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The role of parenting styles and socio-economic status in parents' knowledge of child development

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Early childhood development (ECD) has been recognised to be the most important contributor to long-term social and emotional development. Therefore, positive parenting is paramount to foster quality parent–child interaction. Previous research shows that for parents to adopt a positive parenting style, some degree of parental knowledge is required. The aim of this study was to compare the relationship between knowledge of child development and parenting styles in low and high socio-economic groups of parents in ECD centres. A cross-sectional study was conducted using a correlation-comparative research design. The sample consisted of $N = 140$ parents with children between two and five years old from low and high socio-economic groups. Descriptive statistics and Pearson correlation were used to analyse the data. The findings also show that there is no correlation between knowledge of child development and authoritative parenting styles. However, correlations do exist between the other variables.

Keywords: knowledge of child development; parenting styles; parent–child relationship; socio-economic status; KIDI

Introduction

Cummins and McMaster (2006) wrote: '*The wealth of a nation is the health of its children*'. Human development hinges on nature, the environment and life course experience of children growing up within families and communities (Cummins & McMaster, 2006). It is during this period that children develop their interpersonal attachments, learn about their external world, internalise parental standards and gain the ability to control their emotions, impulses and behaviours (Cummins & McMaster, 2006). Research shows that many challenges in adult society such as mental health problems, obesity or stunting, heart disease, criminality, competency in numeracy and literacy – all of these issues which eventually become an economic burden for any country – stem from early childhood development (ECD) (Irwin, Siddiqi, & Hertzman, 2007). Therefore, ECD has been recognised to be the most important contributor to long-term social and emotional development (Cummins and McMaster, 2006). Thus, whatever occurs in a child's life in the early years may be an indicator of the child's developmental trajectory and life course.

Healthy ECD, which includes the physical, socio-emotional, creative, language and cognitive components, is vital to success in later life. Individual differences in the rate

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of development is apparent during pre-school years, which is typically between three and six years old, and although this may be attributed to genetic and biological factors it may be more a result of environmental influences and parent–child interactions (Schroeder & Gordon, 2012). For example, some children begin to speak at age one whereas another child may only begin at age three. A key requisite for optimal child development is secure attachment to a trusted caregiver, with consistent caring, support and affection early in life (World Health Organisation [WHO], 2005). In most cases this would be the parent.

Parents have an innate goal to raise their child to be cognitively, emotionally and socially competent. These qualities are influenced by: (1) the resources that families have to devote to child-rearing, which is dependent on family income (2) their style of parenting and (3) their tendency to provide a rich and responsive language environment, which is influenced by parental levels of education. Furthermore, parents who are warm, supportive and re-enforce pro-social behaviour raise well-adjusted children (Dewar, 2013). According to Baumrind (1971) this kind of parenting is referred to as an authoritative parenting style.

Parenting style has a fundamental influence on child development and the interaction between parent and child during the ECD phase. Furthermore, it provides the foundations for developing trust which is an important element for children to safely explore their environments (Ainsworth, Blehar, Waters, & Wall, 2014; Bornstein & Tamis-LeMonda, 1989; WHO, 2005). The result of positive parenting styles sets the child's development on a positive trajectory as children who are allowed to explore their environments acquire positive learning experiences. In the process, they develop cognitive abilities needed to assimilate information from one experience and apply it to another. In order for parents to adopt this positive parenting style, it would be necessary to acquire knowledge about child development which would inform the parent of appropriate responses to their child's behaviour. Furthermore, the principals that govern the influence of knowledge on interpersonal and cognitive behaviour extend to parenting and can be summarised by the following: (1) parents construct a concept of children, (2) parents' construction of children can change with experience and (3) parents' construction influences their perceptions of child behaviour and guide child-rearing.

According to Ertem et al. (2007), studies in Western countries imply that what mothers know about child development has important implications on the developing child. Yet, they have found that very little research exists on parental knowledge of child development. Western countries or culture, such as South Africa, is a term broadly used to refer to a heritage of social norms, traditional customs, belief systems and whose history is embedded in European colonisation (Spielvogel, 2010). Cross-cultural studies and studies of minority (Huang, Caughy, Genevro, & Miller, 2005; Kolobe 2004) or immigrant populations (Bornstein & Cote, 2004) in Western countries have shown that there may be large differences between and within cultures on parental knowledge of child development. With South Africa being rich in diverse cultures, research studies have yet to show the similarities or differences in parental knowledge and knowledge of child development. Apart from South Africa being rich in culture there are also socio-economic challenges, which may affect or influence parental knowledge and parenting styles. Poverty and inequality in South Africa is worsening at a rapid rate (Du Plessis & Conley, 2007) with the result that children in early childhood are being raised in poverty-stricken homes. Previous research indicates that there is an association

