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Original Research

Children's books as a brief intervention for parents with depressive symptoms and parenting stress

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Abstract

Background: To determine whether children's books illustrating positive parent-child interactions could serve as a brief intervention for parents with young children and to measure its impact on parenting stress.

Methods: Sets of 3 children's books with parenting content were given to families to take home after 1 of the books was read aloud in the exam room while waiting for the pediatrician. Parenting stress was measured at baseline and 1 month later. Multivariable logistic regression was performed to determine the intervention's effect on parenting stress, adjusting for socio-demographic characteristics, parental depression and health literacy status.

Results: 56 parents with 18-48 month old children participated in this pilot study. Mean total parenting stress scores did not change (baseline 68.7, 95% CI: 65.5-76.1; 1 month 70.8, 95% CI: 65.5-76.1). However, when scores were stratified by depressive status, parents with moderate to severe depression reported a reduction of parenting stress to below clinically significant levels (baseline 94.6, 95% CI: 70.0-119.2; 1 month 81.3, 95% CI: 56.2-106.3). Regression analysis showed parents with depressive symptoms were more likely to report a decrease in total parenting stress 1 month after the intervention (AOR: 6.3; 95% CI: 1.2-31.8), even after adjusting for socio-demographic characteristics, parental depression and health literacy status.

Conclusions: Children's books with parenting content may be a suitable brief primary care-based intervention, especially for parents with depressive symptoms. Our findings warrant future studies with larger sample sizes to understand the effect size of this intervention.

INTRODUCTION

Parental stress has been shown to affect the parent-child relationship and influence the way parents handle their child's behavior[1-3]. Multiple factors contribute to parenting stress, including access to resources, parental depressive symptoms, or perceptions of parenting demands[1, 4, 5]. The accuracy with which parents perceive typical childhood behavior decreases with high levels of stress, and parents may inappropriately attribute negative aspects of a behavior to the child, rather than to the specific situation[2]. Positive parenting interventions are needed to help normalize experiences and provide parents an understanding of challenging childhood behaviors and how to effectively respond to them. Pediatricians have a unique opportunity to recognize problematic interactions as they emerge and intervene; however, interventions must be brief given the busy workflow of outpatient pediatrics. Moreover, mounting efforts to ensure pediatricians routinely screen for parental depression are ongoing, given the impact this condition has on childhood health and behavior[6, 7]. However, there are limited targeted interventions available to pediatricians that are designed to effectively enhance mother-child interactions among parents either at-risk or who have depressive symptoms[8].

The use of children's books to supplement pediatrician counseling during well-child visits is a potentially

effective and brief intervention that may not only improve parent-child interactions, but also have positive effects on various aspects of child growth, development, and mental health[9]. Children who relate to characters while reading a story develop an increased understanding of their own feelings and experiences[9]. Children tend to adopt behaviors that are presented in the form of symbolic modeling such as in picture storybooks[10]. In our previous work, these children's books helped educate parents on alternate strategies to handle common behavioral challenges[11].

In an effort to extend our previous findings, we sought to determine whether a brief parenting intervention could be used in families with children as young as 18 months of age to provide information to parents about common behavioral challenges as early as possible. Our hypothesis is that caregivers who receive the intervention would report lesser parenting stress given the books model alternate ways to handle common behavioral challenges. We also accounted for risk factors such as parental depressive symptoms, health literacy and other socio-demographic factors, which may also be associated with parenting stress.

PATIENTS AND METHODS

Study Procedures

We conducted a prospective 1-month study to examine whether using a series of children's books with parenting content as a brief intervention would reduce parenting stress among parents of children 18 to 48 months of age. One hundred twelve families were recruited between May 2011 and March 2012 during well child visits to one of five community-based pediatric clinics. To be eligible, families had to have a child between 18 to 48 months of age who received care one of the clinics. Families were excluded if their primary language was not English (since the intervention books were not available in other languages), if the child had an acute medical problem at the time of the well child visit, if the parent was less than 18 years of age, if the family had participated in the previous study of the intervention books, or if the family had another child already enrolled in the current study.

