

Parental Reading Support Activities and Children's Reading Achievement in Tanzania

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ABSTRACT

Parents' activities to support their children in reading and their children's reading skills was studied to 600 grade 2 children and their parents in Dar es Salaam, Tanzania. Parents completed a questionnaire on parental involvement activities, i.e. encouragement, reinforcement, modeling and instruction. Children's reading abilities were tested with a reading test measuring word decoding, reading fluency and reading comprehension. Raven's Colored Progressive Matrices test was used to control for children's IQ. Results showed that IQ was not related to children's word decoding and reading fluency, but there was an association between IQ and some aspects of children's reading comprehension. Although parents' level of education correlated significantly with children's reading, parents' reading was not related to children's reading. Hierarchical regression analyses revealed a statistically significant, but weak association between parental reading support activities with all three aspects of children's reading. The usefulness of an intervention to stimulate early literacy is discussed.

Keywords: *Parent involvement activities, school-family partnership, primary school, reading*

INTRODUCTION

Reading ability is an important indicator of school success and a predictor of children's future educational achievements. Tanzania, like other sub-Saharan countries, is facing several setbacks in early literacy development. A report of the UNESCO Institute of Statistics (2017) showed that Sub-Saharan Africa has the largest population of children and adolescents who have not achieved reasonable academic skills. The report stipulates that 202 million or almost 9 out of 10 kids between the age of about 6 and 14 cannot read proficiently at the end of primary or lower secondary school. Although more than two-thirds of the children are actually attending school and can be reached by their governments and communities, they are not adequately achieving academic skills, which may be attributed to the issue of education quality (UNESCO, 2017). In Tanzania, primary education is provided free to all school-aged children. Although the country is experiencing massive basic education expansion, many children are still facing problems with early reading development and the majority of children in Tanzania do not acquire literacy skills according to their age and grade level (Uwezo, 2012).

Kumburu (2012) stated that reading and writing difficulties are common learning problems to many school children in Tanzania, but they are not well understood and not much researched. While all the blame is put on the Government, teachers and the formal schooling environment, only a few studies (e.g. Kimaro & Machumu, 2015; Kumburu, 2011; Mpiluka, 2014; Ngorosho, 2010; Uwezo, 2010; 2011; 2012) have explored the home environment as the first informal learning setting of a child. Kumburu (2011) implemented a short-term literacy skills intervention for children at risk for reading and writing difficulties in Tanzania. In a randomized experiment it was found that poor literacy motivation and support in the home environment are among the factors which hinder a smooth literacy development of children in Tanzania. Ngorosho (2011) studied the role of the home environment in literacy skills of Kiswahili speaking primary school children in a rural area in Tanzania. The paper interviewed parents about the home environment and found that parents' education, occupation, housing circumstances and literacy facilities had a significant relationship with reading ability. Coleman *et al.* (1966) explained that the home environment and

cultural influences are the major sources of inequality in educational opportunities among children in society. Though parents in Tanzania value education highly, their involvement is mostly confined to financial support (Tornblad & Widell, 2014). If Tanzania wants to overcome problems related to early literacy development, there is a great need to involve parents in children's literacy development. This can be done in several ways, such as introducing a specific policy to stress parental involvement, by assessing parents' awareness and motives, as well as the practices parents use to directly stimulate their children's reading skills. Topor, Keane, Shelton and Culkins (2010) underlined that it is very crucial to identify specific parenting practices, programs and mechanisms to stimulate parental involvement behaviors and increase children's academic performance.

The current study is conducted within a larger project aimed at enhancing parental involvement in children's reading development. A first study of this larger project concluded that parents have the desire to be involved in their children's education, and that this desire is stimulated by several factors. On the one hand, invitations from their child or their child's teacher to be involved, and psychological factors such as self-efficacy, knowledge and expectations are related to involvement at home, whereas on the other hand school/teacher/child invitations and perceived time and energy are related to involvement at school (Kigobe, Ghesquière, Ng'umbi, & Van Leeuwen, 2018). The goal of the present study is to go more deeply into the associations between activities used by parents to support their children in reading and their children's reading skills, to examine whether it would be useful to launch an intervention that focuses on parental commitment in child literacy.