between low socio-economic status (SES) and child maltreatment and that there is an association between poor parenting and child maltreatment (Slack, Holl, McDaniel, Yoo, & Bolger, 2004). The past two decades have witnessed an increase of research investigating the association between family income, particularly low income, and the development of children (Mistry, Biesanz, Taylor, Burchinal, & Cox, 2004). The impact of family income, particularly for young children, appears to be stronger for children's cognitive and academic outcomes than for their health and behavioural outcomes (Aber, Jones, & Cohen 2000; Duncan & Brooks-Gunn, 1997, 2000). However, the resulting consensus is that income poverty is harmful for the developing child across all domains of development (Seccombe, 2000). In South Africa, the child population between the ages of zero and nine years is estimated to be 10 million. It has been reported in 2012 that there are approximately 5.3 million children under the age of five years old living in South Africa. As per the General Household Survey conducted in 2011, 58% of these children are living in poverty where the household family income is R604 per month (Berry, Biersteker, Dawes, Lake, & Smith, 2013). Clearly, the majority of children may be living in poverty, indicating the risk that the children are being poorly raised. What is less clear, however, is the extent to which negative child development can be explained by SES as opposed to being explained by inadequate parenting knowledge and behaviours. The purpose of this study is to compare the relationship between knowledge of child development and parenting styles in low and high socio-economic groups of parents in ECD centres. This study hypothesised that (1) there is a significantly positive relationship between knowledge of child development and authoritative parenting styles of parents in ECD centres (2) the most prevalent parenting style in the lower socio-economic group is authoritarian and the authoritative parenting style is the most prevalent for parents in the higher socio-economic group.

Methods

In this quantitative cross-sectional study design, a relationship was sought between having knowledge of child development and the parenting styles of parents.

Sample

Participants were recruited from the Northern Suburbs, Southern Suburbs and the Cape Flats area in the Western Cape. The requirement to participate was that the parent should have a child between the ages of two and five years. Either a willing mother or father could complete the questionnaire. The final sample size was 160. A total of 140 (87.5%) participants responded to the study of which 59 (42%) were from the low socio-economic group and 81 (58%) from the high socio-economic group. These participants were recruited door to door and at ECD centres that were willing to provide access. For the purpose of this study, participants were classified into the low socio-economic group if they paid less than R500 on crèche fees and parents spending greater than R1000 were classified into the high socio-economic group. Of the 140 participants, 122 (87.10%) were female and 18 (12.9%) were males. The majority of the participants (106 [75.7%]) identified themselves as Coloured.

Measures

Structured questionnaires were given to the participants to complete. The instruments that were used were: (1) demographics, (2) Parenting style dimension questionnaire (PSDQ) and (3) knowledge of infant development inventory.

Parenting style dimension questionnaire

The PSDQ is a 62-item Likert-type questionnaire designed to measure parenting style variables consistent with Baumrind's typologies and to measure the dimensions and internal structures within those typologies (Robinson, Mandleco, Olsen, & Hart, 1995). For this study, an abbreviated version of 32 items was given to participants to complete. The authoritative items consisting of 27 questions have a Cronbach alpha of .91, the authoritarian items consisting of 20 questions have a Cronbach alpha of .86 and the permissive items consisting of 15 questions a Cronbach alpha of .75 (Robinson et al., 1995).

Knowledge of infant development inventory

The Knowledge of Infant Development Inventory (KIDI) – Preschool (1981) was used to measure child development knowledge. The KIDI (MacPhee, 1981) is a 75-item questionnaire, which is used in conjunction with the *Catalog of previous experience with infants* (COPE) (Dichtelmiller et al., 1992; MacPhee, 1981). The Cronbach alphas are .67 and .55 for college students at pre-test and post-test, respectively, .82 for parents, and .50 for professionals. Initially the complete KIDI-P consisted of four subscales: Parenting (14 items) which relates to instrumental beliefs about parenting strategies and the responsibilities of parenting, Health and safety (12 items) relates to proper nutrition, healthcare, accident prevention and treating ailments; Norms and milestones (32 items) relates to typical infant behaviour at a given time; and Principles (17 items) includes statements about developmental processes.

For this study, the KIDI 58-item questionnaire will be used to assess the current level of knowledge of child development of each participant regardless of previous experiences. Reponses to the KIDI-P items are scored as correct (1), incorrect (0) or not sure (2). The milestone items starting from item 40 to 58 are scored as correct, incorrect or not sure. However, additional information is required; so participants are required to indicate where they overestimate or underestimate. Overestimates and underestimates refer to questions where if the participant disagrees with a statement he/she would have to indicate whether the statement applies to a younger or older child.

Data collection procedure

The research was conducted after receiving permission to conduct the study from the University of the Western Cape. Further permission was sought from the Department of Social Development as initially the sample was to be recruited primarily from ECD centres. However, permission from the Department of Social Development was not necessary as the principal of the ECD centres have the authority to give consent. The principals of the various selected centres were contacted to get permission to send questionnaires home with the children. The questionnaires that were sent home

with the children had a letter explaining the purpose, aims and objectives of the study as well as a consent form to be signed. The questionnaires were then given to the Principal to distribute to children between the ages of two and five years. A presentation of the study was done at parent/teacher meetings at one of the ECD centres that managed to arrange a slot for the presentation.

