on *“survival”* rather than on keeping track of time the child is supposed to be home. Item 29, *“You don’t tell your child where you are going”* was also deleted because participants felt *“it is not up to the child, I mean they are commanded to do what they are supposed to do; they have no business knowing where their parent is going”* (parent2). Similarly, items 37, *“You send your child to his/her room as a punishment,”* and 41, *“You use time out (make him/her sit or stand in a corner) as a punishment”* were deleted based on participant feedback such as *“Yeah, timeout is not an African concept. It is hard to do given that many families have many kids and limited living space. Even for the town people, look at our housing, most of our children they are sharing rooms; they are sharing bedrooms, they are sharing living space, where are they going to do timeout from? Is the living room big enough that your child would be there in a corner, and you be able to watch your news at the same time?”* (Exp1). Other participants stated, *“timeouts, they are more stressful to implement, personally I don’t have that time; I don’t have those seven minutes for my 7-year-old child to be observing and checking out actually and you know how children really are. You make a turn like this, and they are busy with something else; actually you will get more stressed out when your child is in timeout.”* (Exp1).

Major revisions; Merging and deleting items.

A total of 13 items (30.9%) were merged to minimize scale redundancy. For example, item 36, *“You take away privileges or money from your child as a punishment,”* and item 42, *“You give your child extra chores as a punishment”* were interpreted as forms of non-physical discipline in the Ugandan settings. One participant said, *“Children in Uganda do not have money”* (Exp13). Another participant added *“...for many of our parents in rural areas, giving a child lot of chores is part of life skills training; it is not a punishment; they don’t even bring it in a way to discipline you; it is part of your life; it’s part of you, you know”* (Exp3). Given these interpretations, I decided to merge the two items into one which read, *“You discipline your child (e.g., by giving them extra chores, removing privileges) when they do something wrong.”* In other instances, participants were confused by the difference between the phrases *“You slap your child”* in item 33, *“You spank your child”* in item 35, and *“You hit your child with a belt, switch, or other object when he/she has done something wrong”* in item 38. Participants suggested merging these three items because in Uganda, all these are aspects of using one’s hand(s) to inflict physical punishment on the child as reflected in expert 5’s words, *“in our culture, it is the hand that does both the slapping and spanking.”* Subsequently, I merged the three items to form one item that reads, *“You physically punish your child”* with slapping, spanking, and hitting with an object being used as examples.

Similarly, items number 1, *“You have a friendly talk with your child”* 9, *“You ask your child about his or her day,”* 14, *“You ask your child what his/her plans are for the coming day”* and 20 *“You talk to your child about his/her friends”* on the original APQ were merged to form one item *“You talk to your child (e.g., about his/her friends, plans for the day, favorite sport, plans for the following day)”* in the revised scale. This is because participants felt all the four

items were related to the parent talking to their child, whether the parent was *“having a friendly talk”* (item 1), *“talking about friends”* (item 20), or *“talking about his/her day”* (item 9), or *“discussing plans for the coming day”* (item 14). The *“parent talking to their child was the primary idea”* (parent15) and whatever the content of their talk was secondary and thus was used as examples in the revised item. Another confusion was between items 2, 13, 16, and 27.

Particularly, parent participants felt confused by the difference between *“letting a child know when they do a good job”* (item 2), *“praising a child”* (item 16), *“complimenting a child”* (item #13), and *“telling child that you like it when they help out”* (item #27). Many participants perceived these items as carrying the same cultural connotations in Uganda. For example, they are both done verbally and to other participants, these were all aspects of positive parenting through *“motivation”* (Exp10) and *“encouraging continuation of good behavior”* (parent11). Participants thus suggested that I merge these items into one to reduce confusion and scale redundancy. Eventually, the four items were merged to form item number 14, *“You verbally praise or compliment your child if he/she behaves well or does something well.”*

Important Parenting Practices

Across the board, participants perceived parenting as an important aspect of the Banyankole culture. Specifically, positive parenting, child discipline, and involvement were mentioned as the topmost important parenting practices. Participants were in full support of being involved in their childrens’ lives *“...because when you are part of what your children are doing, you keep advising them to improve on what they are doing”* (parent9), and *“...when you are involved in your children’s things, like gardening with them, they grow up knowing that what we did would get us food. When you are involved with them, they feel like eeheh, if my mum can do this, why can’t I also do that?”* (parent12). Another participant said, *“When a parent is*

involved in parenting, he/she can see how the child is growing; where the child needs guidance, the parent is there to intervene and help” (parent7).

Regarding positive parenting, participants perceived aspects such as teaching cultural values, instilling morals in the child (e.g., respect for elders, saying thank you, asking for forgiveness when in wrong, and others), teaching and technical life skills (e.g., saving, cooking, sewing clothes), and education (e.g., ensuring child has school supplies, arrives to school on time) as unique indicators of positive parenting among the Banyankole people. Further, participants also perceived child discipline as another important practice which primarily served to teach children to learn socially acceptable and unacceptable behaviors in society. As one participant put it, *“a well-behaved child, a well brought up child is my tomorrow’s joy”* (parent9). Child discipline not only helped the child to learn socially expected behaviors and ways of being, but it also protected the dignity of the parent and served the greater community as mentioned in the words of this parent: *“it eases the work of the parent and community, because once the child is behaving well, the parent will not be disturbed, and the community will not be disturbed. So that child will not be a burden. He/she will not be a burden to anybody”* (parent7). Another participant said, *“If I don’t groom my child very well, if my child grew up with bad behaviors, at the end of it all, it will tarnish my name as a parent”* (parent8). Only one participant commented on monitoring as an important practice in saying *“...when you realize that the child is not doing something well or correctly, you advise them to get back on track and do that particular thing or activity better”* (parent10).

Conversely, both experts and parents in this study unanimously agreed that corporal punishment was not a good parenting practice to raise children. Parent participants in particular spoke strongly about the detrimental effects of corporal punishment on children by making statements such as *“they are like torture; when you treat them badly (as in children), they will fear you”* (Exp13) and *“some parents who give corporal punishments, their children grow up all the time when they are scared, they are harassed, it’s like mental torturing, and it’s like a child abuse actually. It’s not the best method that I think I would advise”* (parent16). Across the board, participants agreed that corporal punishments did not improve the child’s discipline but rather made it worse as in these words: *“...it makes the child become hardened. Because you will have used a lot of force like taking a child to police and such things. Most of the time, when you take a child to prison, they may come out with even worse behaviors”* (parent10). Another participant said *“...corporal punishments like beating up a child, not using a simple stick but something like a log of wood or even boiling water and pouring it on him/her. Those punishments don’t help”* (KIP11) and another said, *“With those corporal punishments, they can make the children wild; kids can sometimes run away from home which is not helpful”* (parent15).

Using participant data related to important parenting practices (research question 2) and research on parenting practices in the target culture (e.g., Boothby et al., 2017), five new items were added to the revised APQ scale. The new items are; *“You teach your child good morals (e.g., asking for forgiveness, welcoming visitors at home etc.)”*, *“You teach or ensure that your children have technical skills (e.g., washing clothes, making baskets and mats, cooking, etc.)”*, *“You ensure that your child arrives to school on time,”* *“You ensure that your child has school supplies (e.g., books, pens, pencils etc.)”*, *“You teach your children life skills (e.g., working hard, saving money)”*. These items specifically represented parental involvement and positive

parenting practices unique to the target culture.

Discussion

This study used feedback from local parenting experts (N=14) and caregivers (N=16) to modify the original 42-item APQ to make it more culturally relevant to Western Ugandan families who speak Runyankole. First, the use of experts and cognitive interviews to validate survey instruments in a new culture is not a new method of pretesting an instrument. This method has been used in the pretesting of various measurement instruments in new cultures. For example, Ouimet et al., (2004) used a combination of expert feedback and cognitive interviews to inform the design and revisions of the national Survey of Student Engagement (NSSE) survey instrument for use among college students. In another study, Carvajal-Velez, and colleagues (2022) combined feedback from cognitive interviews with adolescents and parents to inform the cultural adaptation of the Revised Children's Anxiety and Depression Scale (RCADS) in Belize. In addition to expert feedback regarding the validity of the APQ items in Uganda, I further used expert validity checks as a measure of trustworthiness of findings and to ensure that revisions made to the adapted APQ in Uganda were appropriate. Specifically, a total of four experts reviewed the content of the adapted tool for face validity.

Overall, feedback from experts (e.g., suggestions for revisions) were congruent with feedback from the caregivers gathered during cognitive interviews. Data from this study were used to address issues of cross-cultural equivalence (e.g., semantics, content, experiential, and conceptual) to improve the APQ's comprehensibility, acceptability, and cultural relevance. This study represents a significant step in addressing the gaps in science around culturally relevant measurement instruments for assessing outcomes related to parenting in the diverse contexts of Africa (Augustinavicius et al., 2020; Madalane, 2014).

Comprehensibility, Acceptability, and Relevance of APQ Items in Uganda

The findings from this study raise important points for discussion around the comprehensibility, acceptability, and relevance of certain APQ items, as well as important parenting practices in the target culture. First, participants in this study found the content in 10 of the 42 items of the APQ (namely items 3, 10, 17, 21, 24, 26, 32, 34, 39, and 40) to be comprehensible and relevant. Subsequently, the wording of these items was maintained as they were in the original scale. This finding could imply that although parenting varies based on one's cultural context (e.g., Bornstein et al., 2013), certain aspects of parenting are universally understood. For example, most participants found it a common practice for parents in Uganda to “*threaten their children*” (item 3) but end up not punishing them. Another finding highlighted by participants was related to the idea of Ugandan childrens' ability to fend for themselves by “*...being out in the dark without an adult with them*” (item 21). In Uganda, is it not uncommon for children to wonder around in the community after school to play with fellow children in the neighborhoods until late hours of the night. Sometimes they are with friends that parents might not know (i.e., item 17), but because the communal setup of families in Ugandan settings allows for children to interact and know the families in the entire neighborhood, parents are less worried about children being without adult supervision.

Some items were perceived as relevant and comprehensible but needed minor revisions (e.g., removing culturally inappropriate phrases, changing the tense, adding examples, rephrasing a word) to improve clarity and relevance. This finding is consistent with previous studies adapting the APQ in diverse cultural settings which suggested that replacing some words or rephrasing the words altogether improved the scale items' comprehensibility and cultural relevance. An example is seen in the Madalane (2014)'s adaptation of the APQ to Xhosa-

speaking parents which changed either the tense of an item, or the spelling of a word in six items, and rephrased (e.g., by adding or removing a word) seven items to make these items clearer and culturally relevant. I made several changes like those in Madalane's study. For example, in item number 15, "*You drive your child to a special activity*," participants in my study suggested using the words "*support*" or "*arrange*" instead of "drive" to highlight other ways parents support their children's attendance of special events if they do not own a car or do not know how to drive. The various ways of "*supporting a child to a special activity*" such as walking with the child to the activity, giving them transport, or paying a motorcycle rider to take the child, were all used as examples in parenthesis to improve the item's clarity.

Conversely, some items, although comprehensible were perceived as irrelevant to the Ugandan context. Subsequently, these items were removed from the scale based on participant feedback. For example, items 37, "*...send child to his/her room*," and 41 "*...use timeout as a punishment*" were deleted because participants found ideas of timeout and sending children to their rooms as a punishment, culturally inapplicable. This finding is consistent with previous adaptations of other instruments in diverse settings which found that deleting some scale items might improve the scale's relevance (Carvalho-Velez et al., 2022; Namisango et al., 2022). Participants in my study cited reasons for not including these items on the revised scale because these practices were stressful and difficult to implement for the parent who must sit and supervise the child in timeout. This finding can be interpreted in the context of the larger socioeconomic setup of many families in Uganda. For example, families in Uganda tend to have many children and small living spaces, so sending a child to timeout or to a room as a punishment would be perceived to be ineffective because that would mean either the other children or members of the family would have to vacate the house to create space for timeout

which is highly unlikely. Further, this finding was not surprising given that the challenging economic circumstances of many families in Uganda necessitate that parents prioritize survival and providing the basic needs for the family instead of focusing on implementing time-consuming and systematic discipline strategies such as timeouts.

