

# Policy Digest<sup>2022</sup>

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## FAMILY MATTERS



# The Importance of Quality Early Caregiving on Children's Development



Longkang Fishing with Longkang Adventures, Dover Forest West, October 2022



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**Findings from global research is conclusive that families that provide early nurturing care for children are the bedrock of thriving children, and in turn, support better outcomes for individuals and communities throughout their lives.<sup>1</sup>**

In what follows, I explore some of the key themes of early nurturing care, the importance of supporting parental mental well-being and practical ways in which parents can provide a conducive home environment for their children.

The time from pregnancy to age three is crucial for children. Their brains grow faster than at any other time period in his life wherein 80% of a baby's brain is formed. For healthy

brain development in these early years, children need a safe, secure, and loving environment, with the right nutrition and stimulation from their parents. This has been termed as *Nurturing Care* that encompass health, nutrition, security and safety, responsive caregiving, and opportunities for early learning.<sup>2</sup> Our children thrive when raised in a nurturing and supportive environment, where they are more likely to have secure parental attachment, have a safe and secure base from which to explore their environments and to which they return in times of distress. This contrasts with the poorer outcomes seen in young children exposed to emotional neglect, physical abuse, household conflict or other toxic stressors.<sup>3</sup> In addition, parents facing mental health issues, who experience high levels of stress or relationship difficulties would

find it harder to be responsive or provide a loving and secure environment.<sup>4</sup>

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**The evidence is clear: nurturing care is vital when we consider the lasting effects of adverse childhood experiences.**

Adverse childhood experiences such as physical or emotional abuse, neglect or household adversity may have a range of serious negative impacts. These range from developmental delays in the first year, worsening developmental gap during early childhood, and disparity continue throughout life, poor executive functioning and decision-making skills.<sup>5</sup>

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2 Britto, P. R., Lye, S. J., Proulx, K., Yousafzai, A. K., Matthews, S. G., Vaivada, T., Perez-Escamilla, R., Rao, N., Ip, P., Fernald, L., MacMillan, H., Hanson, M., Wachs, T. D., Yao, H., Yoshikawa, H., Cerezo, A., Leckman, J. F., Bhutta, Z. A., & Early Childhood Development Interventions Review Group, for the Lancet Early Childhood Development Series Steering Committee (2017). Nurturing care: promoting early childhood development. *Lancet*, 389(10064), 91-102. [https://doi.org/10.1016/S0140-6736\(16\)31390-3](https://doi.org/10.1016/S0140-6736(16)31390-3)

3 World Health Organization. (2018). Nurturing care for early childhood development: a framework for helping children survive and thrive to transform health and human potential. World Health Organization. <https://apps.who.int/iris/handle/10665/272603>

4 Andrews, K., Dunn, J.R., Prime, H. et al. (2021). Effects of household chaos and parental responsiveness on child executive functions: A novel, multi-method approach. *BMC Psychology*, 9(1), 147. <https://doi.org/10.1186/s40359-021-00651-1>

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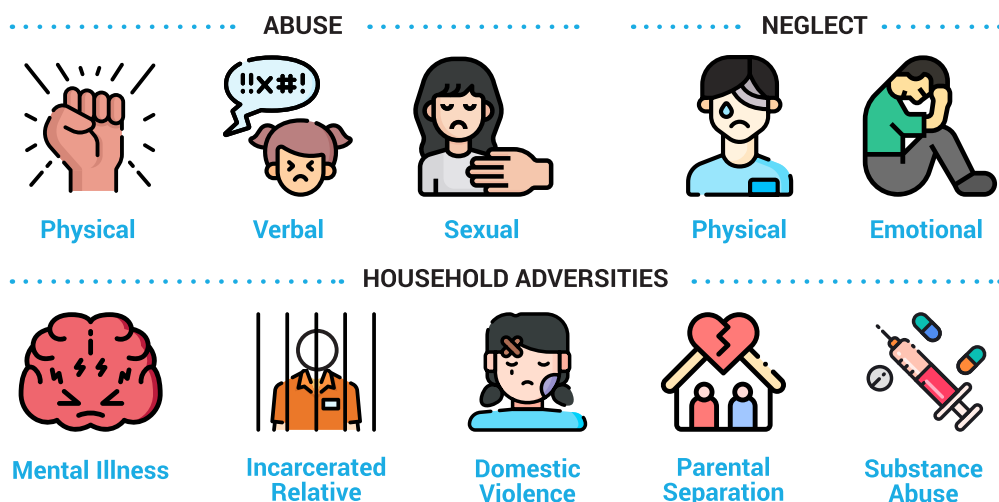
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## 10 most commonly measured Adverse Childhood Experiences (ACEs)