For the lower socio-economic group, a fieldworker was employed and trained who went door-to-door to complete questionnaires with willing participants who had children in the ECD centres. The majority of the completed questionnaires were produced by the door-to-door collection method. It was re-iterated in all correspondence that participation was voluntary and that all identifiable participant information shared would remain confidential.

Data analysis

Quantitative data analysis is a statistical technique used to describe and analyse variation in quantitative measures (Chambliss & Schutt, 2012). Data were analysed by means of bi- and multivariate descriptive inferential statistical tests. Descriptive statistics were used to describe the distribution of and relationship among variables (Chambliss & Schutt, 2012). Frequencies were run in order to determine the shape of the distribution. When studying the frequency distribution, the researcher could see whether the shape of the distribution is normal or not (Vogt, 2007). The raw data were captured into The Statistical Package in Social Sciences (SPSS) Version 22, coded and cleaned. Data cleansing is a process of checking data for errors after the data were entered (Chambliss & Schutt, 2012). Correlation tests were done in order to determine whether there is a relationship between the variables.

In order to establish whether there is a significant difference between groups (low and high socio-economic groups) independent *t*-tests were conducted. An independent *t*-test is used when there are two experimental conditions and different participants being used in the study (Field, 2009). This study looked at the differences if any between the mean scores of variables for the low and high socio-economic groups. To assist with the data analysis, subscales were created for the PSDQ. The subscales included authoritarian, authoritative and permissive parenting styles. Scores ranged from 'Always' to 'Never' on a 5-point scale. Mean scores were then calculated for each subscale. The highest score indicated the applicable parent style.

Four subscales were created for the KIDI-P, namely: principles, parenting, health and safety, and norms and milestones. For each of the subscales there was a 'correct', 'incorrect' and 'not sure' option. Each 'correct' response received a score of 1, 'incorrect' responses received a score of zero and 'not sure' options received a score of 2. Items 40–58 provided information about overestimates and underestimates, which are types of wrong responses that may relate to age-appropriate demands and intellectual stimulation (MacPhee, 1981). Over- and underestimates are probability scores in relation to the odds of answering in such a manner on the milestone questions. Responses for over- and underestimates were also scored 1 for a correct response and 0 for an incorrect response. Total scores were tallied for 'correct' responses, 'incorrect' responses and 'not sure' responses and these were converted into an average percentage score by dividing the total score for each category by the number of participants.

Results

The demographics results revealed that the majority of the participants were female (122 [87.1%]). The majority of the participants were unmarried (90 [64.3%]) and these include participants that may have been widowed or divorced. Of the 140 participants, 106 (75.5%) identified themselves as Coloured. The majority of the participants (128 [91.4%]) reside in the Northern Suburbs. The highest level of education indicated was High School level (112 [80%]) with the majority of participants being English speaking (84 [60%]).

Table 1 presents an overview of the childcare choices of the participants, whether the children are biological or non-biological, means of parenting education and socio-economic information which include crechè fees, source of income and living arrangement.

The results in Table 1 indicate that of the 140 participants, 129 (92.1%) indicated that their children are their biological children. The results also show that approximately one-third of the sample (42 [30%]) had not sought any parenting advice from the internet, books, workshops or counselling. A few of the participants (50 [35.7%]) preferred books relating to parental education.

Table 2 presents the average total percentage scores for the entire sample ($N = 140$) across all the subscales. It also presents the scores for the entire sample for the individual subscales. The findings show that overall the sample scored 60.98% of the questions correctly on the KIDI-P. The sample scored higher in the health and safety subscales (69.71%) and parenting subscales (67.30%), indicating that the sample is fairly knowledgeable in these areas. The lowest scores were obtained in the norms and milestone subscale of which 47.95% of the sample scored correctly.

Table 3 results suggest that the most prevalent parenting style across the total sample ($N = 140$) is authoritative ($M = 4.52$, SD = 0.61) as reported by the parents, with parents encouraging autonomy ($M = 4.39$, SD = 0.78), regulation ($M = 4.39$,

Table 1. Childcare, childcare education and socio-economic information of participants.

Variables		Total sample $n = 140$	%
Child status	Biological children	129	92.1
	Non-biological children	11	7.8
Child fees	<500	59	42.1
	>1000	81	57.9
Parenting education	Parenting workshops	12	8.6
	Parenting counselling	20	14.3
	Parenting books	50	35.7
	Internet	16	11.4
	None	42	30
Source of income	Own Job	96	68.6
	Spouse/partner	23	16.4
	Relatives	9	6.4
	Public assistance	12	8.6
Living arrangements	Own	19	13.6
	Rent	54	38.6
	Living with parents	51	36.4
	Living on property owned by someone else	16	11.4

Table 2. Average total percentage scores for the KIDI-P ($N = 140$).