Parental Involvement and Literacy Development

Research literature has shown that in encouraging early literacy development in elementary school the role of families, family-school relations, and parental involvement cannot be underrated. Parents can play an important role in fostering children's early literacy and language development because home is where children first experience oral and written language (Bishop & de Jong, 2016). There is emerging empirical support for the hypothesis that parents, by introducing written

language, teaching and showing positive beliefs about reading, have a vital role in the literacy development of their children (Baker & Scher, 2002; Berthelsen & Walker, 2008; Boukaz & Person, 2007; Green, Walker, Hoover-Dempsey, & Sandler, 2007; Vellymalay, 2010; Walker, Wilkins, Dallaire, Sandler, & Hoover-Dempsey, 2005; Wright, 2009; Zedan, 2012). Several studies have revealed that early parent interventions boost children's reading development. For example, young children develop stronger early literacy and language skills when parents expose them to books at home, value their role in their children's reading development, monitor children's TV time, regularly engage their children in literacy and language activities at home, and communicate and cooperate with their children's teachers (Carroll, 2013; Fan & Chen, 2001; Gest, Freeman, Domitrovich, & Welsh, 2004; Sénéchal & LeFevre, 2002; Sénéchal & LeFevre, 2014; Simonds, 2012). Sénéchal and Lefevre (2002) conducted a 5-year longitudinal study on the role of parental involvement in the development of children's reading skills and found that children's exposure to books at home was related to the development of vocabulary and listening comprehension skills. Moreover, parental involvement in teaching children about reading and writing words was related to the development of early literacy skills. Flouri and Buchanan (2004) affirmed that parental involvement in a child's literacy practices is a more powerful force than other family background variables, such as social class, family size and level of parental education.

Theoretical Framework

The current study is guided by the Hoover-Dempsey and Sandler model of the parental involvement process (Hoover-Dempsey & Sandler, 1995, 1997, Hoover-Dempsey, Walker, & Sandler, 2005), which tackles three major questions: (a) why do (and don't) families become involved in educational activities; (b) what do families do when they are involved in educational activities, and (c) how does family involvement in children's education make a positive difference in student outcomes. Our study relates to the last question. The Hoover-Dempsey and Sandler model includes 'learning mechanisms' (which they explained as specific kinds of activities) used by parents during involvement activities, namely parental encouragement, modeling, reinforcement and instruction. Because these mechanisms refer to parental activities, we prefer to use

the term 'parental involvement activities'. Hoover-Dempsey (2010) defined these activities as follows: (a) parental encouragement is a parent's explicit support for students and active engagement in activities related to school tasks and learning, (b) parental modeling is parent behavior linked to successful learning such as explicit modeling in the course of instructions, attitude towards reading and actual parents' reading behavior (c) parental reinforcement includes a parent's application of positive, individually and developmentally appropriate consequences for learning behaviors and efforts of their child, and (d) parental instruction is the engagement of a parent with their child by giving various forms of instruction such as teaching, tutoring, practicing or correcting at home.

The Scope of the Study

The present study examines the relationship between parental reading support activities and children's reading skills in second grade of elementary school in a Tanzanian context. Researchers assessed the four parental involvement activities of the Hoover-Dempsey and Sandler model (reinforcement, modeling, encouragement and instruction), and three aspects of children's reading achievement (word decoding, reading fluency and reading comprehension). We expect that using more of a certain parental reading support activity will contribute to better reading results (decoding, fluency, and/or comprehension). To control for possible confounding variables, researchers include an indicator of children's IQ, parents' educational level, and type of school (public versus private) in all regression models. Additionally, Investigation whether the effect of each of the four parental activities on reading was moderated by the level of education of the parents. Finally, researchers checked whether parents' own reading fluency and reading comprehension have a complementary role in children's reading outcome, by adding these variables to the regression models.

