

Exploring the knowledge and needs of early childhood development practitioners from a low-resource community

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ABSTRACT

Early childhood development (ECD) practitioners from low-resource communities may find it challenging to provide developmentally appropriate services to support child development, due to the increased risk of developmental delays. Practitioners rely on their ECD knowledge when delivering ECD services, but many practitioners in South Africa are underqualified. The knowledge and needs of practitioners from low-resource communities should be explored to develop and implement appropriate support services. A combined Knowledge of Infant Development Inventory (KIDI) and KIDI-Preschool (KIDI-P) tool was used to investigate ECD knowledge, and a questionnaire was utilised to determine participants' needs. The mean score for their ECD knowledge was 47.0%. ECD qualification and experience were not identified as significant contributors for better knowledge scores, but having a high school education ($\beta = 4.702, t = 3.387, p = 0.001$), being a parent ($\beta = 3.764, t = 2.091, p = 0.038$), training completed 5 or more years ago ($\beta = 4.271, t = 2.142, p = 0.034$), and a need for information on developmental milestones ($\beta = 2.399, t = 1.992, p = 0.048$) were. The most commonly reported need was related to training and furthering knowledge. The findings provide insight into the knowledge base of ECD practitioners, their needs as well as significant contributors to better ECD knowledge. Implications for practice can be guided by the Nurturing Care Framework (World Health Organization 2019), since the participants and findings from the study can be contextualised within it. ECD practitioners, especially those from low-resource communities, need adequate support in the crucial role they are playing. Further research should be conducted to determine consistency of the findings.

Keywords: early childhood development; practitioners; low-resource; knowledge; needs; challenges; predictors; contributors; qualification; experience

Introduction

Importance of ECD and the role of ECD practitioners

The sensitive period of brain development during the early years of children's lives forms the basis for future learning success (Atmore, Van Niekerk & Ashley-Cooper, 2012a; Biersteker, 2012). Evidence shows that the first few years are an opportunity for significant benefits due to effective interventions, but also great susceptibility for harm when exposed to damaging experiences (Richter et al., 2017).

The role of early childhood development (ECD) practitioners is thus central to the prevention and early identification of developmental delays, in addition to moulding children's early learning outcomes (DoSD, 2015; Joo et al., 2019). ECD practitioners rely on their knowledge of child development when providing developmentally appropriate services (Mpofu & Shumba, 2012). Knowledge shapes practice (Sheridan, Edwards, Marvin & Knoche, 2009) and therefore knowledge is central to what practitioners deem important in early development and should be investigated. The services and support provided by ECD practitioners are directly linked to school readiness and may improve later educational outcomes, in particular for vulnerable children from low-resource settings who are at-risk of developmental delays (Slemming & Saloojee, 2013; South African Department of Social development [DoSD], 2015).

ECD in low-resource communities

Globally, extreme poverty affects an estimated 200 million children under the age of five years, of which 40% are from lower middle-income countries [LMIC] (Dreyer, 2011). During early development, children from low-resource communities are at risk of not having their learning needs met (Ebrahim, Seleti & Dawes, 2013) due to the cumulative effect of early biological and psychosocial risks including nutritional deficiencies, violence and insufficient learning opportunities (Samuels, Slemming & Balton, 2012). In South Africa specifically, more than half of children live in severe poverty which makes them extremely vulnerable, discriminated against and isolated (Atmore et al., 2012a). To ameliorate the potential impact of risks and to optimise early development of young children in South Africa, appropriate stimulation of ECD should be prioritised (Atmore, Van Niekerk & Ashley-Cooper, 2012b). Emphasizing the focus on early development as a means to improve developmental outcomes has been advocated for across the globe (Anderson et al., 2003; Mpofu & Shumba, 2012; DoSD, 2015). In a few African LMIC, such as South Africa, Kenya and Zimbabwe, the importance of ECD has been acknowledged in articles and policy documents (DoSD, 2015; Mbugua, 2009; Mpofu & Shumba, 2012).

The Nurturing Care Framework is a universal framework developed in 2018 by UNICEF, World Health Organization (WHO) and the World Bank, together with other stakeholders such as the Early Childhood Development Action Network and the Partnership for Maternal, New-born and Child Health (WHO, 2019). The importance of nurturing care and all components related to it are emphasised and the framework was developed in response to the need for institutions to work towards shared goals in ECD together, and to inspire other stakeholders and governments (WHO, 2019). Nurturing care consists of a set of conditions that support children's health, nutrition, security and safety, opportunities for early learning and responsive caregiving (Black et al., 2017; WHO, United Nations Children's Fund & World Bank Group, 2018). A set of enabling environments are needed to support nurturing care and consists of enabling policies, supportive services, empowered communities and caregivers' capabilities (Black et al., 2017; WHO et al., 2018). ECD practitioners, their knowledge and their needs fall within this framework under the components required for nurturing care, namely

the provision of early learning opportunities. The services they render are categorised under one of the enabling environments needed, namely supportive services.