Scores attained	Correct (%)	Incorrect (%)	Not sure (%)
Overall	60.98	27.99	11.00
Principles	58.95	25.05	16.00
Parenting	67.30	27.86	4.84
Health and safety	69.71	22.29	8.00
Norms and milestones	47.95	36.76	15.30

SD = 0.78) and connection ($M = 4.65$, SD = 0.55). This is followed by parents reporting permissive parenting ($M = 2.05$, SD = 0.75). The results also suggest that authoritarian parenting is low.

The results in Table 4 how that parents in the high socio-economic group ($N = 81$) scored higher ($M = 9.23$, SD = 2.12) for correct responses for the principles subscale in contrast to parents in the low socio-economic group ($N = 59$, $M = 8.37$, SD = 2.36). The difference was significant $t(138) = -2.26$; $p = .03$ which is less that .05. The results show that the low socio-economic group scored higher ($M = 4.44$, SD = 2.18) for incorrect responses than the high socio-economic group ($M = 3.31$, SD = 1.88) with the difference in mean scores being significant $t(138) = 3.28$; $p = .00$ which is less than .05.

For the parenting subscale, parents in the high socio-economic group ($N = 81$) scored higher ($M = 6.38$, SD = 1.22) for correct responses when compared to parents in the low socio-economic group ($N = 59$, $M = 5.61$, SD = 1.62). The difference in mean scores for correct responses was significant $t(103.13) = -3.08$; $p = .00$ which is less that .05. The results also show that the low socio-economic group scored higher ($M = 2.80$, SD = 1.64) for incorrect responses than the high socio-economic group ($M = 2.30$, SD = 1.21) with the difference in mean scores being significant $t(101.57) = 1.99$; $p = .05$ which is equal to .05. There were no significant differences between the groups for correct and incorrect responses.

For the norms and milestone subscale, parents in the low socio-economic groups scored higher ($M = 12.25$, SD = 4.06) for correct responses when compared to parents in the high socio-economic group ($M = 10.96$, SD = 2.87). The difference in mean scores was significant as $t(98.51) = 2.09$; $p = .04$ which is less that .05. There were no significant differences between the groups for incorrect responses.

The results in Table 4 indicate that the majority of the questions were answered correctly by both the high and low socio-economic groups. However, parents in the high

Table 3. Total mean and standard deviation scores for the sample ($n = 140$).

Variables	Min	Max	*M*	SD
CONNECT	1.00	5.00	4.65	0.55
REG	1.00	5.00	4.51	0.68
AUT	1.00	5.00	4.39	0.78
AUTIVE	1.00	5.00	4.52	0.61
PHYS	1.00	5.00	1.51	0.78
VERBH	1.00	5.00	1.69	0.91
PUNIT	1.00	5.00	1.69	0.85
AUTRIAN	1.00	5.00	1.63	0.80
PERM	1.00	5.00	2.05	0.75

Table 4. Comparing mean scores between low and high socio-economic groups.

Subscale	Variable	LSES (*N* = 59) *M*	LSES (*N* = 59) SD	HSES (*N* = 81) *M*	HSES (*N* = 81) SD	SE	*T*	*df*	*p*
Principles	Correct	8.37	2.36	9.23	2.12	0.38	−2.26	138.00	.03
	Incorrect	4.44	2.18	3.31	1.88	0.34	3.28	138.00	.00
	Don't know	2.31	2.31	2.46	2.80	0.43	−0.35	135.72	.73
Parenting	Correct	5.61	1.62	6.38	1.22	0.25	−3.08	103.13	.00
	Incorrect	2.80	1.64	2.30	1.21	0.25	1.99	101.57	.05
	Don't know	0.59	1.02	0.32	0.63	0.15	1.82	89.65	.07
Norms and milestones	Correct	12.25	4.06	10.96	2.87	0.62	2.09	98.51	.04
	Incorrect	9.03	3.66	8.67	4.37	0.68	0.54	135.26	.59
	Don't know	2.71	3.41	4.37	5.42	0.75	−2.22	135.48	.03
Health and safety	Correct	6.93	1.50	7.00	1.08	0.23	−0.30	100.24	.77
	Incorrect	2.37	1.10	2.10	0.89	0.17	1.58	108.72	.12
	Don't know	0.20	0.48	0.38	0.49	0.08	−2.16	125.95	.03

socio-economic group were more knowledgeable than in the low socio-economic group particularly in the principles, and parenting subscales with the knowledge level in the case of parents in the high socio-economic group were significantly higher than the parents in the low socio-economic group. While both groups scored higher for correct responses in the health and safety subscale, the difference in scores was not significant, indicating that the knowledge level was similar. However, for the norms and milestone subscale, the parents in the low socio-economic group scored higher than the parents in the high socio-economic group with the difference in knowledge level being significant. The parents in the low socio-economic group scored more correct responses (across all the subscales) than incorrect responses. However, they also scored higher for incorrect responses (across all the subscales) than the parents in the high socio-economic group. The differences in mean scores for incorrect responses were also significant for the principles and parenting subscales.

The results in Table 5 show that parents' perceptions of their parenting styles were significantly different. For authoritative parenting, parents in the high socio-economic groups ($M = 4.66$, SD = 0.54) perceived themselves to be more authoritative than parents in the low socio-economic group ($M = 4.32$, SD = 0.64). The difference in

Table 5. Comparing mean scores for parenting styles between low and high socio-economic groups.

