

## SYSTEMATIC REVIEW

## Fathers' involvement in handling growth disorder of children family members: A systematic review

R Endro Sulistyono, Nurul Hayati, Achlish Abdillah

### Abstract

**Objective:** To find out fathers' involvement in the treatment of growth disorders.

**Methods:** The systematic review comprised search on Scopus, CINAHL, ScienceDirect, SpringerLink, ProQuest and Google Scholar databases for studies published in English language between January 2017 and March 2022 and described fathers' roles in handling stunting in children. The keywords used along with Boolean operators included father, paternal, involvement, engagement, role, stunting, and growth disorder. The studies shortlisted were subjected to charting and narrative analyses.

**Results:** Of the 699 studies initially found, 13(1.85%) were analysed in detail. Four factors identified were economic support, instrumental support, nurturing the children, and health risk behaviour. Strategies to increase fathers' involvement related to internal and external barriers.

**Conclusion:** Fathers' role is crucial in handling growth disorder in children. Growth disorder management strategies need to involve fathers and mothers by considering the identified barriers and potential facilitators.

**Keywords:** Child, Mothers, Gender, Health risk, Nutrition. (JPMA 73: S-158 [Suppl. 2]; 2023)

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### Introduction

Stunting is a worldwide problem and commonly implies poor parental functioning.<sup>1</sup> Stunting is an impaired growth condition in children's body and brain due to prolonged malnutrition.<sup>2</sup> Stunted children grow to inadequate height in relation to their age which affects the brain accordingly so that their cognitive potential is not accomplished.

Indonesia was ranked third in terms of prevalence of stunting in the South-East Asia Region (SEAR).<sup>3</sup> The Ministry of Health Republic of Indonesia (MoHRI) in 2018 stated that stunting in children aged 12-59 months in Indonesia in 2013 was 37.2%, whereas in 2018 it was 30.8%.<sup>3</sup>

Studies have identified significant association of the role of parental functioning,<sup>1</sup> family factors<sup>4</sup> and maternal roles<sup>5</sup> with growth disorder in children aged <5. Parental functioning is essential for children's development and growth along with their knowledge.<sup>6</sup> Father's involvement promotes positive health behaviour in the family context<sup>7</sup> but a comprehensive review of father's involvement in handling growth disorder has not been conducted. The current systematic review was planned to fill the gap by exploring fathers' involvement in the treatment of growth disorders in children aged <5.

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### Materials and Methods

The systematic review comprised search on Scopus, CINAHL, ScienceDirect, SpringerLink, ProQuest and Google Scholar databases for studies published in English language between January 2017 and March 2022 and described fathers' roles in handling stunting in children. The review used narrative synthesis and was done based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines<sup>8</sup>. The key words used were growth disorder, stunting, father's role, and children under five.

Data related to authors, year of study, participants, study design, methods and results was extracted from each study. Quality assessment was done using the Critical Appraisal Skills Programme (CASP) checklist to assess the risk of bias in the studies analysed.

### Results

Of the 699 studies initially found, 13(1.85%) were analysed in detail (Figure).<sup>2,9-20</sup> There were 11(84.6%) cross-sectional studies, while 1(7.7%) study each had a qualitative and retrospective quantitative design. Further, 5(38.4%) studies had been conducted in Indonesia, 2(15.4%) each in India and Bangladesh, and 1(7.7%) each in Kyrgyzstan, Madagascar, Ethiopia, and Myanmar (Table).