Opportunities for early learning provided in an enabling environment, namely supportive services (WHO et al., 2018), takes place in many settings including at home with parents and at ECD centres. In South Africa, ECD centres can be described as facilities for children from birth up to the year before they enter formal schooling, where they are provided with care and early childhood programs focusing on development and early learning (DoSD, 2014; DoSD, 2015). Historically, however, the care of young children in South Africa was focused on child-minding rather than child-rearing, but the focus shifted with the influence of the DoSD (Williams, Samuels, Mouton, Ratele, Shabalala, Shefer & Strebel, 2001). An increase of 40.3% (three- to four-year olds) and 34.3% (five- to six-year olds) in ECD centre attendance from 2002 to 2011 was reported in South Africa (Hall, 2013). Changes in family structures and roles, such as nuclear families replacing joint families and higher employment rates amongst mothers (Sharma, Sharma Sen & Gulati, 2008), can possibly explain the increased need for ECD centres in low-resource communities. ECD centres can be seen as a viable platform to reduce the effects of environmental risks through effective stimulation (Biersteker, 2012). Quality practitioners with strong ECD knowledge are empowered to create an environment for optimal and holistic development (Atmore et al., 2012a).

Knowledge of ECD practitioners

Advancement in knowledge is closely associated with higher education coursework (Zaslow, 2009), such as formal training. ECD practitioners should be formally trained, according to an accepted standard, in childhood development, suitable teaching and assessment skills, curricular development, parent involvement and individual diversity (Mpofu & Shumba, 2012). A national audit indicated that more than 40% of South African practitioners did not complete high school and more than half did not have any ECD specialization (DoSD, 2014) like a certificate, diploma or degree. In South Africa in general, only 28.4% of people aged 20 years or older completed high school and it is commonly found in low-resource communities for only a small percentage of the population to have completed high school and an even smaller percentage to have tertiary education (Statistics South Africa, 2011). A lack of funding was identified as one of the reasons why practitioners are not formally trained (DoSD, 2015) and could be due to a shortage of financial support from ECD centres or government departments (Connors, 2019). Additionally, it may be difficult logistically to schedule training and workshops into fixed daily programs (Connors, 2019). Limited knowledge can lead not only to inadequate stimulation of children, but also delayed or missed identification of developmental delays (Ebrahim et al., 2013).

There is, however, countering evidence concerning the influence of training or qualification on ECD practitioners' knowledge (Zaslow, Tout, Halle, Whittaker & Lavelle, 2010). Higher qualification levels are not always associated with better quality care and teaching (Atmore et al., 2012a) as inconsistent links between practitioner education and classroom quality have been reported (Connors, 2019). This may be due to a lack of practical demonstration and instruction during training, as well as a lack of on-site follow-up support to ensure the implementation of theory (Atmore et al., 2012a). Policy recognises this by emphasizing that the quality of services is also dependent on the supervision and mentoring of ECD practitioners and qualifications alone do not automatically improve quality (DoSD, 2015).

ECD knowledge encompasses more than just theoretical knowledge (Campbell-Barr, 2017). A model developed by Basil Bernstein recognised that professionals in early development, such as ECD practitioners, make use of both theoretical and practical knowledge (Campbell-Barr, 2017). Hands on experience is, therefore, another important factor that influences ECD practitioners' knowledge. To date it seems as if there are no clear results on experience as a predictor for knowledge specifically. Experience has been suggested to be an important predictor for quality care (Degotardi, 2010), while a negative relationship between experience and quality services was found and could exist due to burnout in the demanding and poorly paid profession as well as upward progression in the system for enhanced staff (Human Sciences Research Council [HSRC], 2009).

The foundation of developmentally appropriate practice remains knowledge of ECD (Mpofu & Shumba, 2012). The quality of ECD services cannot be solely dependent or attributed to one factor such as qualification or experience alone. The knowledge that ECD practitioners possess regarding early development needs to be explored, as well as the associations between different factors and knowledge. As a way to assess the knowledge of ECD practitioners, the Knowledge of Infant Development Inventory (KIDI) and KIDI-Preschool (KIDI-P) can be used. Globally, the KIDI is the most commonly used tool to measure caregiver's knowledge of child development and parenting of children (Bornstein, Cote, Haynes, Hahn, & Park, 2010). The KIDI is deemed applicable for the ECD practitioner population as they are one of children's primary caregivers and involved in their early development. The KIDI has been used with participants from low to high SES (Ruchala & James, 1997; Bornstein et al., 2010).