Subscale	LSES (*N* = 59) *M*	LSES (*N* = 59) SD	HSES (*N* = 81) *M*	HSES (*N* = 81) SD	SE	*t*	*df*	*p*
AUTIVE[a]	4.32	0.64	4.66	0.54	0.10	−3.39	138.00	.00
AUTRIAN[b]	1.93	0.93	1.41	0.60	0.14	3.72	92.27	.00
PERM[c]	2.31	0.89	1.86	0.56	0.13	3.41	91.10	.00

[a]Authoritative.
[b]Authoritarian.
[c]Permissive.

mean scores were significantly negative $t(138) = -3.39$; $p = .00$ which is less than .05. For authoritarian and permissive parenting, parents in low socio-economic group were more authoritarian ($M = 1.93$, SD = 0.93) and permissive ($M = 2.31$, SD = 0.89) than parents in high socio-economic group for authoritarian ($M = 1.41$, SD = 0.60) and permissive ($M = 1.86$, SD = 0.56) parenting. This was significantly different for authoritarian $t(138) = 3.72$; $p = .00$ which is less than .05.and permissive parenting style $t(138) = 3.41$; $p = .00$ which is less than .05.

The results in Table 6 show that there is no relationship between knowledge of child development across all the subscales and authoritative parenting. However, there is a significantly negative correlation between authoritarian parenting and correct responses for the parenting subscale of the KIDI-P ($r = -.30$**) for the total sample and the low socio-economic group ($r = -.30$**). This indicates that if correct responses increase for the parenting subscales, there may be less association with authoritarian parenting. Furthermore, the results also show that there is a positive correlation between incorrect responses for the parenting subscale and authoritarian parenting for the total sample ($r = .19$*) and the low socio-economic group ($r = .28$**). Thus, the higher the incorrect responses for the parenting subscale there may be an increase in authoritarian parenting. There is also a correlation between authoritarian parenting and the norms and milestones subscale for 'don't know' responses for the low socio-economic group ($r = .34$**), indicating that the higher the score for 'don't know' responses then there is a likelihood that the participants may be authoritarian in their parenting.

The results show that there is a correlation between permissive parenting and correct responses for the principles subscales for the total sample ($r = .20$*), indicating that with higher scores for correct responses in the principles subscale, there may be an increase in permissive parenting. Furthermore, there is a negative correlation between permissive parenting and correct responses for the parenting subscale for the total sample ($r = -.30$**) and the low socio-economic group ($r = -.41$**).

Discussion

Knowledge of child development

Studies of parenting knowledge cover many domains. Bornstein, Hahn, Suizzo, Cote, and Haynes (2005) identified three domains of parental knowledge, namely, knowledge about child development which includes knowledge about basic child requirements and abilities; knowledge about health and safety; and knowledge about strategy to meet the socio-emotional, biological and cognitive needs of the child. Parents are required to use this knowledge to interpret their child's behaviour and to guide their child-rearing or parenting behaviour (Bornstein, 2002). A study conducted by Hess, Teti, and Hussey-Gardner (2004) showed that knowledge scores ranged between 64.44% and 100% with an average score of 82.87% across the participants, which was considered high for the sample. This study found that the overall score for knowledge of child development for participants was 60.98% with participants scoring less for the norms and milestones subscale (47.95%).

These scores are less than scores obtained by Hess et al. (2004). However, the results of the current study are similar to a study conducted by Ertem et al. (2007). In particular, Ertem et al. (2007) found that knowledge of child development (or lack thereof) could potentially be linked to child abuse risk. A lack of knowledge in the developmental process of the child could potentially relate to inappropriate harsh

Table 6. Correlation scores for KIDI-P and PSDQ between low and high socio-economic groups.

	AUTIVE			AUTRIAN			PERM		
Variable	Total sample	Low SES	High SES	Total sample	Low SES	High SES	Total sample	Low SES	High SES
PrincCorr	.11	.12	.01	−.11	−.09	−.01	.20*	−.21	−.07
PrincInc	−.00	.15	.01	.09	.02	−.00	.81	.04	−.05
PrincDK	−.08	−.21	−.01	.05	.11	.01	.13	.21	.09
ParentCorr	.16	.16	.01	**−.30****	**−.41****	.02	**−.30****	**−.41****	.02
ParentIncor	−.07	−.07	.02	**.19***	**.28****	−.04	.15	.20	−.04
ParentDK	−.15	−.15	−.06	**.19***	.21	.04	.26*	.32*	.05
NMCorr	.03	.19	−.04	−.05	−.24	.09	−.09	−.18	−.11
NMIncor	.02	.02	.05	−.04	−.05	−.07	−.04	−.12	−.00
NMDK	−.04	−.24	−.01	.07	**.34****	.01	.11	**.35****	.06
HSCorr	.04	.03	.05	.02	.10	−.07	−.06	−.04	−.07
HSIncor	.06	.20	.01	−.04	−.18	.03	−.02	−.11	−.01
HSDK	.02	−.11	−.45	−.04	−.02	.06	−.02	.03	.04

*Correlation is significant at the 0.05 level (2-tailed).
**Correlation is significant at the 0.01 level (2-tailed).

discipline measures as parents could misjudge where the child is at in the developmental process. Furthermore, Hess et al. (2004) isolated the parenting subscale in the KIDI to measure parenting knowledge but the degree of knowledge for this subscale was not reported. In contrast, these results show that parents were fairly knowledgeable in the parenting subscale with an average score of 67.30%.