Fathers' involvement in knowledge about preventing growth disorder was a key factor.<sup>10,13,18,19</sup>

The informal and formal social networks of fathers could reduce health hardships.<sup>10</sup>

Fathers' engagement in developmentally-supportive stimulation could prevent stunting in children<sup>14</sup> and their capability to care for the family<sup>15</sup> as well as their attitude towards gender-equality were critical factors.<sup>9</sup> Fathers'

health behaviour, such as smoking, could increase the risk of stunting in children.<sup>12,16</sup>

Fathers with low occupational status improved caretaker capacity, improved parenting skills, integrated community development, and decreased domestic violence and gender discrimination.<sup>21</sup>

**Table:** Characteristics of the studies reviewed.

Author name	Title	Participants	Design	Country	Conclusion
Sharma & Subramanyam <sup>9</sup>	Intersectional role of paternal gender-equitable attitudes and maternal empowerment in child undernutrition: a cross-sectional national study from India <sup>9</sup>	22 867 mother–father–child triads. children below the age of 5 years	Cross-sectional study	India	Children with a privileged position in any one of the three intersectional axes (maternal autonomy, paternal gender-equitable attitudes and household wealth) were better off compared with the most disadvantaged children. Focusing on men's attitudes toward gender equity also holds promise for reducing undernutrition
Wigle JM, Akseer N, Mogilevskii R, Brar S, Conway K, Enikeeva Z, et al. <sup>13</sup>	Drivers of stunting reduction in the Kyrgyz Republic: A country case study <sup>13</sup>	2878 children below the age of 5 years	Retrospective quantitative data analyses	Kyrgyz Republic	Paternal education (6%) as key factors
Miller AC, Garchitorea A, Rabemananjara F, Cordier L, Randriamanambintsoa M, Rabeza V, et al. <sup>14</sup>	Factors associated with risk of developmental delay in preschool children in a setting with high rates of malnutrition: a cross-sectional analysis of data from the IHOPE study, Madagascar <sup>14</sup>	Women aged 15–49 of 432 children aged 3 and 4 years	Cross-sectional study	Madagascar	Greater paternal engagement (OR 1.5 (1.09, 2.07)) was associated with increased delay vs. international norms
Chakraborty B, Yousefzadeh S, Darak S, Haisma H. <sup>15</sup>	"We struggle with the earth everyday": parents' perspectives on the capabilities for healthy child growth in haor region of Bangladesh <sup>15</sup>	8 FGD both parents (fathers and mothers) of children under age two	A qualitative study	Bangladesh	Paternal capabilities Being able to earn in all seasons and provide the family with the things they need Being able to save the future and the one who creates the future Being able to express love by purchasing toys and other items as required Being able to access the education needed to get a job and educate the children A father needs to be healthy, energetic, have a brain (intelligence), and be religious
Astuti DD, Handayani TW, Astuti DP. <sup>16</sup>	Cigarette smoke exposure and increased risks of stunting among under-five children <sup>16</sup>	123 children 25–59 months old. Then each RW was taken, 3–4 families randomly	Cross-sectional approach	Surakarta City, Indonesia	Length of exposure of more than 3 h a day increases the risk of stunting by 10,316 times.
Susiloretni KA, Smith ER, Suparmi, Marsum, Agustina, Rina <sup>17</sup>	The psychological distress of parents is associated with reduced linear growth of children: Evidence from a nationwide population survey <sup>17</sup>	46,315 children 6–59 months of age	Cross-sectional approach	Indonesia	Maternal, paternal and parental distress (i.e. both maternal and paternal distress) were associated with reduced linear growth of the children low paternal occupational status improved caretaker capacity, integrated community development, improved parenting skills, as well as reduced gender discrimination, and domestic violence
Kumar P, Rashmi R, Muhammad T, Srivastava S.. <sup>18</sup>	Factors contributing to the reduction in childhood stunting in Bangladesh: a pooled data analysis from the Bangladesh demographic and health surveys of 2004 and 2017–18. <sup>18</sup>	6375 children under-5-years of age	Cross-sectional approach	Bangladesh	Father's characteristics, such as education explained 9% of this change
Ademas A, Adane M, Keleb A, Berihun G, Tesfaw G. . <sup>19</sup>	Water, sanitation, and hygiene as a priority intervention for stunting in under-five children in northwest Ethiopia: a community-based cross-sectional study. <sup>19</sup>	630 participants	Cross-sectional study design	Northwest Ethiopia	Illiterate father