Lastly, on the issue of relevance was the issue of age. Although the APQ is intended to assess parenting practices of parents with children between the age of 6-17 years, some participants felt that some items on the APQ were inapplicable to parents of teenage age children in Uganda. Examples of items that were highlighted were items number 7, “...*you play games or do fun with your child*”, and 33. “...*spank children*”. Due to the nature of parent-child relationships during the teenage stage in Uganda, participants felt these items would be irrelevant because parents in Uganda rarely play games or spank their teenage-age children. Subsequently, the participants recommended using the words “*engaging in fun activities*” presentative of the ages of the children they had in their care.

Another major revision suggested by participants was merging several items that seemed to have similar meanings to reduce scale redundancy as well as improve the time of completion for future participants. Across the board, participants unanimously agreed that 42 items on the original APQ were time consuming to complete and could be reduced through merging. For example, the items focused on hitting or spanking children (namely items 33, 35, and 38) were merged to form one item. In Runyankole, the language used in this study, the words “*okutera*” or “*okufubira*” are used interchangeably to mean correcting a child’s misbehavior either by hand or using an object. Participants suggested merging these items because they represented the use of one’s hand (s) to correct misbehavior. Parents usually do not care whether a hand was used or an object; what matters is that the punishment was issued by physical means. Subsequently, this

change led to item number 28, “*You physically punish your child*” with slapping, spanking, and hitting with an object being used as examples.

Similarly, the majority of the participants in my study were confused by the difference between letting children know when they do a good job (item 2), praising a child (item 16), complimenting a child (item 13), and telling child that you like it when they help out (item 27). This confusion was not surprising to me given that in the Runyankole language, there is only one word “*okuhimbisa*” which denotes various forms of positive parenting such as, praising child, complimenting child, letting someone know they are doing good, and other forms of positive praise. Thus, we were not surprised that participants suggested merging the items above into one to reduce redundancy and improve relevance given that the revised APQ would be translated into Runyankole prior to larger field testing. This finding can also be interpreted in the larger literature on assessing parenting practices in other cultures.

Including Important Parenting Practices

Feedback from my participants shed more light on the context of parenting in the target Ugandan setting. According to my participants, the most important parenting practices were positive parenting, parental involvement, and child discipline. Most participants perceived the three practices as working together to help children learn values of social responsibility, social, family, and cultural respectability (e.g., respect for elders), and to protect the dignity of the parent and the community. My findings should be interpreted in the larger context of research regarding the role of cultural influences on parenting. Scholars like Bornstein (2013) contend that culture influences childrearing practices, parenting beliefs, and parental goals. According to Bornstein, culturally relevant parenting involves the passing on of the parent’s “deeply rooted ideas about how to think, feel, and act as a functioning member of a group” (p. 258).

Thus, cultural influences on parenting were heavily highlighted in the feedback from my participants on parenting practices. From the data, it was clear that most participants perceived parental involvement, positive parenting (e.g., teaching morals), and child discipline to be key hallmarks of producing hard-working, well-behaved, culturally respectful, and socially responsible children in the community. The importance of children respecting their family and cultural values (e.g., respecting elders), following social norms and rules (i.e., being well-behaved), and learning life and technical skills (e.g., saving money, sewing clothes etc.) has been well-established in previous studies of parenting in Uganda, including a study of parenting practices in three districts of Uganda (see Boothby et al., 2017) and a study of men's involvement in a parenting program to reduce child maltreatment and gender-based violence (Siu et al., 2017). Further, Boothby et al.'s study highlighted practices such as teaching children morals, walking children to and from school, sewing a child's torn clothes, bathing children, structuring study time at night, and others as hallmarks of promoting positive child development. Finally, Walakira et al., (2021) contend that positive parenting practices are critical for providing a sense of direction and preparing children to become responsible and contributing citizens of the country. Put together, findings from previous studies and my findings further justified my major revision of the APQ to add five new items that participants suggested could capture culturally relevant practices unique to the target culture. Adding new items to an already existing measurement instrument for use in a new cultural setting is not unique to only my study. This method has been used in other studies adapting survey instruments for use in a new culture. For example, Gjersing et al., (2010) added 12 items in their study to adapt an Australian-English instrument to assess staff attitudes towards opioid maintenance treatment (OMT) (Caplehorn et al., 1996) in Norway). Similar to my study, Gjersing and colleagues sought Norwegian expert

feedback regarding the content of the existing measure and subsequently used this feedback to add new items to the scale to make it more culturally relevant for the Norwegian context. A surprising finding in my study regarding parenting practices was that participants perceived corporal punishments as ineffective parenting practices in the target setting. Given that previous research from Uganda (e.g., Boydell et al., 2017) showed that corporal punishments was still used by many parents in Uganda to 1) correct deviant behavior, 2) maintain children's respectability, and 3) establish household routines, I expected that at least some participants in my study would somewhat concur with research supporting the use of corporal punishment as a useful parenting practice in the Ugandan setting. The fact that participants in my study heavily despised the use of corporal punishments signifies positive progress in parenting using harsh discipline strategies. It means that many in Uganda (particularly experts and parents) are slowly realizing the detrimental mental health effects of this practice and are beginning to move away from it. Further, it could mean that the government of Uganda's recent laws banning corporal punishment of children below the ages of 18 years old are being taken seriously (e.g., Sekiwu & Naluwemba, 2014; Walakira et al., 2021). At the national level for example, Walakira and colleagues (2021) report that many contemporary parents are slowly beginning to ascribe to more positive parenting practices such as sitting with the child to discuss any worrying issues, praising the child when they do or behave well, and teaching children their rights (e.g., rights to food, shelter, and education).

Interestingly, participants noted that many parents in Uganda would be less likely to report the use of corporal punishment as they believed that many still use it as a form of punishment or discipline (see Boydell et al., 2017). Given that the government of Uganda prohibits all forms of corporal punishments for children below the age of 18 (Devries et al., 2014), experts said parents would likely underreport (i.e., choose Never and Almost Never options) for fear of being held accountable in the courts of law. Underreporting a particular behavior or practice has been found to be a major issue that negatively impacts outcomes in many studies using self-administered survey questionnaires to study various constructs in the social sciences and humanities fields (e.g., Webster et al., 2005; Whitman et al., 2021).

Working Between Two Languages in the Adaptation Process

In my study, Runyankole was the native and most spoken language for participants, although English was occasionally used especially in the first steps of the study. It was advantageous that all the members of the research team were native speakers of the target language as well fluent in English. Conversations in Runyankole helped clarify concepts, and occasionally, participants would use English expressions if it was difficult to find a word or phrase in the native language. Mixing English with native language words is a common practice in Uganda since English is Uganda's national and official language; many participants found it challenging to stick to using one language or finding a phrase in the native language that translates similarly into English during the interviews since they are mixing English and their native languages even in a single interaction. For example, the use of the word "*kissing child*" in item 18 was to imply an aspect of positive parenting in the source language, when translated in Runyankole, it is "*okunywegyera*" which signifies sexual relations between two people in a romantic relationship. This made almost all the participants in my study uncomfortable to

respond or talk about the aspect of kissing a child as positive parenting.

This is not the first study to work between two languages simultaneously in the cross-cultural adaptation of a measurement instrument. Other studies (e.g., Carvahal-Velez et al., 2022; Molinuevo et al., 2020; Noguero et al., 2011; Roberts, 2009) all have worked between two languages to adapt the APQ and other measures in the target cultural settings. Madalane (2014) worked between Xhosa and English languages in the adaptation of the APQ to Xhosa-speaking parents in South Africa. In Carvahal-Velez et al. (2022)'s study where researchers worked between Kriol and English to adapt the Revised Children's Anxiety and Depression Scale (RCADS) in Belize, the scholars found that working between two languages, although challenging, helped them to "quickly identify and address issues related to comprehensibility, acceptability, and relevance particularly for words and phrases that had somewhat close meanings" (p. 38). Studies of this nature are important to contribute to the larger literature and ensure appropriate cross-cultural translations and adaptations of measurement instruments.

Study Implications

These findings throw light on culturally relevant parenting practices in Uganda, suggesting major revisions to the APQ and other conceptualizations of parenting to include items that represent culturally relevant practices unique to target settings in Uganda. Particularly, before distributing a self-report measure in a new setting, scholars conducting studies in diverse cultural settings should carefully examine the measure to ensure items are comprehensible, acceptable, and relevant to the target population. Adaptations should go beyond language translations and carefully follow empirically validated guidelines for cross-cultural adaptation of self-report measures (e.g., Beaton et al., 2000) to ensure that adaptations are systematic, accurate, thorough, and rigorous.

Further, the use of local experts and cognitive interviews was an easy way to quickly identify problematic items and ensure local voices were represented. This method is also supported in survey development literature (Artino et al., 2014; Ouimet et al., 2004). Researchers should use local experts, particularly those with clinical knowledge of the target construct as well as bilingual experts in the process of adapting a tool to a new culture. The combination of both ensures that adaptations and translations are culturally and linguistically appropriate while also maintaining clinical relevance as intended in the original scale. Local experts often know the nuanced idioms and meanings of particular words and phrases that would otherwise not be captured through survey testing. Further, local experts and parents also know the “social ecologies of good parenting” (Boothby et al., 2017, p. 169), and how these ecologies might be used to inform appropriate and linguistically sound adaptations of items on the target measure. The use of both experts and parents would lead to sound and robust revisions to any measures of parenting being adapted to target Ugandan and other culturally diverse settings.

On the issue of corporal punishment as a less important practice as participants in my study suggests the need for more studies in this area. A shift away from physical punishments would signify an important step in the fight to end violence against children in Uganda and other African settings (Cluver et al., 2020; Siu et al., 2017).

Strengths and Limitations

The use of a hybrid seven-step process integrating Beaton et al. (2000)'s and Sartorius and Janca (1996)'s guidelines for cross-cultural adaptation of self-report measures offered an organized and clear framework to conduct relevant adaptations of the APQ scale in a Ugandan setting. This enabled the researcher to systematically attend to issues of scale item comprehensibility, acceptability, relevance, and other important parenting domains in the target setting, while ensuring that the original APQ target constructs (i.e., parental involvement, positive parenting, poor monitoring, inconsistent discipline, and corporal punishment) were maintained. Second, this study combined semi-structured interviews with local experts and cognitive interviews with parents from the target culture as data triangulation methods. Survey experts and developers support combining both expert feedback and cognitive interviews as a strong method for the pretesting or cross-cultural adaptation of any new or existing instrument in a new population (Ouimet et al., 2004). The combination of semi-structured interviews and CIs was helpful in identifying potential problematic items, words, and phrases on the APQ scale for assessing parenting practices, which could have been missed if say, traditional survey and pilot testing approaches were used (Namisango et al., 2022). Further, the use of these in-depth qualitative approaches ensured that participants first understood the meaning and intent of the item prior to assessing its acceptability and relevance in the target setting.

Third, the study was careful to ensure that language, phrases, and words that would be considered culturally offensive and disrespectful (e.g., kissing one's child item in 18 and a child leaving a note, item 6) and that items capturing potentially irrelevant parenting practices (e.g., use of time out item number 41 and sending child to a room, item number 37) in the target setting were removed from the scale. Although it is highly likely that these items and phrases

could capture self-reports consistent with parenting experiences of some Ugandan parents (e.g., parents from high socioeconomic contexts), I ensured to remove these items and phrases because we wanted to minimize potentially offensive language as much as possible since the adapted tool could be used in national studies of parenting in Uganda and other African settings. Fourth, the use of highly experienced bilingual experts and translators alongside source language experts in this study is worth highlighting as a strength. The general literature on cross-cultural adaptation of instruments (e.g., Beaton et al., 2000; Carvahal-Velez et al., 2023; Sousa & Rojjanasrirat, 2011) supports choosing the qualified translators and experts to ensure quality translation, back-translation, and cross-validation of a measurement instrument. In study, this approach ensured that local adaptations and translations were valid and culturally appropriate. The use of a combination of source language experts and local experts for final validity checks (in step 7) ensured that translations were linguistically sound and that no words or phrases were mistranslated. Source language experts ensured that clinical relevance and content validity of the adapted tool were appropriate.