In addition, the results also show that parents are fairly knowledgeable on the health and safety as well as the principle subscales on the KIDI-P. This study reports on scores for each subscale of the KIDI-P in order to identify in which areas participants were most knowledgeable, and where the lack of knowledge is. This is necessary in order to identify potential areas to consider when developing interventions of parenting programmes. In terms of the South African National Development Plan 2030 the aim is to improve on relevant components in the ECD sector. This includes providing and supporting future parenting programmes and the results of this contribute to the body of knowledge regarding areas of lack in this regard. While there are few studies that present findings on parental knowledge there are even fewer that are specific in highlighting which aspects of knowledge are lacking.

Although the reviewed studies do not provide specific scores on overall knowledge, they do highlight certain factors to consider when examining knowledge of child development such as the role of the mother and the father in the child's life, education, race and culture. This speaks to Bronfenbrenners ecological systems (1979) theory that states that there are several intrinsic and extrinsic factors that contribute to child development and that the systems interrelate with each other, for example, the relationship between child and parent in the microsystem is affected by the macrosystem which informs culture, belief and certain values which are then transferred onto the child through the parents. Effects of other factors that influence knowledge are apparent in studies such as Hess et al. (2004) who found that older mothers who were more educated, had higher income and were married had a greater degree of knowledge pertaining to child development. Several researchers who conducted similar studies support these findings (Bornstein & Putnick, 2007; Rowe, Pan, & Ayoub, 2005). Another study (Winter, Morawska, & Sanders, 2012) found that parents with higher education demonstrated greater knowledge than their lesser educated counterparts and these results support the findings of Morawska, Winter, & Sanders (2009).

Another factor that could potentially influence knowledge is culture as highlighted in Hess et al. (2004) and is supported by previous research conducted by Bornstein and Cote (2004) stating that knowledge differs within and across cultures. Lastly, another factor that could potentially influence knowledge is different parent roles such as being a mother and father as seen in Winter et al. (2012), who reported on differences between fathers' and mothers' degree of knowledge in child development with mothers having a greater degree of knowledge as opposed to fathers. Hence, a comparison between this study and previous studies is challenging as knowledge of child development or parental knowledge was not properly defined or examined in detail in previous studies.

Parenting in ECD

Children exposed to warm, responsive, consistent parenting are more likely to experience optimal child development outcomes (Stack, Serbin, Enns, Ruttle, & Barrieau, 2010) while adverse family experiences including family dysfunction, harsh, punitive discipline practices and parental psychopathology are associated with an increased risk of child and adolescent psychopathology (Koskentausta, Iivanainen, & Almqvist,

2007). Bornstein and Putnick (2007) found that there were several factors that contributed to parenting such as maternal age, child temperament, maternal confidence to mention a few. However, Bornstein and Putnick (2007) found that parenting styles differed significantly across all subscales of the Parenting Scale used to measure parenting styles. Furthermore, the results of that study show that mothers with low confidence were more lenient or negligent.

Baumrind's typology of parenting styles describes leniency and negligence as traits of permissive parents. Another study conducted by Winsler, Madigan, and Aquilano (2005) found that mothers in particular were perceived to be authoritative followed by permissive and not authoritarian. The characteristics of permissive parenting include inconsistent discipline, ignoring of child misbehaviour and a lack of self-confidence in parenting with the result that children display less internalised distress but externalise their problems (Morawska & Sanders, 2007; Williams et al., 2009; Winter et al., 2012). Winsler et al. (2005) also show that some parents reported that they were permissive, indicating that they often spoiled their children on certain occasions and sometimes gave a punishment but did not follow through with it. Similarly, these study results found that although parents perceived and reported that their parenting style was predominantly authoritative there were some parents who reported and perceived themselves to be permissive. Furthermore, these results also show that participants reported that they often spoiled their child and at times did not execute the given punishment for disobedience. Interestingly, though parents reported on their own perception of parenting in the current study in contrast to another study (Winsler et al., 2005) where spouses reported on each other's parenting, the results are similar.

The implications of permissive parenting as supported by the study included in the systematic review showed that parents did not know that their parenting style resulted in them spoiling their child (Morawska & Sanders, 2007). It also highlighted their inability to manage their child's aggressiveness, not knowing what to do when their child has a temper tantrum, not knowing about common fears for a specific age group and not setting limits on destructive behaviour. The implication for this style of parenting on the developing child is that the child may be unable to develop respect for authority (Gupta & Theus, 2006), lack creativity, motivation and self-reliance, resulting in low cognitive and social achievement (Grolnick, 2003).