Method Participants

All participants selected for this study were residents of Dar es Salaam, chosen for its heterogeneous nature concerning socio-economic characteristics. The study included 600 grade 2 children and (one of) their parents. The children were attending 18 public (73.1% of the pupils) and 6 private primary schools (26.9% of the pupils) in 3 districts

of Dar Es Salaam, Tanzania. In terms of gender, 50.7% of children were male and 49.2% were female. Most of the children were 6 to 8 years old (73.6%), whereas 26.1% was 9 to 11 years old, and 0.3% was 11 to 13 years old. The older age of some pupils was the result of repeating one or more classes or late school admission. Demographic characteristics of the parents are described by the variables gender, level of education, income and employment status. Most participants (68.2%) were mothers, 31.8% were fathers. Of the parents 13.1% was unemployed, 11.5% was labor worker, 45.7% retail trader, 5.1% driver, 9.0% teacher or nurse, 5.6% skilled craftsman, 7.1% farmer or herder, and 3.0% was public servant or government official. Parents' level of education was measured with three categories indicating lower education (66.4%), middle education (20%) and higher education (13.6%). Regarding income, 25.9% had a yearly income between \$50 to \$250, 23.4% had less than \$50 per year, 18.1% \$300 to \$500 and 12.3% over \$1200 per year, and for the rest of the sample, the income was not reported.

Procedure

Data collection was conducted as part of a larger (intervention) study about parental involvement and its impact on children's literacy development in primary schools in Dar es Salaam, with three measurement points (pre- and post-intervention, and follow-up). The current study used baseline data (May 2016) from both the intervention and the control group, except for parents' reading data, which were collected during the follow-up measurement wave (February 2018). The moment for this parental reading data-collection was chosen in order not to intimidate parents at their first meeting with the researchers. At the time of our baseline data collection, Dar es Salaam had a total number of 573 primary schools in three districts: Kinodoni (140 public and 111 private schools), Ilala (110 public and 63 private schools) and Temeke (112 public and 37 private schools). Twenty-four primary schools were randomly selected from a list of all schools. Seven trained researchers who were professional tutors from a teacher training college were responsible for the test administration of the children. Children sat for the reading test in the normal classroom setting. The test was voice reordered for the evaluation of students' oral reading, accuracy rate and identification of error patterns. The researchers also provided instructions to the children before administering the

Raven test. Involved schools in the study agreed to invite parents at schools for data collection purposes. Schools gave parents an official invitation through their children one month and one week before the meeting day. Parents were asked to sign a written informed consent and were tested individually in private rooms for less than 10 minutes. Parents completed a parent involvement (PI) questionnaire with the support of research assistants.

Measures

Parental involvement activities in children's reading.

We used 4 variables related to parental involvement activities used by Hoover-Dempsey, Sandler and Walker (2005) in the Parent Involvement Project (PIP). A pilot study was conducted to examine the validity of the measures' content in the Tanzanian context. We performed a back and forth translation to create a Swahili version of the survey, as Swahili is the official language in Tanzania. Parents rated all items on a 6-point Likert-type scale ranging from 1 (not at all true) to 6 (completely true).

Parental encouragement

Parental encouragement refers to parents' explicit behaviors that support students' active engagement in activities related to school tasks and learning (Hoover-Dempsey, 2010). This variable was assessed with 13 items describing parents' use of encouragement behavior (Hoover-Dempsey et al., 2005). Item examples are: (a) "We encourage this child when he or she doesn't feel like doing schoolwork", (b) "We encourage this child when he or she has trouble organizing schoolwork". Higher scores indicated that parents report using more encouragement behaviors. The Cronbach's alpha reliability coefficient for this scale was .90.