**Families under chronic stress may not be able to carry out their caregiving responsibilities with their limited (e.g., time, mental capacity, financial) resources.<sup>6</sup>**

Harsh parenting practices, hostility and potential child maltreatment may occur as a

result of overwhelming parenting stress.<sup>7</sup> This would in turn result in children and adolescents displaying more internalising and externalising problems (e.g., anxiety, depression, hyperactivity), poorer cognitive skills, and socio-emotional skills.<sup>8</sup>

There are, however, opportunities for social sectors, healthcare providers,

policymakers, and educators to intervene to improve outcomes for families and their young ones. We are now clear that early interventions aimed at providing parental support are effective at improving parenting outcomes, including decreasing parenting stress.<sup>9</sup> A systematic review – a type of literature review that looks at global evidence based on a

<sup>6</sup> Cousino, M. K., & Hazen, R. A. (2013). Parenting stress among caregivers of children with chronic illness: A systematic review. *Journal of Pediatric Psychology*, 38, 809–828. <https://doi.org/10.1093/jpepsy/jst049>

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<sup>7</sup> Venta, A., Velez, L., & Lau, J. (2016). The role of parental depressive symptoms in predicting dysfunctional discipline among parents at high-risk for child maltreatment. *Journal of Child and Family Studies*, 25, 3076–3082. <https://doi.org/10.1007/s10826-016-0473-y>

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<sup>8</sup> Mackler, J. S., Kelleher, R. T., Shanahan, L., Calkins, S. D., Keane, S. P., & O'Brien, M. (2015). Parenting stress, parental reactions, and externalizing behavior from ages 4 to 10. *Journal of Marriage and Family*, 77, 388–406. <https://doi.org/10.1111/jomf.12163>

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<sup>9</sup> Barlow, J., Smailagic, N., Huband, N., Roloff, V., & Bennett, C. (2012). Group-based parent training programmes for improving parental psychosocial health. *Campbell Systematic Reviews*, 8, 1–197. <https://doi.org/10.4073/csr.2012.15>

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topic to draw out what the evidence says – was conducted on parenting interventions.<sup>10</sup> This review looked at high quality (randomly controlled) experiments involving nearly 5,000 parents and found that group-based parent training programmes are effective in improving parental psychosocial functioning and well-being, in addition to decreasing levels of parental stress.<sup>11</sup> Examples of these parenting interventions include Incredible Years, Triple P, Abecedarian Approach but their effectiveness need to be evaluated when they are adapted for the local context.

## Parental mental well-being

While we now have more insight into the implications of the social context, parental stress and economic disadvantage on parenting practices and children's outcomes, it is important to identify sources of parental stress (e.g., financial strain, chronic stress) and intervene early to reduce these stressors.<sup>12</sup>

## There is a need to prevent chronic stress from undermining parent and child psychological well-being, which can lead to conflictual relationships between parents and their children.<sup>13</sup>

Parental mental well-being before conceiving and at pregnancy influence children's brain development. The early influence of parental mental health problems, stressors and anxiety can influence patterns of their children's brain development in its structure, connectivity, and electrophysiology.

This can result in children's behavioural problems and poorer executive functions such as working memory, attention, self-regulation, impulsivity and sensory processing.<sup>14</sup> These would have implications on children's learning and lifelong functioning. Taken together, the

effects of parental depression can elicit intense frustration in the parent, which can lead to dysfunctional family relationships and increase in overall parenting stress.<sup>15</sup> Hence, early interventions would need to focus on parental mental well-being and provide parental support before the child is born, as well as in the early years after birth.