Fifth, our sample was diverse and equally representative in terms of gender, age, and literacy levels. For example, we had we had an even split sample of eight women and eight men for the parents who participated in CIs. The number of women expert participants (n= 8, 57.1%) was slightly larger than the number of men (n= 6, 42.9%). Regarding age, most of our expert participants (n= 12, 85.8%) were between the age of 35-54, while majority (n= 13, 81.3%) were between the age of 35-44. parent participants were between. Finally, in terms of levels of education, our sample was immensely diverse as it included majority parents with education levels less than a bachelor's degree (n=10, 62.5%) while majority (n= 11, 78.5%) of the experts had levels of education higher or equal to a master's degree. These variations in participants'

sociodemographic characteristics helped us to gain more robust and representative information from participants with varying age, gender, and literacy levels.

Most importantly, given the increased calls for cross-cultural adaptation of measurement instruments for parenting for use in African cultural settings (e.g., Augustinavicius et al., 2020), and the widespread implementation of evidence-based parenting interventions in sub-Saharan Africa (see Asimwe et al., 2023), including in Uganda (e.g., Siu et al., 2017; Wight et al., 2022) this study is timely and relevant as it offers a culturally adapted scale for assessing outcomes related to parenting in these diverse contexts. This is an important first step towards improving the validity and reliability of outcomes from studies of parenting in Uganda and other sub-Saharan African contexts.

Despite the above strengths, this study had some limitations that are worth considering. First, the small samples of parents and experts presents issues of generalizability of study findings. Second, the study heavily relied on purposive sampling to recruit participants for this study. Purposive sampling relies on the researcher's judgement and knowledge of the target population to recruit "information-rich" participants (Patton, 2002). A major limitation of this sampling technique is that it is prone to researcher bias (Sharma, 2017). Despite this limitation, all appropriate measures were taken to minimize researcher bias. For example, my judgements of the participants selected for this study were based on clear inclusion and exclusion criteria. Additionally, some of the experts I interviewed were recommended by fellow experts from their network. Third, although the use of highly experienced experts was highlighted as a strength, it also presents some challenges related to relevance. For example, the majority (57.1%, n=8) of our expert participants were master's degree holders and three (21.4%) held a doctoral degree. Given the significant knowledge gap and parenting experiences between individuals from high

socioeconomic backgrounds and those from lower SES in Uganda, it is possible that the feedback provided by experts in this study could have led to adaptations that were misfitting for parents from lower SES contexts, which I surveyed in the larger study two. A final limitation of this study is that the adaptations were only conducted for one culture/language, that is, the Runyankole language, spoken by the Banyankole people of Western and southwestern Uganda. Although the Banyankole are the second largest tribal group in Uganda (after the Baganda) and Runyankole is perhaps the 3rd most spoken language (after Luganda and English), the adaptations of the APQ in this study did not consider the remaining 55 languages of Uganda (Tulibaleka et al., 2021). To ensure the appropriate measurement of parenting across tribes in Uganda, future studies using the Runyankole adapted APQ in another Ugandan culture need to attend to specific cultural and linguistic nuances of that culture and language to ensure further culturally relevant adaptations are incorporated.

Conclusions

This study sought to culturally adapt an internationally validated and commonly used measure of parenting (the APQ; Frick, 1999) for use in a diverse cultural setting in Uganda. To our knowledge, this was the first qualitative study to conduct thorough cross-cultural adaptation of the APQ in Uganda, Africa. The use of a seven-step process that integrated Beaton et al. (2000)'s and Sartorius and Janca (1996)'s guidelines for cross-cultural adaptation of self-report measures provided an organized way to conduct relevant adaptations of the scale. Similarly, the use of local experts and interviews with information-rich parents from the target culture ensured the adaptation of the scale items maintained clinical relevance (like in the original APQ), while carefully attending to issues of comprehensibility, acceptability, and relevance to the Ugandan cultural setting. Findings on important parenting practices rendered initial understanding of

culturally relevant items to add to the APQ for use in the target Ugandan setting. Consequently, the resulting adapted 32-item version of the APQ from this study lends support for future use of the APQ among parents in lower-income settings in Uganda. A necessary and important next step in the process was to evaluate the validity evidence and psychometric properties of the adapted scale in the target setting which I discuss in study 2 in the next chapter.

CHAPTER 5: STUDY TWO

TESTING THE VALIDITY AND PSYCHOMETRIC PROPERTIES OF THE ADAPTED ALABAMA PARENTING QUESTIONNAIRE AMONG RUNYANKOLE-SPEAKING CAREGIVERS IN UGANDA

In Sub-Saharan Africa (SSA), as many as 14.3% of children below 18 years are vulnerable to mental, emotional, and behavioral problems including depression, anxiety, and somatization (Patel & Stein, 2015), disruptive behavioral problems (Ward et al., 2020), and posttraumatic stress disorders (PTSD; Cortina et al., 2012). One risk factor that has been heavily linked with these poor child outcomes is poor parenting. The literature highlights poor parenting practices such as lack of parental involvement, inconsistent discipline, poor monitoring, and others as the most likely parenting approaches to be highly associated with disruptive behaviors in children (Dadds et al., 2003; Devlin et al., 2018; Knerr et al., 2013; Sherr et al. 2013). Given that parenting practices play a critical part in shaping child developmental outcomes, it is critically important that parenting is measured in a culturally accurate way, given the widespread cultural variations in parenting practices. Thus, it is imperative for researchers to develop accurate parenting measures and to test their validity in assessing various parenting practices for both clinical and research purposes (Altenburger et al., 2020; Augustinavicius et al., 2020).

In Africa, despite the immense progress made in parenting research, gaps still exist when it comes to exploring the factor structure, cultural validity, and psychometric properties (e.g., validity and reliability) of most measurement scales used to assess various African parenting practices. For various reasons, most studies implementing parenting interventions in Africa utilize measurement scales developed and tested largely in populations in high-income settings. One measure that has been used widely globally, and in African settings is the Alabama

Parenting Questionnaire (APQ; Frick, 1999; Shelton et al., 1996). The APQ is a 42-items measure which was developed by Shelton et al. (1996) to assess five parenting practices namely: positive parenting, corporal punishment, parental involvement, inconsistent discipline, and child monitoring/supervision, linked with disruptive behaviors in children between 6-17 years of age (e.g., Dadds et al., 2003; Shelton et al., 1996). A total of 35 items on the APQ represent the five practices above, and an additional 7 items measure “other discipline practices,” not represented by any of the above five subscales. Additionally, Elgar et al. (2007) developed a shorter 9-item version of the APQ that could be used for assessments conducted by phone. Although there are two versions of the APQ: namely the parent self-report (completed by parents) and the child global report (completed by children), this study only focused on adapting APQ parent self-report.

For many years, the APQ (compared to other measures of parenting) has gathered extensive research supporting its adequate psychometric properties (e.g., good internal consistency and validity), and its strong ability to distinguish between clinical and non-clinical samples in high-income settings (e.g., Dadds et al., 2003; Shelton et al., 1996; Sullivan, 2023) and in diverse cultural settings (Cova et al., 2017; Esposito, 2019; Madalane, 2014; Nogueira et al., 2020; Roberts, 2009; Świącicka et al., 2019). A recent meta-analysis of 32 studies using the brief version of the APQ (i.e., the APQ-9; Elgar et al., 2007) with three subscales, found acceptable mean alphas of .84 for the positive parenting subscale, .66 for inconsistent discipline, and .70 for poor supervision/monitoring subscale (Liang et al., 2021). Further, the APQ’s ability to reliably measure the same construct (commonly known as measurement invariance) across demographics (e.g., gender, age, and clinical status) (see Florean et al., 2022; Kyriazos & Stalikas, 2021) is widely known. The scale’s negative subscales have been reported to have good

criterion validity (Shelton et al., 1996). In several studies of parenting programs across Africa, the APQ is a commonly used scale to assess parenting practices. For example, the APQ was used in four studies (e.g., Cluver et al., 2017, 2018; Shenderovich et al., 2019; Ward et al., 2020) that tested the feasibility and effectiveness of the culturally adapted Sinovuyo Caring Families Teen Program (Lachman et al., 2016) in South Africa. Outside of South Africa, the APQ has been used to assess outcomes in the feasibility of the Parent Management Training Oregon (PMTO) parenting intervention in Uganda (Wieling et al., 2015) and in a cluster randomized controlled trial (RCT) of a parenting program for male caregivers in rural Tanzania (Lachman et al., 2020). It is important to note that the APQ and its subsequent five dimensions were developed by Euro-American researchers with different views and biases around parenting (Robert, 2009). Thus, the subsequent items on this measure reflect parenting practices in developed countries. In the feasibility study of a parenting intervention among mothers affected by war in Northern in Uganda, Wieling and colleagues (2015) used three APQ subscales, namely parental involvement, positive parenting, and poor monitoring, which all had acceptable alphas of .60 at pre-test, and .75 at post-test. Despite these good alpha coefficients, the authors in this study suggested that the full validity of the APQ needed to be tested in Uganda.

The above qualities have made the APQ a highly valued measure of parenting by both clinicians and researchers globally (Cova et al., 2017). Nonetheless, the factor structure of the APQ has been inconsistent across studies both from North America and those from diverse cultural settings. For example, some previous studies among samples in High-Income Countries such as the United States of America, Australia, and Germany have proposed a five-factor structure of the APQ (see Dadds et al., 2003; Essau et al., 2006; Frick, 1999; Shelton et al., 1996) while others settled on a three-factor structure (e.g., Elgar et al., 2007; Maguin et al., 2016). In

cultures outside the USA and Australia, previous studies of the APQ have supported the original five-factor structure in Romania, Mexico, and Poland (see Florean et al., 2022; Roberts, 2009; Świącicka et al., 2019), a three-factor structure in Norway, Spain, and Portugal (see Clayborne et al., 2021; Molinuevo et al., 2011; Noguero et al., 2020), and a four-factor structure in Chile (see Cova et al., 2017), as the best fitting factor structures. Given the reasons above, and that the APQ's validity had not been established in Uganda, our study aims to build on the extensive APQ research by testing the factor structure of the APQ in Uganda, a sub-Saharan African context.

In general, cross-cultural researchers (e.g., Augustinavicius et al., 2020; Betancourt et al., 2009; Bornman et al., 2010) have criticized measurement scales developed and tested in high-income settings for their inability to capture, with validity, certain parenting practices in populations in low-middle-income countries (LMICs) such as those in Africa. Because culture influences childrearing practices (Bornstein, 2013), I argue that psychometric testing and revisions of available assessment instruments for parenting is needed to ensure cultural relevance and usefulness of these instruments in African settings. Therefore, this study aims to contribute to the larger science of measuring parenting in Africa by examining the factor structure and relevant psychometric properties of a version of the APQ that was adapted for use in a Ugandan cultural setting.

Study 2 Significance

Examining the validity and cultural relevance of the APQ in Uganda is important for several reasons. First, it will ensure that study findings using this measure are reliable, and conclusions are valid (Ertl et al., 2011) when parenting is assessed in Uganda. Second, evaluating the validity of a freely available measure of parenting, such as the APQ, will reduce the cost of developing new assessment instruments and increase access to screening tools in primary care and in educational settings in Uganda. Given the paucity of literature regarding the factor structure and psychometric properties of the APQ in Uganda, this study is relevant because it offers useful insights to survey developers and intervention researchers planning to conduct parenting research in Uganda. The continued assessment of parenting practices in diverse settings in Africa using assessments such as the APQ, without testing their validity, deters the ability of researchers to decipher the nuances of how parenting practices in Uganda are distinct from practices in developed countries outside of Africa. This can lead to invalid conclusions about parenting in Uganda, and subsequently lead to the creation of biased parenting interventions (Dawson et al., 2018).

Study Aims and Research Questions.