Parenting Intervention

The parenting intervention consisted of having the parent and/or child select 1 of 3 available titles to be read aloud to the child by a trained research assistant with the parent observing as they waited for the pediatrician in the examination room. After the book reading, the family was given the book and 2 other titles in the series. Each book illustrated positive parent-child interactions in the context of common behavioral challenges. The books covered getting ready in the morning (Ready for the Day), going to bed (Ready for Bed), and sharing toys with playmates (Ready to Play). This set of books was chosen as they use simple dialog and color-coded text to provide parents positive language for defusing everyday parenting challenges. All 3 books were written at the early second-grade level as determined by Flesch-Kincaid readability statistics in a word processing program[12]. The books were designed to highlight the use of 4 positive parenting techniques: how to validate a child's feelings, how to offer choices, how to promote problem-solving skills, and how to encourage alternate behavior. The rationale for choosing these particular books was that they were readily available at public libraries or national booksellers and they were written at a lower literacy level and could therefore be used even with parents with lower literacy. The choice to read the books aloud was made so that parents with lower literacy could remember the simple storyline when using the book at home.

Before the book reading, parents provided informed consent and completed data collection tools measuring health literacy, depressive symptoms, parenting stress, and socio-demographic information. Immediately following the book reading, parents were asked whether they had heard or learned anything from the book they would try the next time they experienced a similar problem in either getting their children ready for the day, ready for bed, or while their children were playing with others. Families were contacted by telephone 1 month after the intervention to re-assess parenting stress, determine whether the books were used and to collect general comments about the books themselves.

Data Collection Tools

Parenting Stress. Parenting stress was measured using the Parenting Stress Index-Short Form (PSI-SF)[4]. The PSI-SF is used to identify parent-child problem areas in parents of children between 1 month and 12 years of age. There are a total of 36 items with three subscales (parental distress, parent-child dysfunctional interaction, and difficult child). The entire scale has a Cronbach's alpha of 0.8 to 0.91. Individual items are added for each subscale score and then summed across subscales to yield a total parenting stress raw score. Raw scores are converted to percentile scores based on available norms[4]. Scores between the 15^{th} to 80^{th} percentile are considered within the normal range and those above the 85^{th} percentile are considered to be clinically significant. Total raw scores equaling 86 or greater are equivalent to percentile scores in the clinically significant range.

Depressive Symptoms. Parental depressive symptoms

were measured at baseline using the Patient Health Questionnaire-9 (PHQ-9)[13]. The PHQ-9 is a brief instrument developed and validated for screening, diagnosing, monitoring and measuring the severity of depression in primary care[13]. Respondents answer each of the 9 items by rating items on a 4-point scale ranging from 0 (not at all) to 3 (nearly every day). Scores between 5 and 9 are indicative of mild depression; scores greater than or equal to 10 have a sensitivity of 88% and specificity of 88% for detecting major depression. Depressive symptoms were measured at 1 month using the ultra-brief Patient Health Questionnaire-2 (PHQ-2) derived from the PHQ-9 with high sensitivity and specificity for maternal depression (depressed mood and anhedonia)[14]. Scores of 3 or more on the PHQ-2 are considered a positive screen.

Health Literacy Status. We chose to measure health literacy because mothers with depression are more likely to have poor health literacy status and not follow through on recommended preventive health care recommendations for themselves and for their children[15, 16]. Health literacy was measured using the Rapid Estimate of Adult Literacy in Medicine-Revised Scale (REALM-R)[17]. The REALM-R is a word recognition test of 11 (3 non-scored, 8 scored) words used to identify individuals at risk for poor health literacy status. Subjects were provided the 11 items printed in 18-font on a single page and asked to read each word aloud to the research assistant. Dictionary pronunciation was used as the scoring standard and a point was given for each item pronounced correctly. Scores of 6 or less are indicative of poor health literacy.

Sample socio-demographics and other characteristics. A 12-item study specific survey was developed to measure parent and child socio-demographic characteristics. Items included relationship to child, marital status, parental age, race/ethnicity, employment status, educational attainment, whether the child was the respondent's first child, total number of children in the home, child age and gender, whether the child ever received Medicaid or free/reduced lunch, and if the child was ever expelled, suspended or asked to leave daycare or preschool due to behavior problems.

All study procedures were approved by the Indiana University Office of Research Administration prior to the start of the study.