Findings from the local longitudinal cohort study (GUSTO – Growing Up in Singapore Towards healthy Outcomes) indicated that interventions should be targeted even earlier through antenatal care. GUSTO found that up to 40% of mothers reported feeling depressed or anxious during pregnancy. These negative feelings range from mild to more severe levels and are consistent with previous Singaporean reports.<sup>16</sup> Alarming, both North American and GUSTO research have shown that high levels of stress, depressive symptoms and/or anxiety during pregnancy affects the child's brain development during the pre- and post-natal periods.

<sup>10</sup> Uman L. S. (2011). Systematic reviews and meta-analyses. *Journal of the Canadian Academy of Child and Adolescent Psychiatry*, 20(1), 57–59. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3024725/>

<sup>11</sup> Barlow, J., Smailagic, N., Huband, N., Roloff, V., & Bennett, C. (2012). Group-based parent training programmes for improving parental psychosocial health. *Campbell Systematic Reviews*, 8, 1–197. <https://doi.org/10.4073/csr.2012.15>

<sup>12</sup> Cassells, R.C., Evans, G.W. (2017). Ethnic Variation in Poverty and Parenting Stress. In: Deater-Deckard, K., Panneton, R. (eds) *Parental Stress and Early Child Development*. Springer, Cham, 15–45. [https://doi.org/10.1007/978-3-319-55376-4\\_2](https://doi.org/10.1007/978-3-319-55376-4_2)

<sup>13</sup> Ward, K. P., & Lee, S. J. (2020). Mothers' and fathers' parenting stress, responsiveness, and child wellbeing among low-income families. *Children and Youth Services Review*, 116. <https://doi.org/10.1016/j.childyouth.2020.105218>

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<sup>14</sup> Meaney M. J. (2018). Perinatal Maternal Depressive Symptoms as an Issue for Population Health. *The American journal of psychiatry*, 175(11), 1084–1093. <https://doi.org/10.1176/appi.ajp.2018.17091031>

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<sup>15</sup> Arteche, A., Joermann, J., Harvey, A., Craske, M., Gotlib, I. H., Lehtonen, A., & Stein, A. (2011). The effects of postnatal maternal depression and anxiety on the processing of infant faces. *Journal of Affective Disorders*, 133, 197–203. <https://doi.org/10.1016/j.jad.2011.04.015>

<sup>16</sup> Meaney M. J. (2018). Perinatal Maternal Depressive Symptoms as an Issue for Population Health. *The American journal of psychiatry*, 175(11), 1084–1093. <https://doi.org/10.1176/appi.ajp.2018.17091031>

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In addition, findings from S-PRESTO (Singapore Preconception Study of long-term maternal and child outcomes) show that poor maternal mental health persists following birth and influences the quality of parental care.<sup>17</sup>

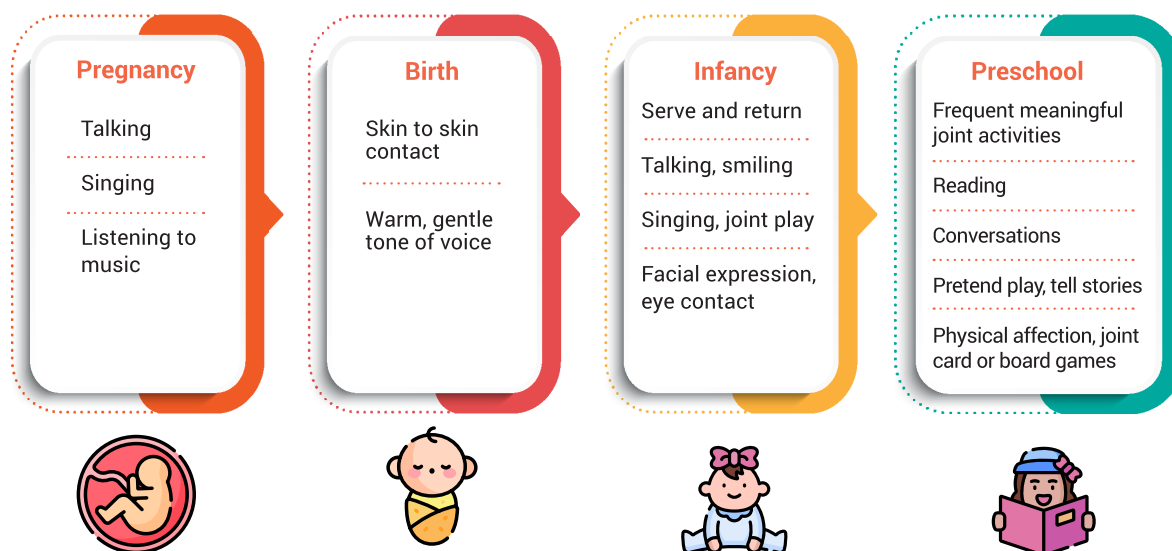
**Fathers are equally important in providing a conducive environment for young infants during pregnancy and following birth of child.**