In this study, I aimed to assess the validity of the 32-item version of the APQ which was culturally adapted to assess parenting practices among Runyankole-speaking caregivers in Uganda in the first study. My second study aims to answer the following research questions: 1) What is the validity and related psychometric properties of the modified Alabama Parenting Questionnaire among a sample of Runyankole-speaking parents in Uganda and 2) is the adapted APQ measure able to predict behavioral outcomes in Ugandan children?

Study Hypotheses

Hypothesis 1. The APQ_Uganda_Revised's factor structure will have similarities to the factor structure identified and confirmed in original APQ studies (e.g., Dadds et al., 2003; Shelton et al., 1996) and studies validating the APQ in diverse cultural contexts (e.g., Cove et al., 2017; Molinuevo et al., 2011; Noguero et al., 2020). For example, I expect that items on the APQ measuring positive parenting practices will continue to group together regardless of cultural differences.

Hypothesis 2. Positive dimensions of the APQ (i.e., parental involvement and positive parenting) will be associated with less externalizing, internalizing, and attention problems in children. Conversely, negative parenting practices will be associated with externalizing, internalizing, and attention problems in children.

Hypothesis 3. Positive dimensions of the APQ (i.e., positive parenting and involvement) will be correlated with each other. Similarly, APQ's negative dimensions of corporal punishment, poor monitoring/supervision, and inconsistent child discipline will be correlated.

Study Two Methods

Sampling

This study took place in four districts of Western Uganda. The participating districts were randomly selected by the research team. The researchers wrote the names of all the 10 districts in Western Uganda where the Runyankole is the primary language and put them in a bowl. Each research team member took turns drawing a district from the pull of 10 districts. Random selection exercise stopped when the team had pulled four districts which was the target for the study.

A sample of 618 caregivers of children between the ages of 6 and 18 years old were recruited using convenience sampling techniques (Etikan et al., 2016; Farrokhi & Mahmoudi-Hamidabad, 2012). The sample for this study was in line with existing guidelines for conducting factor analysis. A sample size of 200 plus participants is considered sufficient to produce reliable factor estimates (Comrey, 1988).

Participants

Participant sociodemographic data for this study are presented in Table 1.3. The total sample included 618 Ugandan caregivers; 379 women and 236 men. The majority (n= 426) resided in rural areas, and the rest (n= 164) lived in urban areas. The ages of participants ranged from 18 to 65 years, and all were native speakers of the Runyankole language, which was the primary language used in this study. More than half of the sample (57.7%) had 1-3 children in their care, 27.7% cared for 4-5 children, and the remaining 14.4% cared for more than 5 children. Lastly, more than half of the sample (84.6%) had a level of education lower than a bachelor's degree (e.g., primary school, high school, and vocational institute), and the majority (69.3%) were from low-income settings.

Table 1.3. Socio-demographic characteristics of participants in quantitative study 2 (N= 618)

Variable	Frequency (n)	Percentage (%)	Mean (SD)
Gender			
Women	379	61.3	-
Men	236	38.2	-
Prefer not to say	3	.5	-
Age (years)			29.8 (1.11)
18-24	30	4.9	
25-34	201	32.6	
35-44	223	36.2	
45-54	101	16.4	
55-64	44	7.1	
65+	16	2.6	
Prefer not to say	1	.2	
Marital status			
Married	484	79.0	
Widowed	45	7.3	
Divorced/separated	37	6.0	
Unmarried	45	7.4	
Prefer not to say	2	.3	
Education level			1.97 (1.18)
Less than a bachelor's degree	520	84.6	
Bachelor's degree	87	14.1	

Table 1. 3. (cont'd)

Master's degree	5	.8	
Other	3	.5	
Employment Status			2.92 (1.52)
Unemployed (e.g., stay-at-home parents)	305	49.6	
Subsistence farmers	132	21.5	
Daily worker	83	13.5	
Government employee	87	14.1	
Business owner	5	.8	
student	3	.5	
Socioeconomic status			1.38 (.64)
Low income	424	69.3	
Lower-middle income	152	24.8	
Middle-High income	34	5.6	
Undisclosed/unknown	2	.3	
Religion			
Christianity	576	93.8	
Islam	36	5.9	
Other	2	.3	
Caregiver Setting			
Rural	426	69.0	

Table 1.3 (cont'd)

Urban	164	26.6	
Both	25	4.1	
Other	2	.3	
District of Residence			
Mbarara	185	29.9	
Ibanda	137	22.1	
Sheema	109	17.6	
Kitagwenda	186	30.0	
Other	2	.3	
No. of Children			1.58 (.80)
1-3 children	354	57.7	
4-5 children	170	27.7	
More than 5	88	14.3	
Number of Languages			1.72 (.61)
One	222	36.1	
Between 1-3	342	55.6	
More than 3	51	8.3	

Note. All participants in the sample were caregivers of a child or children under the age of 17 years. Participants who indicated having an education level of primary school, secondary school, and posts-secondary school certificate are all coded as “less than bachelor’s degree.” Caregivers who indicated being, single, but cohabiting, single, and never married or having multiple partners are all coded as “unmarried.” Of the 520 caregivers with “less than a bachelor’s

Table 1. 3. (cont'd)

degree” most (n= 305; 49.6%) were primary school graduates, followed by secondary school (n= 132; 21.5%), and post-secondary school certificate holders (n=83, 13.5%). Non-biological children include children e.g., of the caregiver’s extended family member, adopted children, as well as children of a community member/neighbor. Under SES, the “Low-income category” included, unemployed caregivers, small scale subsistence farmers, students, daily income workers etc. Government employees include local council chairpersons, institute/university lecturers etc.

Procedures

The study was approved by the Ethics Committee of Michigan State University in the USA and Makerere University in Uganda. To be included in the study, participants had to be 1) 18 years or older at the time of data collection (i.e., with the ability to provide informed consent), 2) a parent or a caregiver of a child or children below the age of 18, 3) a resident of a district in Western Uganda, and 4) fluent in the native language, Runyankole. Participants were recruited by three members of the research team, mainly from local public places of gathering including local health center clinics, parent support groups, and places of worship (e.g., churches). Eligible participants were required to provide informed consent in verbal or written form before participating in the study.

Data Collection

Two types of data were collected during this study. The first set of data were on five parenting practices that the APQ assesses, and the second set of data were on parents’ reports of their children’s psychosocial functioning (i.e., emotional, and behavioral problems). Data collection was conducted in the native language Runyankole. Prior to data collection, all

materials including consent forms and survey questionnaires were translated into Runyankole, the local language of the target population. Specifically, survey questionnaires were translated following guidelines for cross-cultural adaptations of surveys for psychological constructs (Beaton et al., 2000) which included initial translation, synthesis, backtranslation, and expert review (see study 1).

Surveys were administered in groups by the lead researcher (RA) and three trained undergraduate research assistants at the participants venues (i.e., mainly churches, schools, and local health centers). Participants came to a venue where they received the surveys and completed them at the same time in a group format. All three members of the data collection team were bilingual and native speakers of the Runyankole language. Each research team member was assigned a district from the four main districts included in this study. Caregiver groups ranged from 20 to 40 parents per group. Each data collection session lasted approximately 90 to 120 minutes. The research team members opened the group with a greeting and welcomed participants. This was followed by research team members reading out the study procedures, including obtaining participants' verbal and written consent. To ensure uniformity and cater for the differing literacy levels, research team members read each item and response categories to the group and allowed between 15-30 seconds for participants to choose a response. Research team members walked around the group to ensure all participants clearly understood the question they were answering. Each participant received 5,000 Uganda shillings (approximately \$1.50) as a token of appreciation for their participation, in addition to refreshments e.g., sodas and snacks offered during data collection meetings.

Measures

The Alabama Parenting Questionnaire (APQ) Uganda-Revised

I used a revised 32-item APQ (see appendix B) to collect data on parenting practices from Runyankole-speaking parents. The original 42-item parent version of the APQ developed by Shelton et al. (1996) went through a cultural adaptation process in which a total of 15 items were deleted, and 5 new items were added (see study 1 for full details of the adaptation) and this was the scale used in this study. A list of new items added to the scale can be found in appendix B. Unlike revisions in items of the original APQ, I did not revise but rather, maintained the original five subscales: (1) *parental involvement* (2) *positive parenting*, (3) *poor monitoring/supervision* (4) *inconsistent discipline* and (5) *corporal punishment*. Similar to other APQ studies, the caregivers in our study responded to the APQ items using a five-category Likert scale; *Never (1)*, *Almost Never (2)*, *Sometimes (3)*, *Often (4)*, and *Always (5)*. Since all participants in this study were Runyankole-speaking caregivers, I translated the APQ-Uganda_Revised used into Runyankole (see appendix C).

The Pediatric Symptom Checklist (PSC)

In addition to data on parenting practices, I used the adapted 17-item pediatric symptom checklist (PSC; Gardner et al., 1999; Stoppelbein et al., 2012) to collect data on parent perceptions of their children's psychosocial functioning (i.e., emotional, and behavioral problems) (see appendix D). As a further test of validity evidence, I used data on children's psychosocial functioning to examine whether the APQ-UG Adapted was a valid measure for detecting the association between parenting practices (positive/negative) and child psychosocial outcomes (negative/positive). Unlike the APQ-UG, I did not examine other psychometric properties (e.g., factor structure and item-fit) of the PSC in the population for this study.

The full PSC has 35 items and was originally developed for use in pediatric hospital settings to screen for psychosocial symptoms among children in lower-middle-income communities as well as children from marginalized communities in the United States of America (Murphy & Jellinek, 1988; Murphy et al., 1992). The PSC categorizes psychosocial functioning symptoms in three broad subscales which include, *internalizing problems* (e.g., "Your child worries a lot"), *externalizing problems* (e.g., "Your child fights with other children"), and *attention problems* (e.g., "Your child gets distracted easily"). Parents respond to items on each subscale using a 3-item Likert scale: *Never* (0), *Almost Never* (1), *Sometimes* (2). To gain understanding of the significance of symptoms, all 35 items are summed for the total score. Higher scores indicate higher likelihood of a behavioral or emotional problem in the child (Wagner et al., 2015). The PSC-17 has demonstrated acceptable reliability scores ranging from .65 to .73 across the three subscales in US populations (see Gardner et al., 1999; Stoppelbein et al., 2011; Wagner et al., 2015) and good internal consistency (Cronbach's $\alpha = .87$) in an African setting (Lowenthal et al., 2011). Given that the caregivers in my study had to complete the 32-item APQ, I deemed it appropriate to use the 17-item PSC to collect data on children's psychosocial functioning. Prior to data collection the PSC-17 was translated into the local language Runyankole by a Ugandan bi-lingual expert but did not go through the rigorous cultural adaptation process as the APQ.

Data Analysis

Examining Multi-Collinearity

Prior to examining the factor structure of the APQ-Uganda_Revised, I first conducted bivariate correlation to examine relationships between the items and any multi-collinearity. According to Rockwell, (1975), high person correlation coefficients are an indication of multicollinearity (i.e., that those items are highly correlated). I used Field (2013)'s recommendation of removing all items with bivariate correlation coefficients greater than 0.8.

Exploratory Factor Analysis

To examine the factor structure of the Adapted 32-item Alabama Parenting Questionnaire (APQ-UG), I first performed an exploratory factor analysis (EFA) followed by a confirmatory factor analysis (CFA) in Mplus version 8.2 (Muthen & Muthen 1998-2011). I put all the 32 items into the EFA model for analysis. To reduce the likelihood that the results would be due to sampling variation, I randomly split the total sample into two halves using the split cases procedure in SPSS, with one subsample used for the EFA, and the other subsample used for the CFA. I used the first subsample to examine the factor structure underlying the 32-item APQ in Uganda (i.e., the EFA), and then used the second subsample to test or confirm the best fitting model for the structure identified in the EFA (i.e., the CFA) (Hu & Li, 2015). The weighted least squares mean, and variance adjusted (WLSMV) estimator to account for the categorical data with a goemin rotation, which is the default setting in Mplus. Using results from the EFA, I compared different solutions ranging from one to six factors, which is one factor higher than the five-factor structure proposed in research on the original APQ scale's factor structure (e.g., Brown, 2015; Frick, 1999). To determine the appropriate number of factors to extract for the EFA, I used Kaiser's rule of an eigenvalue greater than one, examined the scree plot (Field,

2013), and examined interpretability of the factors.