Parental modeling

Hoover-Dempsey and Sandler purport that when parents are involved they are modeling positive school-related behaviors and attitudes to children (Sheridan & Kim, 2015). Ten items described parent's use of modeling behaviors (Hoover-Dempsey et al., 2005). Item examples are: (a) "We show this child that we like to learn new things", (b) "We show this child that we want to learn as much as possible". Higher scores indicated that

parents report using more modeling behaviors. The Cronbach's alpha reliability coefficient for this scale was .92.

Parental reinforcement

Parental reinforcement influences a child's behaviors by creating occasions for parents to provide their child with attention or rewards for school-related behavior (Sheridan & Kim, 2015). Parent's use of reinforcement behaviors was described with 13 items (Hoover-Dempsey et al., 2005). Item examples are: (a) "We show this child we like it when she or he ask teacher for help", (b) "We show this child we like it when she or he works hard on homework". Higher scores indicated that parents report using more reinforcement behaviors. The Cronbach's alpha reliability coefficient for this scale was .95

Parental instruction

Through direct instructions parents get opportunities to influence their children's learning through the direct involvement behaviors such as teaching, tutoring, practicing or correcting (Hoover-Dempsey & Sandler, 2005). This variable was assessed with 15 items describing parent's use of instructional behaviors (Hoover-Dempsey et al., 2005). Item examples are: (a) "We teach this child to follow teachers' directions (b) "We teach this child to have good attitude about his or her homework". Higher scores indicated that parents report using more instructional behaviors. The Cronbach's alpha reliability coefficient for this scale was .95

Reading skills in children and parents

Reading skills in children

To test reading skills, the study adopted a part of Uwezo's reading assessment tool for children, see <http://www.uwezo.net/assessment/>. Uwezo is a non-profit organization ("Twaweza") that aims to improve competencies in literacy and numeracy among children aged 6-16 years old in three countries of East Africa (Kenya, Tanzania and Uganda). The adopted part of the assessment tool consisted of two sets of the reading test with four sections each. The sections consist of letters, words, paragraph and story reading. The sections with story reading contained two comprehension questions related to the story. The intention was to measure three major reading skills, which are word

decoding, reading fluency and reading comprehension. Scores on the test are based on the amount of words a child could read in a given time, the number of errors children made, and the number of questions children were able to answer correctly after reading two stories. We checked correlations between the 10 components of the two sets of the reading test to see how the two sets are related. Findings showed that the two tests were highly correlated (see Table 1), as a result of which combined the two sets to get three reading skills scores which are word decoding, comprehension and fluency. A higher score indicates a better performance on the test.

Reading skills in parents

To measure parents' reading skills we adopted the '2015 national primary education leaving examination'. We used two sections which included two passages measuring reading fluency and comprehension. A first passage contained 175 words whereby parents had to read aloud for 3 minutes and answer 10 questions related to a passage. A second passage contained 79 words whereby parents had to read aloud for 1 minute and answer 6 questions related to the passage. Parents responded the questions by ticking (✓) the box for the most correct answer among the alternative answers provided below each question. A total score for both reading fluency and comprehension was calculated, with a higher score indicating a better performance on the test. This test was administered in February 2018 at follow-up measurement, and data was obtained from 66.23% of the parents.

Intelligence in children

In psychological research and educational settings Raven's progressive matrices (Raven, Raven, & Court, 1996) are widely used as a measure of intelligence. Raven's progressive matrices, is a non-verbal test, suitable for all children, adolescents and adults regardless of culture and educational level (Burke, 1958; Raven, Raven, & Court, 1996; Schweizer, Goldhammer, Rauch, & Moosbrugger, 2007; Pueyo, Junqué, Vendrell, Narberhaus, & Segarra, 2008). Raven's colored progressive matrices test is shorter (36 items) and simpler than other forms of Raven's progressive matrices and can also be used for children with physical and intellectual disabilities (Giovagnoli, 2001; Pueyo et al., 2008). Given the age of our participants and the cultural context, this study used Raven's colored progressive matrices to control for IQ in the analyses.