**“Fathers have become progressively more involved and integrated into the parenting roles.”<sup>18</sup>**

Fathers’ involvement in caregiving has been linked to positive child mental and medical health outcomes, such as in providing both practical and emotional support.<sup>19</sup> Similar to a mother, a father’s mental health problem can be pre-existent or occur with the onset of parenthood, reducing a father’s responsiveness when engaging with a young infant or child.<sup>20</sup> Paternal postpartum depression is estimated to occur in 10% of men between the first trimester and the first year after a baby’s birth, which is about half the rate of maternal postpartum depression globally (21% of mothers).<sup>21</sup> Paediatricians need to find innovative ways to screen for paternal depression since fathers may not always attend his child’s medical visits, where mothers could typically be screened for maternal depression.

## What can parents do?

While early interactions of fathers and mothers may take place through different context, the evidence is strong that early engagement by parents with young children needs to be frequent and meaningful in order to build an emotionally secure relationship with them. It should begin as early as the prenatal period and with both parents. For example, by the second trimester, the foetus begins to recognise sounds and learning occurs in utero. After birth, repeated skin-to-skin contact stimulates many physiological changes in both the parent and the newborn that establish bonding immediately. For both mothers and fathers, this skin-to-skin contact promotes the



<sup>17</sup> Loo, E. X. L., Soh, S. E., Loy, S. L., Ng, S., Tint, M. T., Chan, S. Y., Huang, J. Y., Yap, F., Tan, K. H., Chern, B. S. M., Tan, H. H., Meaney, M. J., Kamani, N., Godfrey, K. M., Lee, Y. S., Chan, J. K. Y., Gluckman, P. D., Chong, Y. S., Shek, L. P., Eriksson, J. G., ... Cheng, Z. R. (2021). Cohort profile: Singapore Preconception Study of Long-Term Maternal and Child Outcomes (S-PRESTO). *European journal of epidemiology*, 36(1), 129–142. <https://doi.org/10.1007/s10654-020-00697-2>

<sup>18</sup> Fisher S. D. (2016). Paternal Mental Health: Why Is It Relevant?. *American journal of lifestyle medicine*, 11(3), 200–211. <https://doi.org/10.1177/1559827616629895>

<sup>19</sup> Seah, C. K., & Morawska, A. (2016). When mum is stressed, is dad just as stressed? Predictors of paternal stress in the first six months of having a baby. *Infant mental health journal*, 37(1), 45–55. <https://doi.org/10.1002/imhj.21546>

<sup>20</sup> Nakić Radoš S. (2021). Parental Sensitivity and Responsiveness as Mediators Between Postpartum Mental Health and Bonding in Mothers and Fathers. *Frontiers in psychiatry*, 12, 723418. <https://doi.org/10.3389/fpsy.2021.723418>

<sup>21</sup> Paulson, J. F., & Bazemore, S. D. (2010). Prenatal and postpartum depression in fathers and its association with maternal depression: a meta-analysis. *JAMA*, 303(19), 1961–1969. <https://doi.org/10.1001/jama.2010.605>

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release of oxytocin.<sup>22</sup> This hormone plays a key role in bonding by countering stress responses and promotes healthy growth.<sup>23</sup> Figure 2 below lists the ways in which both parents can promote bonding with their young children in the first six years.