Confirmatory Factor Analysis

After identifying the appropriate number of factors, I tested the hypothesized factor structure using several CFA models. First, I removed any items that did not significantly load onto any factor as well as, items with high cross loadings, which I defined as a large ($>.30$) significant loading on more than one factor (Field, 2013). I then retained items using a cut-off of .40 initially. However, using a cut-off of .40 resulted in poor model fit across several models, so I tested subsequent models using a more stringent cut-off of .50 to see if I would obtain a much more robust theory that best accounts for the interrelationships between the underlying variables (Matsunaga, 2010). To determine the best fitting model, I used several indices that provide a measure of goodness-of-fit, including, $CFI \geq .90$, $TLI \geq .90$, $SRMR \leq 0.08$, and $RMSEA \leq 0.06$ (Kline, 2015).

Reliability and Validity of the APQ

After identifying a meaningful factor structure, I calculated McDonald's coefficient Omega to determine the measure's internal consistency (i.e., if the items on the APQ could measure the same construct consistently) of the hypothesized factor structure. I chose to calculate coefficient Omega (and not alpha) based in existing literature that supports using Omega as the best indicator of internal consistency of a measurement instrument (see Dunn et al., 2014; Goodboy et al., 2020; McNeish, 2018). To calculate Omega, data were imported into R software. The calculations of Omega from the different subscales and overall scores were conducted using the R package 'psych' (McDonald, 2006). I considered coefficient Omega of 0.70 as a good cut-off in our study research (see Dunn et al., 2014; Kline, 2016). Next, I examined the correlations between subscales in our final model and considered Pearson's correlation coefficient of 0.3 as

the cutoff for acceptable association (Wijesinghe et al., 2013). A final step involved examining the predictive validity of the adapted APQ by testing the relationship between parenting practices and the child psychosocial functioning (measured by the Pediatric Symptom Checklist; PSC-17).

Study Two Results

Factor Structure

Table 1.4. presents fit statistics for all models that led to my final model. Using Field's (2013) recommendation of removing all items with bivariate correlation coefficients greater than 0.8, I found no multicollinearity among the 32 items of the adapted APQ. The scree plot and examination of eigen values suggested examining a two-factor or five-factor solution to test using confirmatory factor analysis (CFA).

Table 1. 4. Fit indices for the CFA models tested in the process to reach the final model

Model	(X ²)	df	CFI	TLI	RMSEA	SRMR	p-value
Two-factor (.4 cut off)- model 1	592.01	229	.78	.76	.07	.09	<i>P</i> < .001
Two-factor (.5 cut off)- model 2	314.49	103	.81	.78	.08	.80	<i>P</i> < .001
Five-factor (.4 cut off)- model 3	413.78	179	.80	.74	.06	.08	<i>P</i> < .001
Five-factor (.5 cut off)- model 4	197.87	84	.86	.83	.07	.07	<i>P</i> < .001
Four-factor (.4 cutoff)-model 5	507.22	223	.81	.78	.06	.08	<i>P</i> < .001
Four-factor (.5 cut off) improved model after M.I.	158.71	71	.89	.86	.06	.06	<i>P</i> < .001

Table 1.4. (cont'd)

Final hypothesized factor	95.64	59	.95	.93	.04	.05	$P <$
(.05 cut off)- Model 8							.001

I began the CFA analysis by testing two sets of two-factor solution models (Table 1.4.). In these models, items indicating positive parenting and parental involvement subscales on the APQ (i.e., items #4, 5, 7, 10, 13, 14, 16, 17, 18, 24, 25, and 32) were merged into one factor (named effective parenting practices) and items indicating poor monitoring, inconsistent discipline, and corporal punishment subscales (i.e., items 6, 9, 11, 15, 19, 23, 27, 29, 30, and 31) were merged to form a second factor named ineffective parenting. First, I tested a model with 23 items that had a factor loading of $\geq .40$. This model yielded poor fit to the data $X^2(229) = 592.01$, CFI = .78, TLI = .76, RMSEA = .07, and SRMR = .09. Next, I increased the cut off to .50 and this resulted in discarding 7 items (namely 7, 9, 14, 15, 25, and 31) that had a loading below .50 from the analysis. I then tested another two-solution model with 16 items loading $\geq .50$. This model also had a poor fit to the data, $X^2(103) = 314.48$, CFI = .81, TLI = .78, RMSEA = .08, and SRMR = .08. Additionally, modification indices in two-factor models did not suggest any cross-loadings.

Based on previous APQ research that has supported a five-factor structure (e.g., in Badahdah & le, 2016; Florean et al., 2022; Shelton et al., 1996; Scott et al., 2011) and my EFA results (i.e., from the scree plot and eigen values), I then proceeded to test the five-factor solution. I followed a similar process as the two-factor solution analysis and first examined a model using items that had a factor loading $> .40$ from the EFA. This model yielded poor fit to

the data $X^2(179) = 413.78$, CFI = .80, TLI = .74, RMSEA = .06, SRMR = .08. I then examined another five-factor model that included only items with a factor loading higher than .50. Like the previous model, this model also yielded a poor fit to the data, $X^2(84) = 197.87$, CFI = .86, TLI = .83, RMSEA = .07, SRMR = .07. Additionally, the items on the fifth factor representing corporal punishment (i.e., items 28, and 31) did not load significantly on this factor.

These findings suggested further examination of a four factor-structure in greater detail. Based on my findings and previous literature supporting a four-factor structure of the APQ in other cultures (e.g., Esposito et al., 2016; Zlomke et al., 2014), I proceeded to examine a model four-factor structure solution. The first model I tested was identical to the five-factor model, but removed items that did not load onto the fifth factor, which created a four-factor model. The items deleted were items 3, 28 and 31. This model I tested consisted of 15 items and had improved but still not acceptable fit indices of $X^2(223) = 507.22$, CFI = .81, TLI = .78, RMSEA = .06, SRMR = .08. To further improve model fit, I examined modification indices and found that item number 22 (*'You get so busy that you forget where your child is and what he/she is doing'*) loaded onto multiple factors and had the highest expected parameter change associated with removing that item, which led me to discard that item and run the analysis again without item 22. This improved model fit it but was still not adequate $X^2(71) = 158.71$, CFI = .89, TLI = .86, RMSEA = .06, and SRMR = .06. Next, I examined modification indices a second time and found that item number 5 (*'You reward or give something to your child (e.g., a new dress/shirt) for obeying you or behaving well'*) loaded onto multiple factors (i.e., poor monitoring, involvement, and inconsistent discipline). I removed this item and re-ran the four-factor model again with no items 5 and 22. This greatly improved model fit $X^2(59) = 95.64$, CFI = .95, TLI = .93, RMSEA = .04, and SRMR = .05. In this model, all 13 items loaded highly and significantly

onto the four factors. I retained this as the final best-fitting model for the data. Table 1.5 includes an item-by-item analysis of why some items on the adapted 32-Item APQ did not make the final model with 13 items in the second study.

Predictive Validity of the APQ

I examined the strengths of the relationship between parenting practices, measured by the 13-item APQ (appendix E), and children's psychosocial functioning (i.e., externalizing, internalizing, and attention problems) as measured by the 17-item Pediatric Symptom Checklist (PSC-17) in a regression model. An English version alongside a translated version of the PSC-17 is included in the appendix. As hypothesized, the resulting measure with 13 items was related to various behavioral outcomes in Ugandan children. Specifically, positive parenting predicted lower externalizing ($\beta = -1.55$, $SE = .42$, $p < .01$), internalizing ($\beta = -1.22$, $SE = .28$, $p < .01$), and attention problems ($\beta = -0.93$, $SE = .31$, $p < .01$) in children. Conversely, inconsistent discipline predicted higher externalizing problems ($\beta = 2.24$, $SE = .65$, $p < .01$), internalizing problems ($\beta = .93$, $SE = .38$, $p < .01$), and attention problems ($\beta = 1.28$, $SE = .43$, $p < .01$) in children. There were no statistically significant associations between parental involvement and children's externalizing ($\beta = -0.33$, $SE = .463$, $p = .47$), internalizing ($\beta = -0.11$, $SE = .29$, $p = .69$) and attention problems ($\beta = -0.36$, $SE = .33$, $p = .27$). Similarly, no statistically significant associations were detected between poor monitoring/supervision and children's externalizing ($\beta = 0.10$, $SE = .44$, $p = .82$), internalizing ($\beta = 0.27$, $SE = .28$, $p = .24$), and attention problems ($\beta = 0.03$, $SE = .30$, $p = .90$).

Correlation Between Subscales

As it was hypothesized, the positive dimensions of the APQ (i.e., positive parenting and involvement) were positively correlated with each other, although the correlations were weak ($r = .12, p = .000$). Similarly, negative parenting subscales (except for corporal punishment), poor monitoring/supervision, and inconsistent child discipline also had a weak but still positive correlation ($r = .18, p = .001$). Lastly, inconsistent discipline had a weak significant positive correlation with parental involvement ($r = .06, p = .001$).

Reliability of the APQ

Finally, as a further measure of validity evidence, we examined the coefficient omega of the original 32-item adapted APQ and the Omega for the resulting four-factor scale with 13 items. The overall coefficient Omega for our final four-factor model was below the acceptable cutoff threshold (Omega = .57), indicating low reliability of the APQ items in my final model. Subsequent Omegas for each subscale were also inadequate. Similarly, coefficient Omega for each of the subscales in the four-factor model were all below the acceptable cutoff threshold; involvement omega was .46, positive parenting was .62, poor monitoring/supervision was .60, and inconsistent discipline Omega was .53. However, the Omega for the 32-item adapted APQ acceptable (0.74), which was above the threshold cutoff of .70. Three of the four subscales, the parental involvement (Omega = .74), positive parenting (Omega = .71), and poor monitoring (Omega = .71) had coefficient Omegas above the cutoff threshold. The Omega for the inconsistent subscale was poor (Omega = .36).

Discussion

Given that parenting plays a critical role in shaping various child development outcomes, it is important to develop psychometrically sound and culturally valid instruments to assess this important construct in diverse cultural settings. In this study, I sought to examine the validity evidence and psychometric properties of a culturally adapted 32-item APQ in a community sample of Ugandan caregivers of children between the ages of 6 and 18 years of age. Results from my study suggested that a brief 13-item version of the APQ (appendix E) in a four-factor structure solution had good fit to the data and relatively good predictive validity in detecting child externalizing, internalizing, and attention-related problems in the target Ugandan setting. This finding aligns with the larger APQ literature which found that APQ subscales were significantly associated with disruptive behavioral problems in children (e.g., Clayborne et al., 2021; Dadds et al., 2003; Hawes & Dadds, 2006; Roberts, 2009). The four-factor structure identified in Uganda was not surprising as it further punctuates the APQ's factor structure inconsistencies across samples and studies. For example, some studies from high-income countries (e.g., the USA) have identified the five factor sub-scales (e.g., Dadds et al., 2003; Essau et al., 2006; Frick, 1999; Shelton et al., 1996) and in other studies, three factors (e.g., Elgar et al., 2007; Maguin et al., 2016). Conversely, studies from diverse cultural settings like Romania, Mexico, Poland, and Qatar have supported the original five-factor structure in (Badahdah & Le, 2016; Florean et al., 2022; Roberts, 2009; Świącicka et al., 2019), while studies from Norway, Spain, and Portugal have identified three factors associated with the APQ (Clayborne et al., 2021; de la Osa et al., 2014; Molinuevo et al., 2011; Noguero et al., 2020). My study is the latest contribution to the literature of a four-factor model of the APQ in a community sample of Ugandan caregivers. However, given the immense diversity in the samples (e.g.,

children, adolescents, clinical versus community samples, etc.) used in the previous APQ studies, it would be somewhat difficult to compare some of my findings to the findings in the aforementioned studies.

Like in my study, a noticeable feature of APQ studies across samples and cultures is the use of confirmatory factor analysis (CFA) to examine whether “the data fit a hypothesized measurement model based in theory or previous research” (Świącicka et al., 2019, p. 9).