The strengths and gaps in the knowledge of ECD practitioners should be identified in order to prioritise where the greatest support is required and what strengths can be built upon. This study aimed to investigate the knowledge, its influencing factors, and needs of ECD practitioners working in a low-resource South African community in regards to development in young children (birth to six years).

Materials and method

A descriptive survey design was used to evaluate and describe the knowledge and needs of ECD practitioners regarding ECD.

Settings and participants

The sample included 200 ECD practitioners working in a low-resource community in Tshwane, South Africa. African languages are mostly spoken in this community (Table 1), although early childhood learning services are predominantly offered in English across South Africa (DoSD, 2014).

ECD centres were identified through two ECD forums where principals of 50 centres located in the targeted community, were approached. All 50 ECD centres gave consent to participate. Two hundred ECD practitioners from the identified 50 ECD centres agreed to participate in the study. ECD practitioners had to meet the following inclusion criteria; over the age of 18 years; working full time at the ECD centre with children between birth and six years since this is the age range for ECD in South Africa; with language proficiency in English or Northern Sotho, because the questionnaires were only available in these two languages; and at least a grade seven level reading skill in one of those two languages since the questionnaires were set up to accommodate this reading level.

Procedures

Institutional review board clearance was obtained from the Faculty of Humanities, University of Pretoria Research Ethics Committee (HUM 011/0219). Thereafter, permission from all the principals of the identified centres was obtained to approach ECD practitioners at their centres. The principals were asked to invite all willing ECD practitioners to participate in the study. It was emphasised to the principals that participation was voluntary and all practitioners did not have to be a part of the study. The informed consent letters also stated that participation was voluntary, the participants could withdraw at any point in the study and that there was no penalty or loss of benefit if they did not partake in the study. The principals were asked to distribute the informed consent letters, which were in English, and tools (the biographical questionnaire and the combined KIDI questionnaire), which were available in both English and Northern Sotho, to the ECD practitioners. Simple language was used in the consent form to ensure readability. The forms were provided in hard copy and were filled out by hand. Completion of the tools took 30 minutes on average. Participants who had questions regarding the forms, were visited at the respective ECD centres to attend to their queries. The forms were collected by the first author from each centre. Each ECD centre was called to confirm when they were ready for

collection. All tools were handed out and collected over the course of about six weeks.

Table 1. Setting and participant description

Setting and participant description	
Average household income	R1600 (€97.66) or less per month in 40.1% of population (Statistics South Africa, 2011).
Female headed households	One third of households (Statistics South Africa, 2011).
Tertiary education qualification (≥ 20 years)	9.5% (Statistics South Africa, 2011).
Languages spoken	Northern Sotho (Sepedi) 42.3%
	isiZulu 12.2%
	Xitsonga 10.7%
	isiNdebele 8.8%
	English 2.1%
	Afrikaans 0.8%
	IsiXhosa 2.2%
	Sesotho 6.7%
	Setswana 6.6%
	Sign Language 0.4%
	SiSwati 2.8%
	Tshivenda 2.5%
	Other 1.9% (Statistics South Africa, 2011).

Measures

Biographical information

ECD practitioners' biographical information was obtained by means of a questionnaire specifically tailored to the purpose of the study and the selected participant population. The questions were closed as well as open-ended. The questionnaire contained 12 open-ended questions and aimed to gather biographical information such as the practitioners' age, the year in which training was completed as well as where it was done, their needs, challenges, if support was wanted and perspectives. There were 10 closed-ended questions such as how many years' experience they had, which type of qualification they had, the age group they are working with and yes/no questions. The biographical questionnaire was available in English and Northern Sotho.

Knowledge of early childhood development

Knowledge of ECD was investigated by using a combined version of the KIDI (MacPhee, 1981) and the KIDI-P, to evaluate the participants' knowledge of young children and their typical development. The following four

domains are covered in the KIDI tool: norms and milestones, principles (developmental processes, axioms and truisms about development, normal and atypical development, general abilities), parenting, and health and safety (MacPhee, 1981). The KIDI focuses mostly on infants and toddlers (age range of birth to three and a half years), while the KIDI-P focuses on the preschool population (birth to six years). The KIDI has proven validity and reliability (National Centre on Child Abuse Prevention Research, 2005). The KIDI was standardised using four different groups including: mothers, paediatricians, college students and doctoral level psychologists (MacPhee, 1981). The mean proportions of total items correct were .72, .87, .62, .86, for mothers, paediatricians, college students and doctoral level psychologists respectively (MacPhee, 1981). There was a positive correlation between the number of items correct and the professional and practical experience with children (Bornstein et al., 2010). The KIDI also has a split-half reliability coefficient of .85 for mothers, a two-week retest coefficient of .92 and it is also highly stable (Bornstein et al., 2010). The KIDI has evidenced construct validity as it relates to other measures of the knowledge of mothers towards child development and also to the actual development of children (Bornstein et al., 2010). Tool completion requires only a seventh-grade reading level (National Centre on Child Abuse Prevention Research, 2005) and items are worded to be unrestricted by sociocultural biases (MacPhee, 1981).