Analysis

Sample characteristics were calculated for the entire sample, and differences between subjects completing the 1-month follow up by telephone and those lost to follow up were compared using the Fisher's exact test or chi-squared as appropriate to account for cell sizes. Mean total parenting stress scores were examined for subjects with complete data at baseline and 1 month. These scores were further subdivided by the presence of parental depression (any/ none) and the severity of depression (mild/moderate/severe). To explore the impact of the intervention on parenting stress, we used logistic regression. Our primary outcome of interest was a change in parenting stress from baseline to 1 month, and thus a change score was generated by taking the total raw score at 1 month and subtracting it from the total raw score at baseline. Since the sample size was small, we elected to adjust the model for sample characteristics that were selected a priori. The first multivariable logistic regression model was adjusted for parental depression (depressed versus not), health literacy (low versus adequate), race/ethnicity (black race versus other), marital status (single versus other) and education (high school or less versus other). Another regression analysis was conducted to examine the association between parental depression severity and report of a change in parenting stress at 1 month, again adjusting for the same sample characteristics as in the first model. Any data that were missing were excluded from analysis. All data were analyzed using Stata 11 (StataCorp, College Station, Texas, 2010). All comments obtained after the book reading and during the follow-up telephone call were reviewed anonymously by one author (NB) and organized under themes that emerged.

RESULTS

One hundred eighteen families were approached for the study; 4 parents declined due to lack of time or interest, and 2 were excluded based on study criteria. One hundred twelve families were enrolled at baseline. However, only half of the sample (n=56) was reached by telephone to complete the 1-month follow-up data collection. No significant differences existed among the socio-demographics and other characteristics of parents who completed the 1-month telephone survey and those lost to follow-up (see table 1). Among parents who completed the study, most were mothers (84%), single parents (64%), of black race (70%), unemployed (61%). Most had received Medicaid (84%) and had completed high school or its equivalent (GED) or less (63%). At baseline, approximately 40% of the parents had poor health literacy status and just over a quarter of the sample reported depressive symptoms (27%). Only three mothers remained depressed at 1 month based on the PHQ-2 items. Of these mothers, 1 had mild depression at baseline, 2 had depressive scores in the moderate/severe range at baseline. See Table 1 for the remaining sample characteristics.

Table 1. Sample characteristics

Characteristic	Parents with complete data N=56(%)	Parents lost to follow-up N=56 (%)
Mother	47 (84)	48 (86)
Single parent	36 (64)	39 (70)
Parent < 30 years old	30 (54)	36 (64)
Parent race		
White	12 (21)	11 (20)
Black	39 (70)	43 (77)
Male child	35 (63)	27 (48)
Child age		
18 months	3 (5)	2 (4)
19-24 months	18 (32)	17 (30)
25-36 months	22 (39)	27 (48)
37-48 months	13 (23)	10 (18)
First child	25 (45)	19 (34)
Parent not working	34 (61)	31 (55)
Parent education high school or less	35 (63)	37 (66)
Poor health literacy status	24 (43)	29 (52)
Depressed		
Mild depression	15 (27)	13 (23)
Moderate to severe depression	7 (13)	11 (20)
	8 (14)	2 (4)
Ever Medicaid	47 (84)	53 (95)
Child ever Suspended	5 (9)	6 (11)

The intervention in the clinic took an average of 4 minutes (range of 2 to 10 minutes). None of the available books was chosen to read aloud more frequently than the others.

The mean parenting stress score for the entire sample at baseline and 1 month was within the non-clinically significant range. When mean total parenting stress scores were stratified by depressive status and health literacy status, parents with moderate to severe depression at baseline (total parenting stress score 94.6; 95% CI: 70.0-119.2) showed a reduction of parenting stress within the study timeframe. For all other groups, mean total stress scores essentially remained the same or increased, but all were still within the non-clinically significant range (see Table 2).

Depressed parents were more likely to report decreases in total parenting stress scores (AOR 6.3; 95% CI: 1.2-31.8) compared to non-depressed parents, even after adjusting for health literacy status, race/ethnicity, marital status and education (see Table 3). Moreover, parents with moderate to severe depression at baseline were more likely to report a decrease in parenting stress as compared to those with mild or no depression (AOR 10.5; 95% CI: 1.5-73.6). See Table 4. Among this subset of parents, total parenting stress scores fell from clinically significant levels at baseline to non-clinical levels 1 month post-intervention.