In addition, developmental theorists such as Erikson suggest that a healthy development of self in the child requires attentive, warm, responsive and encouraging parents. Therefore, a possible conclusion can be drawn that the less parents know about principles, parenting, norms and milestones and health and safety the more likely the parenting style will lean towards permissiveness. This conclusion is confirmed by the results found in this current study, which show that there is a correlation between knowledge and permissive parenting. While this study highlights the need to explore permissive parenting further, in this context one of the objectives of the study was to determine the most prevalent parenting style. The results of this study show that the overall most prevalent parenting style is the authoritative parenting style with parents encouraging regulation, autonomy and connection similar to Winsler et al. (2005). The characteristics of authoritative parenting styles include parents being warm and supportive while using reasoning approaches that provide the child the opportunity for participation. These findings can be compared to the results of previous studies conducted with children, where authoritative parenting was described as warm, supportive

and nurturing, while offering discipline and structure simultaneously (Darling & Steinberg, 1993; Maccoby & Martin, 1983).

The association between knowledge of child development and parenting styles

Previous research studies posit that the more knowledgeable parents are on child development the more effectively parents will rear their children (Diehl, Wente, & Forthun, 2011; Huang et al., 2005; Reich, 2005). Parents with greater knowledge tend to be less dysfunctional in parenting (Morawska et al., 2007; Winsler et al., 2005). A later intervention study conducted by Morawska, Haslam, Milne, and Sanders (2011) revealed that, post intervention, parental knowledge increased and parenting dysfunction decreased. Thus an increase in degree of knowledge could potentially improve parenting approaches. However, this study's results show that there is no significant relationship between knowledge of child development and authoritative parenting style. The findings in the current study yielded different results than in previous studies conducted where a positive correlation was found (Benaisch & Brooks-Gunn, 1996; Culp, Culp, Blankemeyer, & Passmark, 1998; Miller, 1988).

While no significant relationship exists between knowledge of child development and parenting styles, the quantitative results show that there is a significant negative relationship between knowledge of child development in particular for the parenting subscale and authoritarian parenting. This could mean that if there is a decrease in knowledge of how to parent very young children, then parents could be more authoritarian in their parenting. Hess et al. (2004) examined correlations between the parenting subscales and maternal confidence and found that when knowledge level was low, parent confidence and competence was also low. Though a relationship exists between these two variables, this does not imply that the one causes the other as there may be other factors involved that influence this relationship (Tufte, 2006, p. 5).

This alludes to other potential factors involved when determining the association between knowledge of child development and parenting styles which may include parental efficacy or confidence, parental age, child temperament and parental stress. The effects of these factors are evident in the studies included in the review. For example, earlier studies found that deficits in knowledge of child development and unrealistic expectations on children were found mainly in younger parents (Bornstein & Putnick, 2007). Similar to this study, de Lissovoy (1973) found that young parents were shown to have less knowledge about developmental milestones, indicating a potential risk for unhealthy child development. One of the studies (Bornstein & Putnick, 2007) confirmed the findings of de Lissovoy (1973) and found that maternal age was linked to knowledge and parenting.

Parental role is also another factor to consider (Winsler et al., 2005) when examining the association between knowledge of child development and parenting. In view of this, according to the demographics of this study the results show that 87.1% of the participants were mothers. This is important to note as Bornstein and Ribas (2005) posit that mothers have assumed the primary responsibility of early childcare and found that mothers were more knowledgeable than fathers. Though mothers may be more knowledgeable this does not equate to positive and effective parenting due to lack of support from the less knowledgeable spouse. This finding is supported by Dessen and Braz (2000). The current study possibly confirms the notion that since the majority of participants were mothers, the knowledge level was reported at above average and the parenting style was perceived to be authoritative over the

entire sample. Evidence exists that found that parents who had increased knowledge and confidence showed reduced dysfunction and reported on less externalised behaviour of their children (Winter et al., 2012). While important findings have resulted for this study in terms of the relational aspects of the variables, this study shows that there is no association between knowledge of child development and authoritative parenting styles.

Comparing low and high socio-economic groups

There is some evidence that parents in low socio-economic status groups tend to be harsher in their child-rearing (Steinberg, Mounts, Lamborn, & Dornbusch, 1991). Both Goodnow (1996) and McGillicuddy-De Lisi and Siegel (1995) agree that parenting knowledge has been conceptualised as a product of personal experiences with their children and their social interactions. The Ecological view (Bronfenbrenner, 1986) provides a useful framework to explain how social groups promote parenting knowledge. This framework also describes the differences in parental expectations on intellectual, social and cognitive abilities across different cultural groups as well as socio-economic groups. There is some evidence to suggest that any effect of intervention on knowledge may differ depending upon the SES of parents as found in the study of Winter et al. (2012).