Although the APQ had been used previously in a Ugandan setting as a tool to assess four of the five parenting practices (Wieling et al., 2015), this study was the first to attempt to examine the factor structure and psychometric properties underlying the adapted version of the APQ in Uganda using the CFA approach. Additionally, I examined the predictive validity of the Uganda revised APQ by exploring if associations exist between parenting practices and children’s maladaptive symptoms (which in our study included externalizing, internalizing, and attention problems) reported by caregivers as hypothesized in APQ previous research (e.g., Dadds et al., 2003; Shelton et al., 1996).

Except for the corporal punishment dimension (which was deleted because the items supposed to correspond with this subscale cross-loaded on other subscales leaving the subscale with only one item), my four-factor model retained each of the parenting dimensions (i.e., involvement, positive parenting, poor monitoring/supervision, and inconsistent discipline) observed in the original APQ research (e.g., Frick, 1999; Shelton et al., 1996). The APQ’s four-factor structure observed in Uganda is consistent with previous APQ research that has observed a four-factor structure to be the best fitting model in the target settings (Cova et al., 2017; Escribano et al., 2013; Zlomke et al., 2014). In Cova et al. (2017)’s study in Chile, the four factors were labeled slightly differently; positive reinforcement, parental involvement,

inconsistent disciplinary practices, and punitive practices and in Zlomke et al. (2014) study involving US parents, the four factors were labeled: positive and involved parenting, parental monitoring, discipline practices, and discipline process.

The four-factor structure of the APQ-Uganda_Revised had many similarities to the structure identified in other APQ studies in diverse cultural contexts (e.g., Cove et al., 2017; Molinuevo et al., 2011; Noguero et al., 2020), thus supporting our *first hypothesis* (H1). For example, positive parenting practices and involvement items grouped together in our sample. Similarly, items corresponding to negative parenting practices of poor monitoring and inconsistent discipline (except for corporal punishment dimension) grouped together as hypothesized in this study. This finding shows that despite cultural differences, certain aspects of parenting appear to be universally shared (Roberts, 2009). In my study, I found that the items measuring positive parenting and poor monitoring practices were particularly highly endorsed. This could be due to a new generation of parents who have slowly begun to break away from traditional ways of parenting (e.g., using harsh discipline strategies) to embrace more positive parenting approaches, including having conversations with their children, teaching children rights, and others (e.g., Boothby et al., 2017; Walakira et al., 2021). Contrary to the traditional models where parents learned how to parent from their parents (i.e., intergenerational transmission of parenting), most Ugandan parents are seeking other ways to improve their parenting strategies (e.g., attending parenting workshops, TV programs on parenting etc.). Additionally, the widespread application of culturally adapted parenting interventions in Uganda (e.g., Siu et al., 2017; Wieling et al., 2015) could also explain the high endorsement.

Further, the predictive validity of the resulting 13-item scale was also evaluated against children's psychosocial functioning (i.e., externalizing, internalizing, and attention problems) in a regression model. As hypothesized, positive parenting practices (i.e., parental involvement and positive parenting) predicted less externalizing, internalizing, and attention problems while negative parenting practices predicted higher externalizing, internalizing, and attention problems in children of parents in this sample, thus supporting the initial validity of the 13-item scale in Uganda (Hypothesis 2). These results are consistent with previous APQ research that has shown that the relationship between parenting practices and children's maladaptive symptoms is bidirectional. For example, Świącicka et al., (2019) found that inconsistent discipline practices were most strongly associated with hyperactivity-impulsivity symptoms for both mothers and fathers while oppositional-defiant symptoms (ODD) symptoms were strongly associated with poor monitoring and supervision in a sample of 911 Polish mothers and 497 fathers of children between the ages of 6-13 years. In Spain, de la Osa et al. (2014) found strong associations between inconsistent discipline practices and children externalizing/conduct behaviors, while more internalizing, externalizing, and attention problems were detected in children in a sample of Qatari parents who were inconsistent at monitoring and disciplining their children (Badahdah & Le, 2016). Put together, this pattern of results seems to align with larger theoretical models in parenting research such as social interaction learning theory and coercion theory which suggests that when parents use more and more negative parenting practices to get their children to comply, it only exacerbates children's disruptive behaviors while positive interactional experiences between children and parents improve child behavioral and mental health outcomes. In summary, the association between parenting and children's psychosocial functioning symptoms detected using the APQ provides preliminary evidence that the 13-item version of the

APQ could be a potentially useful scale for use in the target Ugandan setting.

Relatedly, my third hypothesis that positive dimensions of the APQ would be highly correlated with each other as well as negative dimensions to be highly correlated, was inadequately supported. This result implies that there are no excessive overlaps between what the APQ subscales are attempting to assess (i.e., parenting practices) which is often the desired outcome (Lyons-Thomas, 2014). According to this author, a correlation of some sort is often expected to exist between subscales on the same measurement instrument, however, this inter-subscale correlation should not be too high (i.e., $> .50$) as this would indicate excessive overlaps between underlying constructs the various subscale on a given measurement instrument are attempting to measure. Although weak positive correlations were detected between APQ's positive dimensions (i.e., positive parenting and involvement) and negative dimensions (poor monitoring/supervision, and inconsistent discipline), the correlation of the latter dimensions ($r = .18$) was slightly higher than that between positive parenting and involvement ($r = .12$). This was not a surprising finding given that majority of the caregivers (over 80%) in our sample had between 3-5 children of different ages in their care; it would be quite challenging to supervise or consistently employ discipline with many children of varying ages in a single household.

The reliability estimates (as measured by McDonald's Omega) of the positive parenting and poor monitoring subscales were acceptable (.62 and .60), but the estimates for involvement (Omega = .46) and inconsistent discipline (Omega = .53) were weak. Moreover, the overall Omega for the 13-item scale was weak (Omega = .57). The issue of low reliability in our study has also been reported in previous studies validating the APQ in other settings. For example, Dadds et al., (2003) reported coefficient alpha of .55 for the poor supervision/monitoring subscale while Elgar et al., (2007) reported low alpha coefficient of .57 for the positive parenting

subscale and .62 in the inconsistent discipline subscale. Even though the low reliabilities reported in the above studies were detected only in certain subscales and not the entire scale (as it was in our study), low reliability presents some concerns that necessitate careful interpretation of data when using adapting an already existing scale for use in a new culture (Badahdah & Le, 2016).

The small number of items (13 items) in our final model could be one possible explanation for the low internal consistency estimates of our scale as it was in other studies (e.g., Elgar et al., 2007). Further it is highly likely that certain items in my final CFA model raised questions. For example, item number 30 (You punish your child, e.g., by giving them extra chores, removing privileges, when they do something wrong) was originally hypothesized to correspond with other discipline practices on the original APQ, but in the CFA for my study, this item loaded onto the poor monitoring subscale. I noted that this item (factor loading = .88) was the only one with a factor loading below 1 among the 13 items in our final model. Although its factor loading was still acceptable, it did not make cultural sense or even conceptual sense why an item on ‘punishment’ would load on a poor monitoring scale. Given that the items corresponding with Other Discipline Practices on the original APQ were not meant to be a subscale, it is highly likely that I needed to examine this item as a single-item measure rather than putting it on a subscale.

Including Other Discipline Practice Items and New Items

An interesting observation that may not be directly related to the findings of this study is that our study included the four items, numbers 34, 39, 40, and 42, representing the “other discipline practices” from the original APQ in our EFA analysis. These items are numbered 29, 30, 31, and 32 on the 32-item APQ-UG_Revised used in this study. Subsequently, only one item number 32 (#40 on the original APQ) (*You calmly explain to your child why his/her behavior was wrong when he/she misbehaves*) made it to the final hypothesized four-factor model. This is interesting because in the original conceptualization of the APQ, items corresponding to other discipline practices had no clear conceptual relationship with the five main dimensions of the APQ, yet they are part of the 42-item original APQ scale (see Dadds et al., 2003; Shelton et al., 1996). In fact, in several studies testing the psychometric properties of the APQ (e.g., Cova et al., 2017; Nogueira et al., 2020), only the 35 items corresponding to the five APQ dimensions are included in the analysis; the additional 7 items corresponding to other discipline practices are often discarded, citing that they created confusion, while in other studies, the brief 9-item APQ developed by Elgar et al. (2007) (which does not include other discipline practices items) is often preferred because it is short and takes less time to complete (Clayborne et al., 2021).

However, given that I removed items and added a set of entirely new items to the APQ during adaption process, I chose to include all items (including other discipline items) to see if I could learn something new about these items in the new cultural setting. Eventually, I learned that item number 32 (*You calmly explain to your child why his/her behavior was wrong when he/she misbehaves*) was highly endorsed by caregivers in my sample as manifested by the high factor loadings (1.47) of this item in our initial CFA model. One explanation for the high endorsement of this item by parents in our study could be related to recent changes in the Ugandan

parenting guidelines (e.g., Walakira et al., 2021). In recent years, the government of Uganda through its ministry of gender, labor, and social development and other children's rights organization have been emphasizing other ways of promoting child discipline besides the traditionally known practices such as corporal punishments and physical punishment (Walakira et al., 2021). The increase in research highlighting the detrimental effects of harsh discipline practices and child maltreatment (e.g., poor child mental health and academic child outcomes) in Uganda has seen the government of Uganda enact strict laws against child maltreatment and harsh discipline practices like corporal punishment. A last note on this point is that this could also be the reason why the corporal punishment subscale had only one item loading well on it, which led me to discard this subscale to arrive at my final four-factor model.

Overall, the factor structure, the correlations between the APQ subscales, as well as associations between parenting practices and children's psychosocial functioning symptoms aligned with all my hypotheses, suggesting that the 13-item version of the APQ maybe an initial brief tool for examining certain parenting constructs in the target Ugandan setting.

Strength and Limitations

Perhaps the number one strength of my study was the large sample size ($n= 618$), which provided smaller margins for sampling error (Taherdoost, 2017). This is the first study to evaluate the validity evidence for the APQ in Uganda and the first study to develop a valid and brief 13-item measure of parenting in Uganda. Having a valid, culturally adapted, and psychometrically sound instrument for assessing parenting in a diverse context such as Uganda is advantageous clinically and research-wise. It will strengthen the validity of research findings in future parenting intervention and survey of parenting practices studies in Ugandan settings for Runkayole speaking people (Ertl et al., 2011). Evaluating the validity of a freely available

measure of parenting reduces the cost and time of developing a completely new measure and increases access to screening tools in primary care and in educational settings in Uganda. Moreover, the resulting 13-item scale was translated and is now available in the target setting local language (i.e., Runyankole). I hope this can inspire and expand the scope of parenting research among Runyankole-speaking families because people are likely to feel comfortable to engage in research if the tool they are using is in their native language.

The 13-item adapted APQ from my study offered preliminary support that the adapted tool could be a good and brief tool for detecting significant effects in the children's externalizing, internalizing, and attention problems despite inadequate internal consistency. The measurement literature contends that a measurement scale must be valid, that is, it must measure what it is supposed to measure, even if it does so imprecisely (e.g., Boateng et al., 2018).

Like any other study, my study had some limitations. First, my study did not focus on developing a theory to explain or conceptualize parenting practices in the target group. Rather, I tested the validity of an already existing measure of parenting that was developed based on theories of parenting in a Euro-centric context (i.e., the USA). This approach seemed feasible given the resource constraints (i.e., time & money) to invest in developing a new tool. Nonetheless, this approach offered us insights into why some items did not work in the target setting for my study. Considering this limitation, future studies should seek to first develop a coherent and culturally relevant theory to explain the construct of parenting practices as it is understood among the Banyankole cultural group in Uganda. From here, the theorists can then develop and test assessment tools for parenting based on an indigenous theory rather than testing an instrument based on already existing measures based in Western constructions of parenting.