Table 2. Summary of mean parenting stress scores*

	Mean (95% CI)	
	Baseline	**1-month**
Total parenting stress score	68.7 (62.9-74.5)	70.8 (65.5-76.1)
By depression status		
No Depression	61.9 (57.0-66.8)	66.2 (61.3-71.1)
Mild	78.7 (62.8-94.6)	85.9 (67.6-104.1)
Moderate/Severe	**94.6 (70.0-119.2)**	81.3 (56.2-106.3)
By health literacy status		
Poor	71.0 (62.9-79.2)	71.8 (64.4-79.2)
Adequate	66.8 (58.1-75.5)	70.8 (62.9-78.7)

*Total mean scores ≥86 are considered clinically significant and are in bold

Table 3. Multivariable logistic regression examining the likelihood of a change in parenting stress at 1 month*

Characteristic	AOR	95% CI
Parental Depression	6.3	1.2-31.8
Poor Health Literacy	1.1	0.3-4.4
Black Race	1.9	0.4-8.7
Single Parent	0.4	0.1-2.0
Education	0.4	0.1-2.3

*Multivariable logistic regression with robust estimates, adjusting for presence of parental depression, poor health literacy, race/ethnicity, marital status and education.
AOR: adjusted odds ratio; CI: confidence interval
Variables that achieved statistical significance are bolded

Table 4. Association between reported change in parenting stress at 1 month and parental depression severity*

Characteristic	AOR	95% CI
Mild Depression	4.4	0.6-30.6
Moderate to Severe Depression	10.5	1.5-73.6
Poor Health Literacy	1.4	0.3-5.8
Black Race	1.8	0.5-6.4
Single Parent	0.3	0.9-1.4

*Multivariable logistic regression with robust estimates, adjusting for presence of parental depression, poor health literacy, race/ethnicity, marital status and education.
AOR: adjusted odds ratio; CI: confidence interval
Variables that achieved statistical significance are bolded

Parent Use of Books and General Comments

During the 1-month follow up telephone survey, parents were asked how they used the books with their child. A majority (89%) used them as a bedtime story or while the behavioral challenge was occurring. When asked if they recommended the book series to others, just over one-third of parents said they had (39%). Almost all reported that their children liked the books (91%). When asked if they liked getting the books as a set or would prefer one book at specific clinic visits, 80% reported they preferred getting them as a set. Half of the parents desired additional parenting topics in the form of children's books.

In general, parents' comments reflected their acceptance of the books and highlighted particular aspects of the books they liked. Parents tried the strategies illustrated or used the books to role play similar scenarios with their children. One parent described learning general strategies for defusing stressful behavior challenges and putting those strategies into practice with her child: "We read them at night and then we practice some of the things in the books, like making things fun [and] not a chore."

Parents liked getting the books as a set, often explaining that the books were usable with all the children in the home or that other siblings enjoyed the books and read the books to each other: "I read one of the books before bedtime, before they go to sleep. Her big brothers also read the books themselves."

Parents who received the intervention at the 18-month visit were eager for more books at subsequent visits. When asked what they liked about the books, parents cited reasons encompassing general features of a children's book, such as the simple storyline and color illustrations, however many inherently valued the parenting content contained within them. ("They're easy to follow if someone needs a guide. They are good for that—such as with a first child." "Good ideas like getting different ways to approach different situations," or "[I like] that it tells you what to say to her.")

Parents reported sharing the books with others or using them in other settings, such as daycare or school: "Sent the books to grandmother's house to read with the children when she watches them;" "I even read them at the daycare I work at;" and "Two of them are at home. We use them there and the one about ready to play is at school and they [the teachers] read that to her there." Parents were eager for additional topics as children's books and suggested ones that illustrated how to

successfully handle temper tantrums, how to promote listening behavior and good manners, getting a child ready and excited for daycare or school, what to do when sad or angry, and addressing specific issues for children with special needs.