According to Winter et al. (2012) parents with higher education, which is also known to be associated with SES, hold a greater degree of knowledge in child development, which was apparent in the pre-intervention phase of the study. Those findings support a much earlier study conducted by Parks and Smeriglio (1986), which also concluded that parents of lower SES tend to demonstrate less parenting knowledge than those of higher SES. The findings of this study present results that differ. The current study results show that in general parents were fairly knowledgeable and perceived their parenting to be authoritative across the groups. However, parents in the low socio-economic group were significantly more knowledgeable on the norms and milestones of child development that those in the high socio-economic group. Similarly, Bornstein and Ribas (2005) validate in their study that parental knowledge differs across SES. While authoritative parenting was prevalent across the groups, more parents in the higher socio-economic group were authoritative in their approach.

The results in the quantitative phase indicate that there were more permissive parents in the low socio-economic group. The findings of this study are similar to those of Shumow, Vandell, and Posner (1998) who found that parents in low socio-economic environments were either harsh or permissive in their parenting. Crittenden (1985, 1996) found that permissive parents are likely to be less educated, impoverished and lacking in parenting knowledge which is similar to the results of this study. However, the results of the correlation studies conducted between parenting styles and the various subscales support Bronfenbrenners ecological systems' view as stated in the opening statement of this section specifically where permissive parenting was found to be higher in the low socio-economic communities. This highlights that in order for the microsystem, specifically the primary caregivers, to be more effective in their contribution to optimal child development the necessary support may be required by role players in the macrosystem such as the government to address the lack in education and poverty by providing opportunities for parents in the low socio-economic group to acquire various skills that could enhance better parenting.

Limitations

No research study is without its imitations. This study in particular encountered challenges and limitations which may impact the findings of this study.

- The study sample consisted mainly of mothers with a small percentage of fathers willing to participate in the study. As previously discussed and supported by previous research, mothers tend to be more nurturing than fathers. This could possibly explain the reason why the majority of parents reported to be authoritative.
- The study was conducted by means of self-reporting questionnaires. The participants may have responded in a way that would not reflect negatively on them although the study was private and confidential. In other words the responses may be perceived truth and not actual truth. If the children were asked to report on their parents' parenting behaviour the outcome may have been different. The same applies to the knowledge of child development questionnaire. Parents may not necessarily want to admit that they may be using harsh and punitive measures in disciplining their children.
- The study sample size is not large enough to generalise the findings to the entire population. Accessing parents through the ECD centre proved to be challenging. Thus the sampling strategy had to be changed in order to gather information. The majority of the sample classified themselves as 'coloured'. Therefore these finding cannot be generalised across other racial groups
- Conducting a socio-economic study is also a limitation as SES is not static. In other words, the participants may have indicated that they spend R500 and less on school fees which was the low SES indicator in this study but may not, in the bigger scheme of society, be classified as low SES when considering all the other factors which make up SES.
- The full impact of the parental knowledge level on the child cannot be fully identified as there are other role players surrounding the child and one wonders whether child-rearing beliefs and knowledge are similar or different to the participant.

Recommendations

Further research studies are recommended in the area of parental knowledge and parenting styles in ECD as there is too little research to draw from. Perhaps future studies can look into other factors that influence parental knowledge so that a more holistic view can be obtained. Parents and the immediate primary caregivers play a pivotal role in a child's life. Therefore, when conducting future studies it could benefit to gather information from all the key players in the child's life. The findings of this study also suggest that culture is potentially a huge factor that needs further research together with the other variables in this particular context since all the hypotheses for this study were mainly rejected. Because this study was done on a small sample with the majority being coloured mothers. The study should be replicated on a much bigger sample to ascertain whether the results will be similar to this context or whether it supports international findings. These results highlighted the need for further parent education in norms and milestones and parenting as these were the two areas where parents were lacking. Therefore, when parenting programmes are designed it would be beneficial to focus on these two aspects in order to reduce the risk of

child maltreatment or abuse as well as to promote the optimal development of children during the early years.

While the majority of this sample indicate that the prevalent parenting style is authoritative the permissive parenting style is highlighted as a concern. Furthermore, since clinics have access to parents they should make use of the opportunity to educate parents on the norms and milestones of a developing child. Most mothers attend antenatal screenings and it is here where the opportunity is to start educating mothers on the developing child and this education can be continued when parents attend post-natal screenings with the baby. Alternatively, the government should make funds accessible to establish early intervention parenting centres across the country or distribute enough funds to NGOs where qualified and trained professionals can provide training and education on parenting and child development.

Conclusion

The study focused on knowledge of child development and parenting styles. A positive and healthy early childhood sets a positive trajectory for adulthood. Although this study's results should be interpreted with caution, findings suggest that parents in the South African context are predominantly authoritative and that parental knowledge level is above average. As this study suggests, the level of parental knowledge does not particularly influence parenting styles. Thus, we could conclude that there may be other factors associated with parental knowledge and parenting. Although the limitations of this study may not be generalised as the sample is limited to mothers with a specific racial background, the study does highlight the need for further research particularly into permissive parenting.

Disclosure statement

No potential conflict of interest was reported by the authors.

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