First, although we found the best fitting model for the data in a four-factor structure, the

process involved discarding as many as 19 items from the original adapted 32-item APQ from study one. Discarding items is a common practice in almost all studies evaluating the APQ's psychometric properties, however, I acknowledge the limitations that might come with this practice. Specifically, discarding items could reduce the scale's reliability as observed in my study. Therefore, the reader should consider the current findings as exploratory rather than explanatory and conclusive. These findings need to be validated in future independent studies. Second, given that the data for this study were drawn from only one cultural group in Uganda (i.e., the Banyankole caregivers), study findings and conclusions might not be generalizable. Uganda is an immensely diverse country with approximately 56 tribal groups, each with a unique language, culture, traditions, and parenting practices. Although there are commonly shared traditions and parenting practices across the 56 tribes, it would still be arrogant and naïve to assume and conclude that the Banyankole people (although are the second largest group in the country) are representative of the parenting nuances of all the tribal groups in the country. Considering this limitation, future studies should seek to examine validity evidence and psychometric properties of the APQ using samples from other cultural groups in Uganda and compare results with findings from our study. Relatedly, the child outcome measure (i.e., the Pediatric Symptom Checklist-17) used in this study was not culturally adapted to target population. Given this limitation, the findings related to the child outcome variable should be interpreted lightly. Future research should seek to conduct thorough cultural adaptation of the PSC-17 to Ugandan setting.

Implications

Despite above limitations, findings from the present study throw light on the factor structure and relevant psychometric properties of the adapted version of the APQ in a Ugandan setting. This is an important first step to validate the APQ in a Ugandan setting. To propel parenting research forward, future studies should evaluate whether the findings from this study can be replicated across various contexts in Uganda. For example, it would be interesting to investigate whether the 13-item tool observed in this study could validly assess the associations between parenting and child behavioral outcomes in families affected by HIV/AIDS, given the increase in research showing links between parenting and children behavioral outcomes among families affected by HIV/AIDS in Uganda and Africa (Ssewamala et al., 2022; Tutlam et al., 2023). Further, given that over 65% of the participants in our sample were from low-income and lived in rural areas, future research should investigate the usefulness and psychometric properties of the APQ among caregivers from urban and high-income settings in Uganda to see if a similar or even stronger psychometric properties might be detected. Finally, in addition to culturally adapting the PSC-17 (child outcome measure used in this study), research should also seek to adapt and investigate the factor structure and psychometric properties of the child self-report of the APQ in the Uganda context. This research should also evaluate how the both versions of the APQ (i.e., the parent-APQ scale and the child self-report) relate in the Ugandan setting.

Conclusions

The 13-item version of the APQ could be a useful tool for assessing relevant parenting outcomes associated with child behavioral and emotional symptoms in Uganda. As a result, the tool could be used by both clinicians and researchers who are interested in using brief culturally adapted assessment instruments to explore certain parenting practices in the target Ugandan setting. The resulting 13-item tool is brief and takes less time to complete. This is an advantage given that research participants' fatigue tends to negatively impact research outcomes. Nonetheless, future studies should seek to validate the current findings using caregivers across various sociodemographic backgrounds and other cultures in Uganda.

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APPENDIX A: ORIGINAL 42-ITEM ALABAMA PARENTING QUESTIONNAIRE

Directions: The following are a number of statements about your family. Please rate each item as to how often it typically occurs in your home.

Subscale	Item #	Item statement	1 Never	2 Almost Never	3 Sometimes	4 Often	5 Always
Parental involvement (10 items)	1.	You have a friendly talk with your child					
	4.	You volunteer to help with special activities that your child is involved in (such as sports, boy/girl scouts, church youth groups)					
	7.	You play games or do other fun things with your child					
	9.	You ask your child about his or her day					
	11.	You help your child with his or her homework					

	14.	You ask your child what his/her plans are for the coming day					
	15.	You drive your child to a special activity					
	20.	You talk to your child about his/her friends					
	23.	Your child helps plan family activities					
	26.	You attend PTA meetings, parent/teacher conferences, or other meetings at your child's school.					
Positive parenting (6 items)	2.	You let your child know when he/she is doing a good job with something					
	5.	You reward or give something extra to					

		your child for obeying you or behaving well.					
	13.	You compliment your child when he/she does something well.					
	16.	You praise your child if he/she behaves well.					
	18.	You hug or kiss your child when he/she does something well.					
	27.	You tell your child that you like it when he/she helps out around the house.					
Poor monitoring or supervision (10 items)	6.	Your child fails to leave a note or to let you know where he/she is going.					
	10.	Your child stays out in the evening past the time he/she is supposed to be home.					

	17.	Your child is out with friends you don't know.					
	19.	Your child goes out without a set time to be home.					
	21.	Your child is out after dark without an adult with him/her.					
	24.	You get so busy that you forgot where your child is and what he/she is doing.					
	28.	You don't check that your child comes home at the time she/he was supposed to.					
	29.	You don't tell your child where you are going.					
	30.	Your child comes home from school more than an hour past					

		the time you expect him/her.					
	32.	Your child is at home without adult supervision.					
Inconsistent discipline (6 items)	3	You threaten to punish your child and then do not actually punish him/her					
	8.	Your child talks you out of being punished after he/she has done something wrong.					
	12.	You feel that getting your child to obey you is more trouble than it's worth.					
	22.	You let your child out of a punishment early (like lift restrictions earlier than you originally said).					

	25.	Your child is not punished when he/she has done something wrong.					
	31.	The punishment you give your child depends on your mood.					
Corporal punishment (3 items)	33.	You spank your child with your hand when he/she has done something wrong.					
	35.	You slap your child when he/she has done something wrong.					
	38.	You hit your child with a belt, switch, or other object when he/she has done something wrong.					
Other Discipline practices (7 items)	34.	You ignore your child when he/she is misbehaving.					
	36.	You take away privileges or money					

		from your child as a punishment.					
	37.	You send your child to his/her room as a punishment.					
	39.	You yell or scream at your child when he/she has done something wrong.					
	40.	You calmly explain to your child why his/her behavior was wrong when he/she misbehaves.					
	41.	You use time out (make him/her sit or stand in a corner) as a punishment.					
	42.	You give your child extra chores as a punishment.					

Note: Replicates the Alabama Parenting Questionnaire scale (Frick, P.J. 1991)

APPENDIX B: REVISED 32-ITEM ALABAMA PARENTING QUESTIONNAIRE

Subscale	Item #	Item statement	Original, revised item from original scale, or new item
Parental involvement (7 items)	1.	You talk to your child (e.g., about his/her friends, plans for the day, favorite sport, plans for the following day)	Created by merging items #1, 9, 14, and 20 from the original scale
	4.	You volunteer to help with special activities that your child is involved in (e.g., sports, dance groups, church youth groups)	Not much revision; only replaced “boys/girls scouts” with “dance groups”
	7.	You engage in, or do fun activities (e.g., jump a rope, tell stories, go to parties, or visit friends) with your child	Replaced the word “play” in the original item with “engage.” Added examples of culturally

			relevant examples of “fun activities”
	10.	You help your child with his/her homework (e.g., doing it with child, paying someone to help your child if you are busy or are uneducated and can’t read)	Provided the examples of the various ways to “help child with homework”
	13.	You support or arrange for your child to attend a special activity e.g., by walking with the child to the activity, giving them transport, or paying a motorcycle rider (i.e., boda-boda) to take the child.	Revised by adding examples of other ways parents support their children to attend special event if they don’t own a car
	21.	You involve your child in planning family activities	Revised the wording on item 23 on the original scale to reflect the parent’s behavior
	24.	You attend PTA meetings, parent/teacher conferences, or other meetings at your child’s school.	Maintained original wording

Positive parenting (8 items)	2.	You teach your child good morals (e.g., asking for forgiveness, saying thank you, greeting and welcoming visitors, respecting elders etc..)	New item
	5.	You reward or give something to your child (e.g., a new dress/shirt) for obeying you or behaving well.	Minor revisions- Adding culturally resonant examples of rewards.
	12.	You teach or ensure that your children have technical skills (e.g., washing clothes, making baskets and mats, cooking, sowing clothes, milking cows etc.)	New item
	14.	You verbally praise or compliment your child if he/she behaves well or does something well.	Major revision- Merged items 2, 13, 27 on the original to form this item
	16.	You hug, give a hi-5, or pat your child when he/she does something well.	Minor revision: remove “kiss” and replaced it

			with hugging, hi-5, or pat child
	17.	You ensure that your child arrives to school on time	New item
	18.	You ensure that your child has school supplies (e.g., books, pens, pencils etc.)	New item
	25.	You teach your children life skills (e.g., working hard, saving money)	New item
Poor monitoring or supervision (6 items)	6.	Your child fails to ask for permission or inform you where he/she is going	Minor revision. Removed “leaving a note”
	9.	Your child stays out in the evening past the time he/she is supposed to be home.	Maintained original wording
	15.	Your child is out with friends you don’t know.	Maintained original wording
	19.	Your child is out after dark without an adult with him/her.	Maintained original wording
	22.	You get so busy that you forget where your child is and what he/she is doing.	Maintained original wording
	27.	Your child is at home without adult supervision.	Maintained original wording
	3.	You threaten to punish your child and then do not actually punish him/her	Maintained original wording

Inconsistent discipline (6 items)	8.	Your child persuades you not to punish them when they have done something wrong	Minor revision removed the phrase “talks you out of being punished” from item 8 on the original
	11.	It is difficult for you to discipline your child	Created by rephrasing item # 12 for clarity
	20.	You call off/stop punishing your child earlier than you originally said	Revised the phrase “let your child out of a punishment” on item 22 to “call off/stop”
	23.	You do not punish your child when he/she has done something wrong.	Minor revision
	26.	The punishment you give your child depends on your mood (e.g., when you are sick, have no money, etc.).	Minor revisions of item 31 on the original scale. Revisions were including

			examples to describe mood.
Corporal punishment (1 item)	28.	You physically punish your child (e.g., slap them, spank them, OR hit them with an object e.g., a cane, slipper) when they do something wrong	Major revision- created by merging items #33, 35 & 38 from the original scale
Other discipline practices (4 items)	29.	You ignore your child when he/she is misbehaving.	Maintained original wording
	30.	You punish your child (e.g., by giving them extra chores, removing privileges) when they do something wrong	Major revision- created by merged with items #36 and 42 of the original scale
	31.	You yell or scream at your child when he/she has done something wrong.	Maintained original wording
	32.	You calmly explain to your child why his/her behavior was wrong when he/she misbehaves.	Maintained original wording

APPENDIX C: TRANSLATED 32-ITEM UGANDA ALABAMA PARENTING

QUESTIONNAIRE

Endagiriro: Ebiri kukurataho ahaifo n'emishororongo eine akakwate n'okworikutwaza kworora n'okukuza abaana abari kutuura omuka yaawe. Ninkushaba ogyeragyeraanise buri gumwenk'oku oyosire notwaaza omuka yaawe. Ebigarukwamu ebiri kubaasika ni; Tikikabahoga (1), Tikiribaho (2), Obumwe n'obumwe (3), Emirundi mingi (4), Buriijo (5).

NYABURAWA BYONA BIGARUKEMU.