The combined tool was available to the participants in English and Northern Sotho. The tool is divided into two subsections which both encompass all four domains mentioned previously although response options differ. In subsection one, the available responses were *Agree*, *Disagree* or *Not sure*. The possible answers in subsection two were *Agree*, *Younger*, *Older*, or *Not sure*. Scores were determined for each subsection (subtotal one and subtotal two) as well as for the total questionnaire, labelled as *ECD knowledge score*. Subtotal one was a score out of 50 and subtotal two was a score out of 31. The ECD knowledge score was the sum of subtotal one and subtotal two, which thus was a score out of 81. Sample questions are given in the results section in Table 3. The rigorous process of translating and verifying the tools were based on the International Test Commission (ITC) Guidelines for Translating and Adapting Tests [Second Edition] (Gregoire, 2018).

Analyses

The quantitative data was recorded on a MS Excel datasheet that could be imported to statistical software, Statistical Package for the Social Sciences (SPSS) version 25, for analysis. The qualitative data was coded on a MS Excel datasheet for analysis and interpretation. Descriptive and inferential statistics were used to analyse the outcome of the quantitative data by using SPSS version 25. A stepwise linear regression model was run to identify variables that predicted better ECD knowledge. The aim was to investigate whether eight specific variables (qualification level [less than high school education, high school education, and diploma or certificate in ECD], when training was completed, being a parent, years working as an ECD practitioner [experience], when training was done, currently enrolled in training, participant age and a need for information on developmental milestones) would predict better ECD knowledge scores. For the stepwise procedure, all eight variables were put into the model and SPSS did a stepwise procedure to include the significant variables. A significance level of <0.05 was used to determine statistical significance. A thematic coding approach was used to analyse the qualitative data where a code is given to all parts of data (Robson, 2011). Main themes and sub-themes were then created by grouping codes with the same label which can be used for interpretation (Robson, 2011). ATLAS.ti version 8.4.3 contributed to the preliminary data analysis after data was coded by the first author. Themes were then agreed upon and finalised through consensus amongst all the authors, resolving any queries regarding questionnaire responses. These steps were implemented to limit research bias and ensure trustworthiness of the analysis (de Vos, Strydom, Fouché & Delpont, 2011; Leedy & Ormrod, 2015)."

Regarding the sample size of the study, typically, for regression analysis, the recommendation is that at least ten observations be used for every predictor in the model (Austin & Steyerberg, 2015). Thus, if all eight variables are entered into the model, the minimum sample size requirement for the study is 80. Since there are 200 participants, the sample size is adequate. In addition to this, after the statistical analysis was performed, G*Power version 3.1.9.4 was used to calculate the obtained power of the study which equalled 0.987 which is an ideal level of statistical power.

Results

Description of participants

Participants ranged between 19 to 64 years [$M=35.9$, $SD=10.5$] (Table 1). Most participants (80.9%, $n=157$) had seven or less years of experience as an ECD practitioner, with approximately half (50.5%, $n=98$) having three or less years of experience. Less than half (44.9%, $n=88$) of the ECD practitioners had a qualification in ECD, but 97.9% ($n=190$) were interested in further training. A *lack of funding* was the greatest theme identified under the open-ended question regarding the reason why acquiring an ECD qualification was difficult. A *love for children* was the biggest theme categorised under their motivation for choosing this profession.

Table 2. Participant characteristics ($n=200$)

Characteristics	Sample
Age [years] ($n=193$) *	Mean 35.9 ($SD = 10.5$; range 19-64; $n=193$)
Years of experience as ECD practitioner ($n=194$) *	0-3 years = 50.5% ($n=98$) 4-7 years = 30.4% ($n=59$) 8-11 years = 9.8% ($n=19$) 12+ years = 9.3% ($n=18$)
Own children ($n=196$) *	Yes = 88.8% ($n=174$) No = 11.2% ($n=22$)
Qualification level ($n=183$) *	Less than high school education = 24.0% ($n=47$) High school education = 24.5% ($n=48$) Certificate in ECD = 42.3% ($n=83$) Diploma in ECD = 2.6% ($n=5$)
Years since ECD training ($n=193$) *	0-1 year back = 9.3% ($n=18$) 2-3 years back = 16.6% ($n=32$) 4-5 years back = 8.8% ($n=17$) 5+ years ago = 9.3% ($n=18$) N/A (no qualification in ECD) = 56.0% ($n=108$)
Currently enrolled in ECD training ($n=192$) *	Yes = 26.6% ($n=51$) No = 73.4% ($n=141$)
Interested in further ECD training ($n=194$) *	Yes = 97.9% ($n=190$) No = 2.1% ($n=4$)