DISCUSSION

Among parents with children ages 18 to 48 months, the use of children's books as a brief intervention to support parenting efforts in the pediatric office was feasible and acceptable. Among parents with moderate to severe depression at baseline, parenting stress scores decreased to non-clinical levels 1 month after receiving a set of children's books. Depressed parents were more likely to report a decrease in parenting stress, even after adjusting for health literacy status, race/ethnicity, marital status and educational attainment.

Our study adds to growing literature exploring brief interventions to promote positive parent-child interactions in pediatric primary care[8, 18]. While this particular intervention can be provided to all families presenting for well-child visits, parents who reported depressive symptoms were most likely to report a change in parenting stress. It is known that parents with depressive symptoms are more likely to experience high levels of parenting stress[5, 19]. Pediatricians are increasingly aware of the need to identify parental depression as it can negatively affect child health[6, 20]. Moreover, depressed parents may have more critical appraisal of their child's behavior[21, 22]. Parents in our sample valued the parenting advice contained within the books and tried to implement these simple, alternate strategies. Along with a change in overall parenting stress, fewer mothers reported depressive symptoms 1 month later. Because our sample size was small, it would be important in future studies to tease apart the mechanism by which these books help mothers affected by depressive symptoms and parenting stress. It is possible these books helped to normalize problematic situations through the modeling that occurs in the storyline. It is also possible that the books presented information in easy to understand language and illustrations that improved the understanding of the content for depressed mothers who may otherwise have poor health literacy. A third mechanism may be that the books facilitated shared reading experiences and promoted "time-in" and positive attention that the child craved, especially from a depressed mother. Given our current findings and that the books are relatively inexpensive, our intervention represents a potential brief intervention for pediatricians to actively intervene on parental depression.

The foremost example of using children's books in pediatric primary care is that of *Reach Out and Read* (ROR), which is used to promote early literacy experiences and promote school readiness skills[23-28]. In addition, positive interactions between the parent and child during shared reading experiences are related to a child's focused attention and enthusiasm and can contribute to a child's secure attachment to the primary caregiver[29]. Thus, not only can pediatricians use children's books to support early literacy efforts, but children's books can also be used to supplement the counseling efforts of pediatricians to promote positive parent-child interactions. Our previous and current work show that the content of the children's books can be used to understand parental perceptions about common parenting challenges[11] and that there are benefits specifically for parents who report depressive symptoms. Parents reported that the children's books helped normalize problematic parenting challenges for both themselves and their children and illustrated alternate ways to interact positively with each other. Families report sub-optimal counseling around discipline and behavior and desire this type of anticipatory guidance[30]. Our work, albeit preliminary, fills a critical gap in the literature on the need to identify brief interventions to enhance parent-child interactions during well-child visits. In addition, families were accepting of the intervention during the well-child visit despite the pediatrician not being directly involved. Future, larger randomized controlled studies will be essential to understand if pediatrician involvement is necessary.

Parents with depression have an increased risk of lower health literacy,[31-33] which is associated with poor adherence to pediatric preventive care[34]. Almost half of our sample was comprised of parents with poor health literacy, yet parents still reported using the books and sharing them with others. Parents reported the books helped teach alternate parenting strategies, which may have been facilitated through symbolic modeling that has been shown to be as effective as a live model presented by videotape or film[10]. Future directions should include testing the effectiveness of pediatric counseling, coupled with various formats of parent education and whether one format is more effective.

As with any research, consideration of the study limitations is warranted. First, our sample size was small due to half of our sample being lost to follow-up. Follow-up data collection was carried out by telephone and many mothers were hard to contact mostly due to disconnected or non-working phone numbers. Therefore, even though we attempted to reach each family a minimum of 3 times and had asked for more than 1 phone number at baseline, follow-up data

collection proved to be a major challenge. However, demographics between those completing the study and lost to follow-up were similar. There is also a potential of sample bias. However, the prevalence of depressive symptoms in our sample is similar to other studies examining the correlates of depressive symptoms among high-risk women, which include being of a younger age, less educational attainment, unemployment and less social support[35-37]. Our findings could also represent regression toward the mean[38]. As our significant effect was found only among mothers with depressive symptoms, and parenting stress and depression are highly correlated, we acknowledge that our findings are preliminary. However, a larger randomized controlled is needed to confirm our reported findings. As with all studies involving parent-reported measures, there is a possibility of social desirability and expectancy bias. However, mean parenting stress scores for our sample are similar to those reported for a sample of 196 families with preschool aged children in Head Start used to validate the PSI-SF, which measured the primary outcome of interest (Head Start sample total parenting stress score 73.44, SD 25.56)[39].