Statistical Analysis

The study employed SPSS Statistics software 24.0 to conduct statistical analyses. We calculated means and standard deviations of all variables (see Table 1). We checked the linear relationship between the variables and the control variables (child IQ, type of school (0 = public, 1 = private), parent's level of education, parent's reading fluency and reading comprehension). Because some of the variables seemed to be not normally distributed, both non-parametric Spearman and parametric Pearson correlations were computed and compared, but results were not different. To test the contribution of parent activities to children's reading tests, we performed hierarchical multiple regression analyses (HMRA). We checked assumptions of normality, homoscedasticity, and multicollinearity. Because child word decoding, parental modeling and parental reading fluency were negatively skewed, a Log transformation ($\log(X_i)$) was performed, and analyses were also run with these transformed variables. However, this did not show different results; therefore, we report the results with non-transformed variables.

The correlations among pairs of parent activities variables were large ($> .50$). To avoid multicollinearity, we decided to run hierarchical multiple regression analyses (HMRA) with each of the four parent activities (encouragement, reinforcement, instruction and modeling) separately as independent variables and the three reading test variables (word decoding, comprehension and fluency) as dependent variables (12 HMRA's in total). Control variables school type (0 = public, 1 = private) and parents' level of education were entered in the first block, the IQ score of the child was entered in the second block and one parental strategy was entered in the third block. We also ran a principal component analysis (PCA) on the four parenting activities variables to see whether it would be useful to extract a common factor, representing parenting involvement in children's reading in general. The PCA showed that one component explained 71.67% of the variance. Therefore, we additionally conducted three HMRA for the three dependent variables with the common, extracted component score for the four activities. To test whether parental education level was a moderator Andrew Hayes' Process macro version 3.0 (Hayes, 2013) was used. The interaction between parental education level and each of the four parental activities was entered in the HMRA to examine

whether this interaction explained additional variance in the three child reading variables. Finally, we checked whether parents' reading fluency and parents' reading comprehension predicted children's reading outcome, by adding these variables to the regression model in a final block (in the regression models without moderator). Because of the listwise deletion of missing values, the number of participants in these analyses is smaller.

Results

Prevalence of Parent Activities

Table 1 shows that parents reported to apply the four parenting activities frequently. They seemed to use slightly more encouragement and modeling activities than reinforcement and instruction activities.

Parental Activities Related to Word Decoding

Control variables

Of the two control measures type of school and parent's level of education entered in Step 1 ($F(2, 527) = 18.20, p < .001, 6.1\%$ explained variance), parental education was significantly related to child word decoding ($\beta = .25, p < .001$). In Step 2, IQ did not explain an additional proportion of the variance in child word decoding with $F_{\text{change}}(1, 526) = 0.05, p > .05$. *HMRA with parent activities separately.* Among the four HMRA only instruction explained an additional proportion (1%) of the variance in word decoding, $F_{\text{change}}(1, 525) = 5.20, p < .05$, showing that more parental instruction ($\beta = .10, p < .05$), was significantly related to better child's word decoding skills.

HMRA with a common factor for the four parent activities

The common factor for the four parenting activities did not significantly explain additional variance in child word decoding $F_{\text{change}}(1, 525) = 1.82, p > .05$.

HMRA with parental education as a moderator

The interaction effects of parental education and one of the four parent activities did not account for the variance in child word decoding. There was no extra explained variance ($R^2_{\text{change}} = 0\%$) by adding the interaction term with education: encouragement by education, $F_{\text{change}}(1, 525) = 0.02, p > .05$; modeling by education, $F_{\text{change}}(1, 525) = 0.08, p > .05$; reinforcement by education, $F_{\text{change}}(1, 524) = 0.95, p > .05$; instruction by

education, $F_{\text{change}}(1, 524) = 0.22, p > .05$ and the common activities component by education, $F_{\text{change}}(1, 524) = 0.07, p > .05$.