*Missing data due to non-disclosure of information on questionnaire

Participant knowledge

The mean ECD knowledge score was 47.0% (38.1 out of 81, $SD=9.1$). Subsection one had an average score of 48.3% (24.1 out of 50, $SD=5.8$) and subsection two had an average score of 45.2% (14 out of 31, $SD=4.6$). The 12 questions with the lowest performance are presented in Table 2. These 12 questions fall under three of the four domains of the combined KIDI questionnaire: norms and milestones, principles and health and safety.

Table 3. Items with the lowest scores on the combined KIDI questionnaire

Question	Domain	Expected response	Frequency of correct responses
Children learn all of their language by copying what they have heard adults say	Principles	Disagree	3.0% ($n=6$)
When toddlers are strongly attached (bonded) to their parents, they are clingier and tend to stick close to mom or dad	Principles	Disagree	6.5% ($n=13$)
Four-month olds lying on their stomachs start to lift their heads	Norms and milestones	Younger	8.0% ($n=16$)
Once children turn three or so, they become less defiant and negativistic, “NO! I don’t want to!”	Norms and milestones	Disagree	12.5% ($n=25$)
Eighteen-month olds often cooperate and share when they play together	Norms and milestones	Older	13.0% ($n=26$)
By three years of age, most children will dress up in their parents’ old clothes and play act	Norms and milestones	Older	13.5% ($n=27$)
It is not until four years of age that children begin to tease other children	Norms and milestones	Younger	14.5% ($n=29$)
When a baby less than twelve months gets diarrhoea, you should stop feeding solid foods and give him/her flat ginger ale or pedialyte	Health and safety	Agree	15.5% ($n=31$)
Babies are about seven months old before they can reach for and grab things	Norms and milestones	Younger	16.0% ($n=32$)
The way a child is brought up has little effect on how smart he/she will be	Principles	Disagree	18.5% ($n=37$)
Infants begin to respond to their name at ten months	Norms and milestones	Younger	19.5% ($n=39$)
When putting babies in the crib for sleep, place them on their back, not stomach	Health and safety	Agree	21.0% ($n=42$)

Predictors of knowledge

As shown in Table 4, the stepwise linear regression model significantly explained 9% of the variation in the ECD knowledge score ($F[4.180]=5.577$, $p<0.05$, $R^2 =0.110$, $R^2_{Adjusted}=0.090$). Four variables were significantly associated with better ECD knowledge scores indicating that the variables were significant contributors to the ECD knowledge score. The four significant contributors included high school education ($\beta=4.702$, $t=3.387$, $p=0.001$), being a parent ($\beta=3.764$, $t=2.091$, $p=0.038$), training completed five or more years ago ($\beta=4.271$, $t=2.142$, $p=0.034$) and a need for information on developmental milestones ($\beta=2.399$, $t=1.992$, $p=0.048$). Participants with high school education obtained 4.702 times more correct responses on average for the ECD knowledge score than participants with less than high school education, and participants who reported themselves as parents scored 3.764 times more correct responses on average than those who did not. Participants who completed their training five or more years ago received 4.271 times more correct responses on average than participants who completed their training zero to one year ago. Participants who indicated a need for information on developmental milestones obtained 2.399 times more correct responses on average than those who did not select this option.

Table 4. Predictors of overall knowledge

Contributing variables	Regression coefficients (β -value)	Effect size	p	t	F	R^2	$R^2_{Adjusted}$	ANOVA p -value of the model
Qualification – Matric (high school education)	4,702	0.078	0.001*	3.387	5.577	0.110	0.090	0.000*
Being a parent	3,764	0.028	0.038*	2.091				
Training completed five or more years ago	4,271	0.040	0.034*	2.142				
Need for information on developmental milestones	2,399	0.0244	0.048*	1.992				

* $p < 0.05$ statistically significant

Qualification in ECD as well as experience as an ECD practitioner were not significant predictors for better ECD knowledge. In order to investigate this, separate linear regression models were run (by using the enter method) where any predictors may be entered into the model. The models were run with qualification and experience respectively. A positive coefficient of 0.918 indicated that participants with an ECD qualification did obtain more correct responses on average for the ECD knowledge score than participants with less than high school education, but this was not statistically significant ($p=0.530$). With experience, although the category ‘four to seven years of experience’ was not statistically significant ($\beta=1.916$, $t=1.301$, $p=0.195$), the positive coefficient indicates that participants with four to seven years of experience did obtain more correct responses on average for the ECD knowledge score than participants with zero to three years of experience. The same can be said for participants with eight to eleven years of experience ($\beta=0.985$, $t=0.437$, $p=0.662$) and with twelve or more years of experience ($\beta=4.155$, $t=1.802$, $p=0.073$).