CONCLUSION

Children's books with parenting content are acceptable to parents when distributed during well-child visits at the pediatric office, even as young as 18 months of age. Parents appreciated receiving the set of children's books with parenting content and used the books with their children in a variety of ways. Parents with moderate to severe depression were more likely to report a decrease in total parenting stress one month later. Given the fact that pediatricians need effective and brief ways to engage parents affected by depressive symptoms and parenting stress, children's books may be a promising brief and minimal cost method to provide early parent support around common behavior challenges while also promoting positive parent-child time together.

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REFERENCES

1. Williford, A.P., S.D. Calkins, and S.P. Keane, *Predicting change in parenting stress across early childhood: child and maternal factors.* Journal of abnormal child psychology, 2007. **35**(2): p. 251-63.
2. Morgan, J., D. Robinson, and J. Aldridge, *Parenting stress and externalizing child behaviour.* Child and Family Social Work, 2002. **7**: p. 219-225.
3. Crnic, K. and C. Low, *Everyday stresses and parenting*, in *Handbook in Parenting: Practical Issues in Parenting, 2nd ed.*, M.H. Bornstein, Editor 2002, Lawrence Erlbaum Associates: Mahwah, N.J.
4. Abidin, R.R., *Parenting Stress Index: Professional Manual, Third Edition*1995, Lutz, FL: Psychological Assessment Resources, Inc. (PAR).
5. Webster-Stratton, C., *Stress: A Potential Disruptor of Parent Perceptions and Family Interactions.* Journal of Clinical Child Psychology, 1990. **19**(4): p. 302-312.
6. Shonkoff, J.P. and A.S. Garner, *The lifelong effects of early childhood adversity and toxic stress.* Pediatrics, 2012. **129**(1): p. e232-46.
7. Garner, A.S. and J.P. Shonkoff, *Early childhood adversity, toxic stress, and the role of the pediatrician: translating developmental science into lifelong health.* Pediatrics, 2012. **129**(1): p. e224-31.
8. Regalado, M. and N. Halfon, *Primary care services promoting optimal child development from birth to age 3 years: review of the literature.* Archives of pediatrics & adolescent medicine, 2001. **155**(12): p. 1311-22.
9. Tielsch Goddard, A., *Children's books for use in bibliotherapy.* Journal of pediatric health care : official publication of National Association of Pediatric Nurse Associates & Practitioners, 2011. **25**(1): p. 57-61.
10. Karapetian Alvord, M. and K.D. O'Leary, *Teaching children to share through stories.* Psychology in the Schools, 1985. **22**(3): p. 323-330.
11. Bauer, N.S., et al., *A Pilot Study Using Children's Books to Understand Caregiver Perceptions of Parenting Practices.* Journal of developmental and behavioral pediatrics : JDBP, 2012. **33**(5): p. 423-30.
12. Flesch, R., *The Art of Readable Writing*1974, New York: Harper & Row.
13. Kroenke, K., R.L. Spitzer, and J.B. Williams, *The PHQ-9: validity of a brief depression severity measure.* Journal of general internal medicine, 2001. **16**(9): p. 606-13.
14. Kroenke, K., R.L. Spitzer, and J.B. Williams, *The Patient Health Questionnaire-2: validity of a two-item depression screener.* Med Care, 2003. **41**(11): p. 1284-92.
15. Leiferman, J.A., et al., *Mothers' mental distress and parenting practices with infants and toddlers.* Archives of women's mental health, 2005. **8**(4): p. 243-7.

16. Sanders, L.M., et al., *Health literacy and child health promotion: implications for research, clinical care, and public policy.* Pediatrics, 2009. **124 Suppl 3**: p. S306-14.

17. Bass, P.F., 3rd, J.F. Wilson, and C.H. Griffith, *A shortened instrument for literacy screening.* J Gen Intern Med, 2003. **18**(12): p. 1036-8.