HMRA with parental reading variables entered in the final block

There was no extra explained variance ($R^2_{\text{change}} = 0\%$) by adding the two parental reading variables: for the model with encouragement, $F_{\text{change}}(2, 355) = 0.07, p > .05$; with modeling, $F_{\text{change}}(2, 355) = 0.08, p > .05$; with reinforcement, $F_{\text{change}}(2, 355) = 0.05, p > .05$; with instruction, $F_{\text{change}}(2, 355) = 0.04, p > .05$ and with the common activities component, $F_{\text{change}}(2, 355) = 0.04, p > .05$.

Parent Activities related to Children's Reading Fluency

Control variables

The two control measures type of school and parents' level of education accounted for a significant proportion (15%) of the variance in reading fluency, $F(2, 517) = 46.63, p < .001$. Only parental education was significantly associated with reading fluency ($\beta = .40, p = .001$), indicating that a higher educational level of the parents is associated with more reading fluency. In Step 2, children's IQ did not add a significant proportion of variance in reading fluency, $F_{\text{change}}(1, 516) = 1.64, p > .05$. In the final models only one control variable, parental education level, remained significant after adding parental involvement activities (see Table 3).

HMRA with parent activities separately

Among the four HMRA only the two variables encouragement and instruction explained some proportion of the variance in reading fluency. In the model with parental encouragement an additional 1% of the variance was explained in the third step, with $F_{\text{change}}(1, 516) = 4.37, p < .05$. In the model with parental instruction an additional 1% of the variance was explained in the third step, with $F_{\text{change}}(1, 515) = 3.72, p = .05$. Regression coefficients indicated that parental instruction ($\beta = .08, p = .05$) and encouragement ($\beta = .09, p < .05$) were positively associated with reading fluency.

HMRA with a common factor for the four parent activities

Adding the common component for the four parenting activities explained 1% extra variance, with $F_{\text{change}}(1, 515) = 3.92, p < .05$, and a positive regression coefficient ($\beta = .08, p < .05$).

HMRA with parental education as a moderator

Parental education did not significantly moderate the association between one of the four parent activities and child reading fluency. There was no extra explained variance ($R^2_{\text{change}} = 0\%$) by adding the interaction terms: encouragement by education, $F_{\text{change}}(1, 515) = 0.06, p > .05$; modeling by education, $F_{\text{change}}(1, 515) = 0.26, p > .05$; reinforcement by education $F_{\text{change}}(1, 514) = 1.30, p > .05$; instruction by education, $F_{\text{change}}(1, 514) = 0.76, p > .05$, and activities component by education, $F_{\text{change}}(1, 514) = 0.07, p > .05$.

HMRA with parental reading variables entered in the final block

There was no extra explained variance ($R^2_{\text{change}} = 0\%$) by adding the two parental reading variables in the final block: for the model with encouragement, $F_{\text{change}}(2, 344) = 0.70, p > .05$; with modeling, $F_{\text{change}}(2, 344) = 0.83, p > .05$; with reinforcement, $F_{\text{change}}(2, 344) = 0.93, p > .05$; with instruction, $F_{\text{change}}(2, 344) = 0.91, p > .05$ and with the common activities component, $F_{\text{change}}(2, 344) = 0.90, p > .05$.

Parental Activities Related to Reading Comprehension

Control variables

In the model with parental encouragement the two control variables type of school and parent's level of education entered in Step 1 accounted for 1.3% of the variance in reading comprehension, $F(2, 542) = 4.71, p < .01$. In Step 2, IQ did not significantly explain extra variance in reading comprehension, $F_{\text{change}}(1, 541) = 0.71, p > .05$.

HMRA with parent activities separately

Parental reinforcement explained an additional proportion of the variance in reading comprehension (1%), with $F(1, 540) = 4.12, p < .05$. Also instruction explained additional variance (1%), with $F(1, 540) = 4.12, p < .05$.