Table 5. Thematic analysis of the needs and challenges identified by ECD practitioners

Sub-themes	
Main theme #1:	
Need training and further knowledge	<p>Training enrolment:</p> <p><i>"I will like to go continue with my ECD course"</i></p> <p><i>"Bieng given the opportunity to study further"</i></p> <p>Teaching skills:</p> <p><i>"Information on teaching skills"</i></p> <p>Mentoring:</p> <p><i>"a mentor is someone I need and a good support structure at the centre"</i></p> <p>Funding for training (including increased remuneration):</p> <p><i>"...support of training and funding sources"</i></p> <p><i>"Support (with) fundings so that I can further my studies"</i></p> <p><i>"...not getting enough salary"</i></p> <p>Improved knowledge about assessment of children:</p> <p><i>"More knowledge with assessment of children and observation"</i></p> <p>Improved knowledge on the development of daily plans, programs and theme discussion:</p> <p><i>"Learning plan & daily program" (reported as a challenge)</i></p> <p>Identifying and helping children with atypical development or behavioural problems:</p> <p><i>"Support regarding disabled children..."</i></p> <p><i>"A child who always have anger and isolate him/herself"</i></p> <p>Support from allied health professionals:</p> <p><i>"The speech therapist, phycologist etc. to assist in centers"</i></p> <p>Assistance with discipline:</p> <p><i>"To discipline our children"</i></p>
Main theme #2:	
Need support from public and private sectors	<p>Support from the government specifically:</p> <p><i>"Government support and create more training for the practitioner"</i></p> <p>Financial sponsors and resources (e.g. toys, books and infrastructure):</p> <p><i>"We need story books, and educational toys"</i></p> <p><i>"Not having enough resources when teaching"</i></p> <p><i>"Not having better building..."</i></p>
Main theme #3:	
Challenges dealing with parents	<p>Improved teamwork with parents:</p> <p><i>"To work together with parents"</i></p> <p>Parental support:</p> <p><i>"Support from parents..."</i></p>

Participant challenges and needs

Participants had the opportunity to express the challenges they faced as ECD practitioners ($n=192$), the support they required ($n=186$) and additional comments they had ($n=114$) through open-ended questions (Table 5). Main themes and sub-themes were identified from these answers in order to establish needs and challenges the participants may have.

Discussion

Description of participants

Almost half (44.9%) of participants from this low-resource community had a qualification in ECD, which agrees with findings from a 2014 audit (*Audit of ECD Centres National Report 2014*) indicating that 49.0% of practitioners in South Africa had some form of ECD specialisation (DoSD, 2014). Only 24.5% of the participants completed high school, which is less than the findings of the 2014 audit stating that 41% of practitioners nationally completed high school (DoSD, 2014), and the general statistics from the community which shows that 38.4% of the population have a high school qualification (Statistics South Africa, 2011). Almost all (97.9%) participants were interested in further training, although only 26.6% were enrolled. This could partly be attributable to a lack of funding as one of the main themes identified in regard to barriers in acquiring an ECD qualification.

Participant knowledge

On average, the participants only identified 47.0% of the combined KIDI questionnaire items correctly. This finding contrasts with previous studies from varying socio-economic settings that have identified better ECD knowledge scores varying between 52.0% and 81.0% for parents. A study that used the KIDI with a socio-demographically heterogeneous sample of 268 European American mothers, found an average of 81.0% as the total knowledge score (Bornstein et al., 2010). The participants were described as having fair knowledge (Bornstein et al., 2010). In Qatar, a study was conducted with 263 mothers from a variety of sociodemographic backgrounds, and described the participants' knowledge as generally low, with a score of 52.0% (Al-Maadadi & Ikhlef, 2014). The KIDI-P was used for a study in the Western Cape, South Africa, where a mean total score of 61.0% was obtained by a sample group of 140 parents from both high and low SES (September, Rich & Roman, 2015). These studies differ from the current study since the participant samples were from a variety of sociodemographic backgrounds and sampled parents whereas the current study was performed in a low-resource community on ECD practitioners, although 88.8% were also parents. These previous reports also used either the KIDI or the KIDI-P and not a combined questionnaire as in the case of the current study. No other studies have been performed with the combined KIDI questionnaire. Results from the current study suggests that the ECD practitioners from a low-resource community generally have low knowledge regarding ECD, with the greatest knowledge gaps in the domains of norms and milestones, health and safety, and principles.