18. Minkovitz, C.S., et al., *A practice-based intervention to enhance quality of care in the first 3 years of life: the Healthy Steps for Young Children Program.* JAMA, 2003. **290**(23): p. 3081-91.

19. Leigh, B. and J. Milgrom, *Risk factors for antenatal depression, postnatal depression and parenting stress.* BMC Psychiatry, 2008. **8**: p. 24.

20. Paulson, J.F., S. Dauber, and J.A. Leiferman, *Individual and combined effects of postpartum depression in mothers and fathers on parenting behavior.* Pediatrics, 2006. **118**(2): p. 659-68.

21. Webster-Stratton, C. and M. Hammond, *Conduct problems and level of social competence in Head Start children: prevalence, pervasiveness, and associated risk factors.* Clin Child Fam Psychol Rev, 1998. **1**(2): p. 101-24.

22. Milgrom, J. and P. McCloud, *Parenting Stress and Postnatal Depression.* Stress Medicine, 1996. **12**: p. 177-186.

23. Needlman, R. and M. Silverstein, *Pediatric interventions to support reading aloud: how good is the evidence?* J Dev Behav Pediatr, 2004. **25**(5): p. 352-63.

24. High, P., et al., *Evaluation of a clinic-based program to promote book sharing and bedtime routines among low-income urban families with young children.* Arch Pediatr Adolesc Med, 1998. **152**(5): p. 459-65.

25. Needlman, R., et al., *Clinic-based intervention to promote literacy. A pilot study.* Am J Dis Child, 1991. **145**(8): p. 881-4.

26. Mendelsohn, A.L., et al., *The impact of a clinic-based literacy intervention on language development in inner-city preschool children.* Pediatrics, 2001. **107**(1): p. 130-4.

27. Theriot, J.A., et al., *The impact of early literacy guidance on language skills of 3-year-olds.* Clinical pediatrics, 2003. **42**(2): p. 165-72.

28. Weitzman, C.C., et al., *More evidence for reach out and read: a home-based study.* Pediatrics, 2004. **113**(5): p. 1248-53.

29. Frosch, C.A., M.J. Cox, and B.D. Goldman, *Infant-parent attachment and parental and child behavior during parent-toddler storybook interaction.* Merrill-Palmer Quarterly, 2001. **47**(4): p. 445-474.

30. Schuster, M.A., et al., *Anticipatory guidance: what information do parents receive? What information do they want?* Archives of pediatrics & adolescent medicine, 2000. **154**(12): p. 1191-8.

31. Bennett, I.M., et al., *Literacy and depressive symptomatology among pregnant Latinas with limited English proficiency.* Am J Orthopsychiatry, 2007. **77**(2): p. 243-8.

32. Kavanaugh, M., et al., *Maternal depressive symptoms are adversely associated with prevention practices and parenting behaviors for preschool children.* Ambul Pediatr, 2006. **6**(1): p. 32-7.

33. Chung, E.K., et al., *Maternal Depressive Symptoms and Infant Health Practices Among Low-Income Women.* Pediatrics, 2004. **113**(6): p. e523-e529.

34. Sanders, L.M., et al., *Literacy and child health: a systematic review.* Arch Pediatr Adolesc Med, 2009. **163**(2): p. 131-40.

35. Hall, L.A., *Prevalence and correlates of depressive symptoms in mothers of young children.* Public Health Nurs, 1990. **7**(2): p. 71-9.

36. Green, K.M., et al., *Early Life Predictors of Adult Depression in a Community Cohort of Urban African Americans.* J Urban Health, 2012.

37. Chaudron, L.H., et al., *Prevalence of maternal depressive symptoms in low-income Hispanic women.* The Journal of clinical psychiatry, 2005. **66**(4): p. 418-23.

38. Davis, C.E., *The effect of regression to the mean in epidemiologic and clinical studies.* Am J Epidemiol, 1976. **104**(5): p. 493-8.

39. Reitman, D., R.O. Currier, and T.R. Stickle, *A critical evaluation of the Parenting Stress Index-Short Form (PSI-SF) in a head start population.* J Clin Child Adolesc Psychol, 2002. **31**(3): p. 384-92.