To further strengthen the parent-infant bonding, parents should engage in 'serve-and-return' interactions.<sup>24</sup> What this means is that when infants coo, cry or make facial expressions, they are seeking adults' response through 'serves'. This would prompt the adult to 'return' through eye contact, reassuring words, hugs, or play. When these connections and interactions are absent or infrequent over a sustained period, the young infant can feel stress and confusion, which impedes on their healthy brain development.<sup>25</sup>

As the child enters preschool, shared book reading provides opportunities for numerous

'serve-and-return' experiences when parent and child review the book content together with questions, answers and comments. The GUSTO study showed that being read to by their parents for just 10 minutes a day markedly improved the children's literacy skills at age four, especially among those of lower socioeconomic status.<sup>26</sup> In addition, it has been found that having meaningful conversations with your children would also strengthen bonding.<sup>27</sup> This finding is similar to a large OECD study of five-year-olds in England, the United States and Estonia, which showed that the more frequently parents read with their children, the more likely it was that the children showed better socio-emotional skills and prosocial skills.<sup>28</sup>

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## Screen Time

It is important to note that excessive screen time for

children reduces opportunities for parent-child interaction. However, families face numerous challenges in today's screen-rich home environments during mealtime, through hybrid work platforms and when commuting. Families' increased screen time is increasingly implicated as interfering with parent-child interactions. The time that young children spend on screens (ie., mobile phones, tablets, television) tends to substitute for time best spent interacting with parents.<sup>29</sup> Furthermore, screen time for infants under two years is not recommended due to the potential adverse effects on cognitive and socioemotional development.<sup>30</sup> Screen time and device use by parents themselves should also be monitored as this may detract from time and attention given to children. Parents of newborns may underestimate their own device use and there is benefit to supporting new parents in choices about device use.

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<sup>22</sup> Vittner D, McGrath J, Robinson J, Lawhon G, Cusson R, Eisenfeld L, et al. (2018) Increase in oxytocin from skin-to-skin contact enhances development of parent–infant relationship. *Biological Research For Nursing*, 20, 54-62. <https://doi.org/10.1177/1099800417735633>

<sup>23</sup> Moberg KU, Handlin L, Petersson M. (2020) Neuroendocrine mechanisms involved in the physiological effects caused by skin-to-skin contact – With a particular focus on the oxytocinergic system. *Infant Behavior and Development*, 61:101482. <https://doi.org/10.1016/j.infbeh.2020.101482>

<sup>24</sup> Shonkoff JP (2017) Breakthrough impacts: What science tells us about supporting early childhood development. *Young Children*, 72, 8-16. [https://developingchild.harvard.edu/wp-content/uploads/2016/05/From\\_Best\\_Practices\\_to\\_Breakthrough\\_Impacts-3.pdf](https://developingchild.harvard.edu/wp-content/uploads/2016/05/From_Best_Practices_to_Breakthrough_Impacts-3.pdf)

<sup>25</sup> Bernier A, Calkins SD, Bell MA. (2016) Longitudinal associations between the quality of mother–infant interactions and brain development across infancy. *Child Development*, 87(4), 1159-1174. <https://doi.org/10.1111/cdev.12518>

Leblanc D, Geilh F, Beauchamp MH, Bernier A. (2022) Disorganized attachment behaviors in infancy as predictors of brain morphology and peer rejection in late childhood. *Cognitive, Affective, & Behavioral Neuroscience*, 22(4), 833-848. <https://doi.org/10.3758/s13415-022-00987-0>

<sup>26</sup> Sensaki S, Law E. Unpublished data. Singapore: Singapore Institute for Clinical Sciences.

<sup>27</sup> Romeo, R. R., Leonard, J. A., Robinson, S. T., West, M. R., Mackey, A. P., Rowe, M. L., & Gabrieli, J. D. E. (2018). Beyond the 30-Million-Word Gap: Children's Conversational Exposure Is Associated With Language-Related Brain Function. *Psychological science*, 29(5), 700–710. <https://doi.org/10.1177/0956797617742725>

<sup>28</sup> OECD. (2020) Early Learning and Child Well-being: A Study of Five-year-Olds in England, Estonia, and the United States. <https://doi.org/10.1787/3990407f-en>

<sup>29</sup> Wilkinson C, Low F, Gluckman P. (2021) Screen time and children: What do we know about the effects on emotional, social, and cognitive development? Auckland: Kōi Tū: The Centre for Informed Futures.