HMRA with a common factor for the four parent activities

The common component for the four parenting activities did not explain additional variance with $F_{change}(1, 540) = 4.26, p < .05$.

HMRA with parental education as a moderator

Parental education was not a significant moderator in the association between one of the four parent activities and child reading fluency. There was no extra explained variance ($R^2_{change} = 0\%$) by adding the interaction term: encouragement by education, $F_{change}(1, 540) = 1.56, p > .05$; modeling by education, $F_{change}(1, 540) = 0.12, p > .05$; reinforcement by education, $F_{change}(1, 539) = 0.00, p > .05$; instruction by education, $F_{change}(1, 539) = 0.18, p > .05$ and the common activities component by education, $F_{change}(1, 539) = 0.06, p > .05$.

HMRA with parental reading variables entered in the final block

There was no extra explained variance ($R^2_{change} = 0\%$) by adding the two parental reading variables in the final block: for the model with encouragement, $F_{change}(2, 362) = 0.53, p > .05$; with modeling, $F_{change}(2, 362) = 0.54, p > .05$; with reinforcement, $F_{change}(2, 362) = 0.31, p > .05$; with instruction, $F_{change}(2, 362) = 0.40, p > .05$ and with the common activities component, $F_{change}(2, 362) = 0.43, p > .05$.

Discussion

The present study assessed the contribution of four parental involvement activities (encouragement, modeling, reinforcement, and instruction) to three child reading skills (decoding, fluency and comprehension). Of the possible confounding variables, only the educational level of the parents was associated with child reading, but only modestly (15% explained variance in reading fluency, 6% in word decoding and 1% in comprehension). Whether the child goes to a private or a public school, or the score on the IQ test was not significantly related to the reading subtests, neither did the parents' reading test scores.

Concerning the parental involvement activities, results of the study suggested that parental instruction was consistently associated with all reading outcomes of the children, parental encouragement was only associated with children's reading fluency, and reinforcement was only associated with reading comprehension. Adding these parental involvement activities explained only an additional 1% of the variance,

indicating that associations were very weak. Moreover, if a Bonferroni correction is applied, none of the parenting strategies remains significantly associated with child reading outcomes. Parental modeling was not significantly related to the child reading outcomes. The association between parental instructions and children's reading skills is in line with other studies (Sénéchal & LeFevre, 2014; Sénéchal et al., 1998; Sénéchal, 2006; Teale, 1986). Home instruction about reading proves to be very effective as shown in the experimental study of Morrow and Young (1997).

They found that children who received both home and school-based reading instruction outperformed children of the control group who received only school-based instructions. Sénéchal et al. (1998) found that direct instructions of written-language skills by parents contribute largely to child literacy development particularly to the acquisition of literacy skills of children who cannot yet read. Sénéchal and LeFevre (2014) affirmed that parents' direct teaching about reading had more effect on children's reading than other informal involvement activities of parents such as shared book reading. This was also recognized by Teale (1986) who confirmed that parents' direct teaching was more effective than parents' engagement in storybook reading. Sénéchal (2006) found that parents' teaching contributed 6% unique variance to children's alphabetic knowledge and was related to phoneme awareness while other variables such as story book exposure did not account for any unique variance. He confirmed that parents' teaching of children about literacy in kindergarten directly predicted kindergarten alphabetic knowledge and Grade 4 reading fluency. This means that parents' direct teaching not only helped emergent readers to develop decoding skills but also led to successful development of reading fluency in later years. Sénéchal and LeFevre (2002) affirmed that frequency of parents' teaching is directly related to children's early literacy. We extended previous findings by showing that parents' direct teaching activities relate to children's decoding and reading fluency beyond parents' educational level and parents' reading skills. In this study, parental encouragement was weakly associated with children's reading fluency. Sanders (1998) found a relationship between students' perceptions of parental encouragement of academic efforts and children's academic self-concept. Martinez-Pons (1996) affirmed that, when children face difficulties in self-regulation to engage in school activities, a child who is