Predictors of knowledge

High school education was a significant, and also the greatest, contributor to better ECD knowledge in the linear regression model ($\beta=4.702$, $t=3.387$, $p=0.001$). A previous study considering high school education amongst ECD practitioners in South Africa was strongly associated with enhanced stimulation of language and reasoning compared to those who did not complete high school (HSRC, 2009). In the current study, ECD qualification was not identified as a predictor of better ECD knowledge. Limited practical demonstration and instruction during training, as well as poor on-site follow-up support ensuring implementation of theory were suggested as possible

reasons for qualification not predicting quality services (Atmore et al., 2012a). The need for mentoring and information on teaching skills, as well as daily plan, program and theme discussion development was identified. These needs could have been reported due to the fact that less than half of participants (44.9%) were qualified in ECD, or because these areas are possibly lacking in training. Nonetheless, these needs should be responded to.

Experience as an ECD practitioner was also not a predictor of better ECD knowledge. Research exploring experience as a predictor for ECD knowledge is lacking, and therefore the results of the current study provide new evidence. About half (50.5%) of the participants, however, had three or less years of experience, indicating that the participants did not have a lot of experience. Therefore, experience as a possible predictor for better ECD knowledge requires further exploration to determine consistency of this finding.

Training completed five or more years ago was a significant contributor to stronger ECD knowledge ($\beta=4.271$, $t=2.142$, $p=0.034$) and is a new finding. Experience as a parent was strongly associated with better ECD knowledge scores and contributed significantly to the model ($\beta=3.764$, $t=2.091$, $p=0.038$). The majority (88.8%) of participants had their own children, and therefore had first-hand experience with child development and caring for children. The findings of the current study are supported by gendered ideologies' view of teachers who are mothers as better able to meet the needs of their students (Kang, Park & Park, 2019).

Interestingly, the participants who indicated a need for more information on developmental milestones had significantly better knowledge scores than those who indicated no need ($\beta=2.399$, $t=1.992$, $p=0.048$). Having a need for information on developmental milestones was thus another significant contributor to the model. This seems to suggest that participants who possess more ECD knowledge, realise that there is more to know regarding developmental milestones. Raising awareness amongst ECD practitioners around the importance of understanding early development and developmental milestones is, therefore, an important priority in these settings.

Participant challenges and needs

The main theme identified in terms of needs was receiving training and furthering knowledge. This is supported by the fact that 97.9% of participants answered *yes* when asked whether they were interested in further training. Specific knowledge needs were categorised as requiring more information on teaching skills, assessment of children, development of daily plans, programs and theme discussions, identifying and helping children with atypical development, working with parents, and discipline. Previous reports also indicated that ECD practitioners need proper training in appropriate teaching and assessment skills, the development of curricular activities, involvement of parents and individual diversity of children (Mpofu & Shumba, 2012). The extent to which they are supported by training sites in this regard should be assessed. ECD practitioners are confronted with a higher prevalence of delays in low-resource communities (Ebrahim, Seleti & Dawes, 2013) including behavioural challenges, developmental delays and learning disabilities (DoSD, 2014), along with increased attendance at ECD centres (Hall, 2013). This supports the participants' need to receive training and emphasises to respond to it. Allied health professionals, such as speech–language therapists, occupational therapists and psychologists, need to assist ECD practitioners in this regard.

A lack of resources, like books and toys, appropriate infrastructure and financial sponsorships were reported as needs and challenges that the participants encounter. In addition, funding was the largest barrier for participants in acquiring an ECD qualification which has also been acknowledged previously (DoSD, 2015). ECD practitioners in these low-resource settings face specific knowledge needs while having to provide services to increasing numbers of children at risk for delays. Receiving support from government and non-government departments in all the different areas of needs was one of the main themes and, therefore, the support offered from them on these different levels should be evaluated.

Implications

The implications of the findings from the current study can be contextualized within the Nurturing Care Framework (WHO, 2019). ECD practitioners, their knowledge and their needs fall within this framework under the component early learning opportunities and the services they render are called supportive services. The Nurturing Care Framework guides principles, strategic actions and ways of monitoring progress in providing nurturing care to young children (WHO et al., 2018).