#	Omishororongo n'enshoboorora yaayo.	1 Tikikabahoga	2 Tikiribaho	3 Obumwe n'obumwe	4 Emirundi mingi	5 Buriijo
1.	Nogambaho n'omwana waaawe (eky'okureeberaho, aha bikwatiraine na banywani be, ebi ari kuteekateeka kukora eizooba eryo, emizaano ey'ari kukunda ninga ebi arikuteekateeka kukora kuburasheeshe)					
2.	Nooyegyesa omwana waawe emicwe mirungi					

	(eky'okureeberaho, nk'okushaba okusaasirwa, okwebaza hamwe n'okwakiira abagyenyi, kuha abantu bakuru ekitiinisa n'ebindi)					
3.	Nokangakanga omwana waawe kumufubira okiheza omureka?					
4.	Noohwera omwana waawe omu myoga y'omutaano ey'ari kwetabamu (eky'okureeberaho, emizaano, ebibiina by'okuzina, ebibiina by'eminyeto ahamaramizo)					

5.	Noohereza omwana waawe ekiconco ninga ekindi kintu (eky'okureeberaho ekiteeteeyi kisywa/esaati nsya) ahabw'okukworobera ninga kugira emicwe mirungi.					
6.	Omwana waawe takukushaba rusa ninga kukumanyisa ahari kuba naaza					
7.	Nooyekwatiramu ninga okora otuzaanozaano (eky'okureeberaho; okuguruka omuguha, okutebya ebitebyo, kuza okutaaha obugyenyezi ninga kutayaayira					

	abanywani) n'omwana waawe.					
8.	Omwana waawe naakubeihabeiha obutamufubira yaakora kubi.					
9.	Omwana waawe naakyererwa kugaruka omuka omu mwabazyo arenzya eshaaha ez'ashemereire kuba ari omuka					
10.	Noohwera omwana waawe aha bibaamuha ah'eishomero (eky'okureeberaho kubikora nawe nari kumurondera ow'okumuhweraho waaba otaine bwire)					

11	Nikikugumiira kuhana omwana waawe					
12.	Nooyegyesa ninga oreebeka ngu omwana waawe aine omwoga ogwari kumanya (eky'okureeberaho okwozya emyenda, okuruka ekiibo nari omukyeeka, okukama ente n'ebindi)					
13.	Noohagira ninga nootaho entebekanisa y'okukureeba ngu omwana waawe yaaza aha myoga y'omutaano (eky'okureeberaho n'ogyenda nawe, nomuha sente z'okumutwara					

	ninga omuvuga, n'ebindi)					
14.	Nohaisa ninga nosiima omwana waawe ku ari kugira emicwe mirungi ninga yaagira eki yaakora gye					
15.	Omwaana waawe naatayaayira banywani be otakukimanya					
16.	Omwana waawe nomubumbatira, ninga omukongota ah' ibega ku ari kugira eki yaakoragye					
17.	Noorebeka ngu omwana waawe yaahika ah'eishomero omu bwire					

18.	Noorebeka ngu omwana waawe aine eby'eishomero byona (eky'okureeberaho, ebitabo, obucumu, ekaramu n'ebindi)					
19.	Omwana waawe naakyereererwa aheeru bwira atainayo muntu mukuru weena.					
20.	Eby'okufubira omwana waawe nk'oku waaba omuraganiise nooheza obirugaho					
21.	Nooreka omwana waaawe ayejumbira omu kutebekanisiza emyoga y'ahaka					

22.	Noorabanamu munonga ohika n'ahakwebwa omwana waawe ahu ari n'eki ari kukora					
23.	Torikufubira mwana waawe ku ari kukora ekintu ekitashemeire					
24.	Nooza omu nkiiko z'abashomesa n'abazaire, emishomo y'abazaire n'abashomesa ninga ezindi nkiiko ah'eishomero ry'omwana waawe.					
25.	Nooyegyesa omwana waawe okugira obwengye bw'okwebisaho (eky'okureeberaho					

	okukora n'amaani, nk'okubiika sente)					
26	Ekifubiro eky'orikuhereza omwana waaawe nikirugiriira omu muringo ogw'orikuba orimu. (eky'okureeberaho waaba orwaire, otaine sente)					
27.	Omwana waaawe naaba ari omuka atainayo muntu mukuru w'okumureeberera.					
28.	Noofubira omwana waaawe (eky'okureeberaho kumuteera oruhi, ninga kumuteeza ekintu					

	nk'omunyanfu, "siripa") yaagira ekiyaashobya					
29.	Torikufa aha mwana waawe ku arikugira emicwe mibi					
30	Noofubira omwana waawe (eky'okureeberaho; ori kumuheereza emirimo emurengire, omwaaka emigisha ye) ku ari kukora ekitashemeire					
31.	Nooyamira ninga okankamira omwana waawe yaakora enshobi					
32.	Nooyetwara oshobororagye omwana waawe oku emicwe ye etari mirungi ku arikugira eki yaashobya.					

APPENDIX D: TRANSLATED PEDIATRIC SYMPTOM CHECKLIST

Instructions: Emotional, behavioral, and physical health go together in children. Because parents are often the first to notice a problem with their child's behavior, emotions or learning, you may help your child get the best care possible by answering these questions. Please mark under the heading that best fits your child.

Item Description	Never (0) Tikikabahoga	Sometimes (1) Obumwe n'obumwe	Often (2) Emirundi mingi
1. Is fidgety, unable to sit still Naaguma naimukyera, tarikushutama akahamira hamwe			
2. Feels sad, unhappy Naayehuriramu obusaasi, tashemereirwe			
3. Daydreams too much Naaroota munonga ebya nyomushana			
4. Refuses to share			

Tarikukunda kubagana n'abandi			
5. Does not understand other people's feelings Tarikwetegyeereza oku abandi barikwehurira			
6. Feels hopeless Naahurira ayehweire amatsiko			
7. Has trouble concentrating Tarikuhamira aha kintu kimwe			
8. Fights with other children Naarwana na bagyenzi be			
9. Is down on himself or herself			

Naayegaya, ayegaruza ahansi			
10. Blames others for his or her troubles Naagira ngu bataahi be nibo bamureeteire oburemeezi			
11. Seems to be having less fun Takishemererwa nkenyimaho			
12. Does not listen to rules Tarikuhurikiza biragiro			
13. Is hyperactive Nayeshunga			
14. Teases others Naarahura abandi			
15. Worries a lot			

Naayerarikirira munonga			
16. Takes things that do not belong to him or her Naatwara ebintu bitari bye			
17. Gets distracted easily Naarahuka kuhuga			
TOTAL SCORE			

APPENDIX E : 13-ITEM UGANDA ALABAMA PARENTING QUESTIONNAIRE

APQ subscale	<i>Item statement</i>
Parental involvement (PI)	
	4. You volunteer to help with special activities that your child is involved in (e.g., sports, dance groups, church youth groups)
	7. You engage in, or do fun activities (e.g., jump a rope, tell stories, go to parties, or visit friends) with your child
	32. You calmly explain to your child why his/her behavior was wrong when he/she misbehaves.
Positive parenting (PP)	
	12. You teach or ensure that your children have technical skills (e.g., washing clothes, making baskets and mats, cooking, sowing clothes, milking cows etc.)
	17. You ensure that your child arrives to school on time
	18. You ensure that your child has school supplies (e.g., books, pens, pencils etc.)
	24. You attend PTA meetings, parent/teacher conferences, or other meetings at your child's school.
Poor monitoring/supervision (PM)	
	19. Your child stays out in the evening past the time he/she is supposed to be home.

	27. Your child is at home without adult supervision.
	30. You punish your child (e.g., by giving them extra chores, removing privileges) when they do something wrong
Inconsistent discipline (ID)	
	6. Your child fails to ask for permission or inform you where he/she is going
	23. You do not punish your child when he/she has done something wrong.
	29. You ignore your child when he/she is misbehaving.

APPENDIX F: EXPERT INTERVIEW QUESTIONS

Thank you for agreeing to be part of this study and helping me with my dissertation research that is examining the validity and cultural relevance of items on a measure of parenting called the Alabama Parenting Questionnaire (APQ). As I mentioned to you in my email, this tool was originally developed and tested in the USA primarily among English-speaking families. The tool has been adapted for use in many international studies of parenting but not in Uganda. I am looking forward to hearing your thoughts on how you think this tool could be useful in our Ugandan cultural setting as an expert. I have drafted a set of questions to guide our conversation today. However, feel free to interrupt and ask or clarify something you might not be clear about. Lastly as a reminder, I will be recording our interview today. Are we good to go? YES/NO

1. I sent you an email with the APQ attached a few days ago, did you get a chance to read through the items? Do you have any questions related to the tool?
2. What were your general first impressions of the tool?
3. What items did you like and why?
4. What items do you think are relevant in the context of the parents you work with in Uganda?
5. What items do you think are missing on this tool? In other words, if you are to revise this tool, what would you add/remove to make the measure culturally relevant in a Ugandan setting?
6. In general, how important is parenting to you as a practitioner?
7. As a professional, what parenting practices do you think are the most important in supporting children's mental, emotional, social, intellectual, and behavioral development?

Those were my questions, thank you for your time, do you have any other comments to add, or clarifications to make?

APPENDIX G: COGNITIVE INTERVIEW GUIDE

Procedure to Follow During the Interview with each Parent/Caregivers (Researcher don't read steps 1-7 to participants aloud to participants)

Step 1: Researcher, hand a copy of the study informed consent, a social demographic survey, and a Runyankole APQ to the parents

Step 2: Review consent procedures with parents and allow them 5 mins to complete the demographic questionnaire.

Step 3: Researcher/interviewer, 1) read aloud each item to the participants, 2) ask what the item means for the participant, 3) ask if it applies in their parenting, 4) probe for participant's understanding and areas of confusion of the item.

- **NB:** You can read the item in both Runyankole and English if the participants wants both but let the primary language be Runyankole.

Step 4: ask parent/caregivers to repeat back what they heard and what they believed the item was asking.

Step 5: ask participants for suggestions regarding how they would modify the item for it to be easily understood and culturally relevant to Runyankole-speaking parents

Step 6: ask for parent's overall impression of the tool e.g., is it a good tool to assess parenting in the Ankole cultural context? If yes/NO, ask parent to give reasons.

Step 7: Researcher ask parents to describe their overall understanding of the concept of parenting, including what they think are the most important parenting practices to support children's growth

Instructions to be Summarized Out loud to all Parent Participants

(Start the Audio-Recording Here-you don't have to read verbatim all the info here but summarize key things e.g., purpose of the study and what the participant will be asked to do)

During the next few weeks, we are asking parents and/or caregivers of children below the age of 17 years in Ankole region about the different actions they take, things they say, and attitudes they take, to support their children's emotional and behavioral development. Such actions/attitudes are known as **parenting practices**. The purpose of these interviews is to help us test the usefulness and cultural appropriateness of the Alabama Parenting Questionnaire (APQ), which is a tool (developed in the USA) used to assess 5 parenting behaviors/practices of; 1) positive parenting, 2) parental involvement, 3) monitoring/supervision, 4) inconsistent discipline, and 5) corporal punishment. I will hand you this tool in a minute..!

As a parent, you will be asked to provide verbal feedback on each item, response categories, and your overall impression of the content on the tool as well as, your knowledge of the concept of parenting among the Banyankole culture. Sometimes I will ask you questions about how you chose your answer. These questions will help us (me) to learn when and where I can improve this assessment tool for it to be used in Ankole region and/or, even in Uganda. The interview should take between 40-50 minutes depending on you, and your parenting experiences. If you need to take a break at any time, please let me know.

This project is a dissertation of Mr. Asiimwe Ronald, a native of Ibanda district, who is currently completing his PhD in Marriage and Family Therapy at Michigan State University in the U.S.A. You will be given a small token of 30,000 UGX as an appreciation for your time and helpful insight. It would be helpful to me if I recorded our interview so that we can go back and listen to what you said. Again, all your information will be kept confidential and when using any of your

statements from this interview, your names and identity will be concealed. Is it okay if I go ahead and record our interview?

Structured Probing Questions for Cognitive Interviews

A). Warm up Question:

1. What did you understand to be the main purpose of our interview today?

B). Comprehension (question intent and meaning)

2. Can you please repeat aloud the statement/item I just read to you?
3. In your own words, what do you think this statement is asking? OR What does this statement mean to you? How does this statement apply to you as a parent?
4. Was the statement easy or hard to understand? What do you think made it easy/hard for you to understand?
 - a. If the statement was difficult to understand, what would you add/remove from this statement for it to be easily comprehensible/understood to you?

C. General Impressions of the Tool

5. We have gone through all the items on the APQ, overall, what are your impressions of the measure?
6. What would add/remove from this tool for it to be easily comprehensible/understood by a Ugandan (specifically a Munyankole) parent?

C). Knowledge about Parenting and Parenting Practices

7. In general, how important is parenting to you? How about in Banyankole families, how and why is parenting important?
8. As a parent, what parenting practices do you think are the most important in supporting your children's mental, emotional, social, intellectual, and behavioral development?

Can you rate the importance of the following parenting practices (e.g., positive parenting, parental involvement, monitoring/supervision, child discipline, and corporal punishment, as well as provide me with behavioral examples of each parenting practice.