encouraged to persist to do so will be more likely to succeed in engaging in school work than a child who is not. This implies that parental engagement in explicit supportive behavior through the encouragement of the student's interest in reading activities increases children's reading motivation. It seems that the more a parent encourages a child to read and to engage in reading activities the higher the possibility for a child to become a fluent reader. Parental reinforcement was related to children's reading comprehension. Parental reinforcement in reading activities through various home activities such as story books exposure and family reading time can directly or indirectly stimulate the child's reading comprehension. Sénéchal (2006) did a study on how parental involvement in kindergarten is related to grade 4 reading comprehension, fluency, spelling, and reading for pleasure and found that story book exposure predicted grade 4 reading comprehension indirectly.

Children might require more exposure to literacy materials at home, as strong base for decoding, vocabulary and reading fluency (which all requires parental support) to boost their reading comprehension development. With regard to reading comprehension, we found a relationship between children's IQ and some aspects of reading comprehension but IQ did not explain variance in reading comprehension in a hierarchical regression model. Tiu, Thompson and Lewis (2003) found that IQ accounted for a significant amount of variance in children's processing speed, which is a very important aspect in reading comprehension. On the other hand, Share, McGee and Silva (1989) stressed that IQ does not set limits to reading progress even in extreme low IQ children. Parental educational level remained significant even after adding parental involvement activities and parent's reading skills in all hierarchical regression models. Parents' educational level seems to be the most important parental factor related to children's reading development in this study. However, it did not moderate the association between parental involvement activities and child reading skills, meaning that depending on the educational level, we did not find different associations. Chiu and Ko (2008) pointed out that maternal education plays an essential role in children's reading. Though Van Bergen et al. (2016) stressed that home literacy is more proximal to children's reading than parental education; parents' own literacy skills were not associated with children's reading skills in this study. Shonkoff and Phillips (2000) found that the level of parental

education is not only strongly associated with the home literacy environment but also with parents' teaching styles and use of resources, child care and educational materials such as a parental direct teaching of alphabets, book sharing and library visits.

Conclusion and Implications

The current study opens a way for more investigation on the effective and feasible parental reading support activities which can be used to encourage parental involvement in the literacy development of children in Tanzania. Though parental educational level was associated with all three children's reading skills, parents' own reading ability didn't correlate with any children's reading skill. This suggests that although parental reading ability is important, it cannot be a deciding indicative measure of parental involvement at home and it would be wrong to assume that illiterate parents are not able to help their children at home and support their reading development. Leichter (1984) stipulated that children may learn and become readers on their own without formal instruction, but through experiences with literacy together with their parents. More specifically, the emotional reactions of the parents can affect the child's progress significantly. Researchers need to find feasible ways and practices that can be useful to all parents regardless of their reading status.

Parents might not be able to read but if they are well supported, they can encourage and reinforce their children to see the importance of reading and education. Children with literate parents might have more advantages by receiving literacy support at home than children of illiterate parents. This does not mean that illiterate parents are not willing to help their children: a strong desire to help can exert a positive influence for their children to become literate. It should be noted that not all activities are feasible and effective to every parent and child. If we want children to have a smooth reading development, policy makers, schools and teachers need to motivate parents to take part in their children's reading progress by providing them with feasible tools and reliable practices such as teacher-parent meetings, home visits as well as a specific parent training which focuses on informing parents about the importance of reading. We need to think of specific practices that can easily facilitate students' intrinsic and extrinsic motivation for reading and bring better reading successes to children. For example, schools can buy reading materials for children for use at home, teachers can use simple

and motivating practices such as resource sharing by lending story books to children for home use and the use of wordless picture books at home. Parents can be instructed to ask their children about their daily routines at school and new words they learnt at school, tell stories to their children, and children can read aloud for parents.

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