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<sup>30</sup> McCaleb M. (2020) How does the use of smartphones change for new mothers? A pre- and post-partum, match controlled observational design. University of Canterbury, Christchurch. [https://ir.canterbury.ac.nz/bitstream/handle/10092/101323/McCaleb,%20Miriam\\_Master's%20Thesis.pdf?sequence=1](https://ir.canterbury.ac.nz/bitstream/handle/10092/101323/McCaleb,%20Miriam_Master's%20Thesis.pdf?sequence=1)

GUSTO findings have shown that screen time exposure in children aged between 1 and 2 years of age has been found to predict prominent deficits in executive functions at 8.5 years of age. Executive function skills are the attention-regulation skills that make it possible to stay focused, retain and work with information in our brains, resist distraction, consider the consequences of different behaviours, and plan for the future.<sup>31</sup>

Research has clearly demonstrated that early caregiving experiences have an impact on infant brain development and later child executive function skills, laying an important foundation for learning in school settings.<sup>32</sup> Executive functioning skills in the early years predict a wide range of important outcomes,

including readiness for school, school performance and social competence in adolescence; better physical health; higher socioeconomic status and fewer drug-related problems and criminal convictions in adulthood.<sup>33</sup> Kindergarten students with poorer executive function skills and poorer social competence showed more difficulty in reading and math, and this gap in performance continues to widen until Primary Two and persists thereafter.<sup>34</sup> While we are not born with executive function skills, we have the potential to develop them slowly, beginning from infancy into early adulthood. Both positive (supportive caregiving and high-quality early education) and negative (stress, poverty, disadvantage) experiences

shape our development of executive function skills.

**The period between two and six years of age is considered a “sensitive period” where the human brain grows rapidly and is especially susceptible to environmental influences and quality of early caregiving.<sup>35</sup>**

Sensitive, warm and nurturing caregiving behaviour fosters the development of children's self-regulatory or executive functioning skills by providing the child with a predictive, orderly, and stimulating environment.<sup>36</sup>

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**Thus, early social relationships and healthy caregiving behaviour are important for children's development of executive functioning skills and have the potential to level the playing field by reducing social disparities in academic achievement and health.<sup>38</sup>**

## Conclusion

In conclusion, the focus on parental mental well-being before pregnancy through to after birth of children is essential for effective long-term benefit across generations. Early interventions, including parenting programmes, need to focus on supporting young parents in providing warm, nurturing care for their children while reducing the stressors that

they may face (e.g., financial stressors). Promoting parent-child bonding in the early years has been shown to reduce parenting stress, enhance socio-emotional development, behavioural and cognitive development of children.<sup>39</sup> Thus, parents play a very significant role in a child's brain development. They are their children's first teachers and prepare them for increased independence by nurturing, protecting and guiding them.

## Recommendations of parenting behaviours to enhance children's outcomes in early years



1. Engage frequently in 'serve-and-return' interactions e.g. show affection, respond to their cues, make conversations.



2. Encourage your child's language development e.g. nurture love for books, read together, speak in complete sentences.



3. Encourage their growing independence e.g. let them help with simple chores.



4. Affirm and praise positive behaviours more than punish unwanted behaviours, tell or show your children what they should do instead. Use discipline to guide and protect your children, rather than punishment to make them feel bad or guilty.



5. Help your children through the steps to solve problems when they are upset, when taking on new challenges, during disagreements with another child.



6. Enhance their executive functions through activities such as peekaboo, imitation games, simple role play, conversation and storytelling, complex imaginary play, movement games and board games that are appropriate for their age.



7. Take care of yourself physically, mentally, and emotionally. Reach out for family and community support quickly when you feel overwhelmed.



8. Be mindful about modelling good screen time management and avoid providing screen time for children below two years of age. For young children (two to four years old), join them and discuss what they want to watch on the screen to avoid passive ('babysitting'), sedentary screen time.

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