One of the strategic actions of the framework addresses the strengthening of services (WHO et al., 2018), which includes ECD services rendered by ECD practitioners. There are specific proposed actions that can be taken on country level to strengthen these services (Figure 1). Each country's government should take the lead with these activities and coordinate them (WHO et al., 2018). This can aid South Africa in ensuring that young children are provided with nurturing care by addressing the needs in the ECD education sector. These proposed actions encourage, firstly, that opportunities for strengthening services in the education sector should be identified (WHO et al., 2018). The findings of the current study point to possible opportunities for strengthening ECD services, but it should be explored further. The study also identified existing facilitators for support services, namely the main motivation for becoming an ECD practitioner was their love for children and their determination to receive training and improve knowledge. Additionally, the national standards and service packages should be updated to encompass the five nurturing care components. Strengthening the capacity of the workforce and renewing competency profiles are also suggested (WHO et al., 2018). This can be accomplished by amongst others revising and enhancing the training curricula of ECD practitioners as well as funding them. Providing mentoring and supervision to ECD practitioners is also essential (WHO et al., 2018), which was one of the needs identified from the study as well. Improving the competency of practitioners to assess the development of children as well as timeous referral to health care professionals when needed are some more ways in which a country can strengthen the ECD services it renders (WHO et al., 2018). This also emerged as a need in the current study. Ultimately, ensuring quality ECD services and striving to produce centers of excellence should be prioritized (WHO et al., 2018). The framework uses an approach that includes the whole government and the whole society (WHO et al., 2018) and one of the main themes of ECD practitioners' needs were receiving support from government and non-government sectors. These proposed actions can act as guidelines for appropriately identifying the needs and gaps in ECD. These actions will also be instrumental in effectively addressing them in order to not only improve the ECD workforce and their environment, but ultimately supporting young children to develop to their full potential.

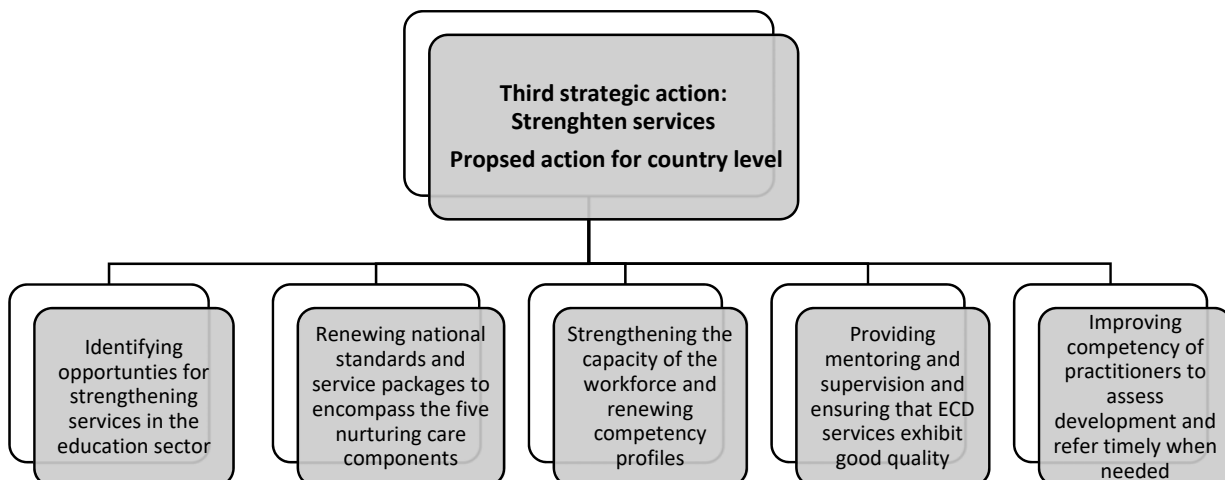


Figure 1. The third strategic action of the Nurturing Care Framework (WHO et al., 2018) in light of this study

Limitations and recommendations

One of the limitations of this study was the possible influence of language barriers. The questionnaires were available in English and Northern Sotho, but not in the other languages spoken in the community. The ECD practitioners may have spoken other languages and providing the questionnaires in their home languages could possibly have yielded more reliable results. Secondly, although the combined KIDI questionnaire is reported to be unrestricted by sociocultural biases (Bornstein et al., 2010), it may not be adequately suited for this population as some terms and concepts may be unfamiliar. Culture and society influence the pathways along which development occurs (Balton, Uys & Alant, 2019; Weisner, 2002). The knowledge that South African ECD practitioners need to have regarding ECD, therefore, may differ culturally from what Western cultures deem important. Contextual relevance should be explored in future research.

Conclusion

The ECD knowledge scores of the ECD practitioners from a low-resource community were poor with an average knowledge score of 47.0%. Significant contributors to better ECD knowledge were identified, namely: high school education, training completed five or more years ago, being a parent and a need for information on developmental milestones. Valuable information regarding the most important needs, as perceived by ECD practitioners, were captured along with specific areas of support required. ECD practitioners from low-resourced communities are important role players in ECD of young, vulnerable children. ECD practitioners from low-resource communities are important role players in ECD of young, vulnerable children. The findings of this study indicated that ECD practitioners want and need support in the crucial role they are playing. Actions needed to strengthen these ECD services can be contextualised within the Nurturing Care Framework (WHO, 2019), which can guide these interventions on local and international level.

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