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Author name	Title	Participants	Design	Country	Conclusion
Win T, Sein TT, Ikeda W, Morita A, Sokejima S. <sup>20</sup>	Does Father's Social Capital Matter to Child Undernutrition in Myanmar? <sup>20</sup>	1546 children aged 6 to 59 months	Cross-sectional study design	Myanmar	An inverse relationship of structural social capital (social supports from the father's social networks) at the individual level with child wasting. the informal and formal social networks may facilitate access to various social supports that help fathers overcome health hardships such as child undernutrition
Sunny R, Elamana J, Olickal JJ. <sup>10</sup>	Determinants of Nutritional Status among Under-Five Children in the Tribal Population of The Nilgiris, Southern India: A Cross-Sectional Study. <sup>10</sup>	605 under-five tribal children	Community-based cross-sectional study	Tamil Nadu (India)	Illiteracy of father significantly associated with underweight.
Bukit DS, Keloko AB, Ashar T. <sup>11</sup>	Father's Support and Mother's Behaviour in Stunting Prevention Efforts <sup>11</sup>	Mothers who have infants 6-59 months	Cross-sectional	Indonesia	There was a significant correlation of the father's support and mothers' behaviour in preventing stunting (p <0.038)
Bella A, Dartanto T, Swasthika D, Kusnadi G, Moeis F, Nurhasana R, et al <sup>12</sup>	"Through thick and thin: Do parental smoking behaviors affect the children's stunting, thinness, and overweight status? <sup>12</sup>	7,320 children-year.	Cross-sectional	Indonesia	Exposure to paternal smoking increases the risk of stunting, thinness, and overweight in children
Krisnana I, Suryawan A, Muftiyaturrohmah M. <sup>2</sup>	Analysis of Fathers' Support Based on Maternal Perceptions Through Stunting Incidence in Toddler at Coastal Areas <sup>2</sup>	105 mothers who had children aged 12 to 36 months (under three years)	Cross-sectional	Indonesia	Informational support and assessment did not have a relationship with the incidence of stunting with a value of p = 0.502 and 0.291, while instrumental support and emotional support had a significant relationship with the incidence of stunting, the value of p= 0.000 and 0.002.

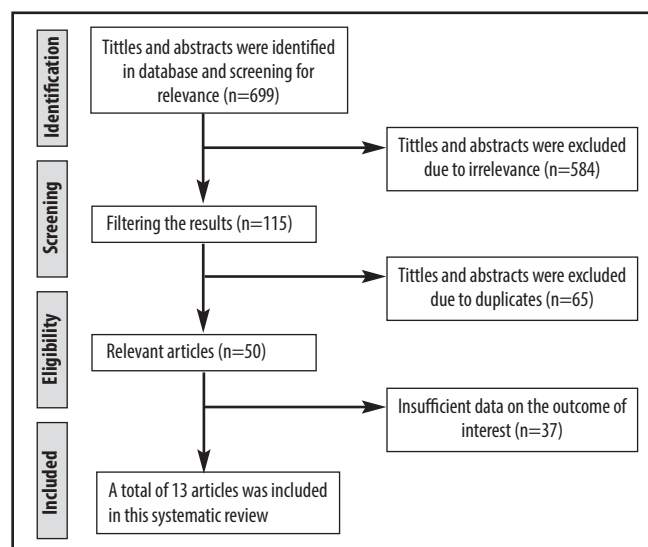


Figure: Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flowchart.

## Discussion

The finding that fathers' attitude toward gender equality may in a key factor in terms of family's overall nutrition, health and education pattern<sup>9</sup> is in line with a previous study.<sup>22</sup>

Fathers' roles as caregivers, educators, supervisors, disciplinarians, protectors, and supporters significantly

influence the prevalence and prevention of stunting. Fathers' involvement in nurturing and raising the child with the mothers as a shared responsibility could increase fathers' engagement in the relevant activities.

Fathers' health behaviour, such as smoking, consumes a significant proportion of their incomes which could be better utilised in managing nutritious food for the family, especially the children growing up.<sup>23</sup> Fathers' smoking behaviour has been associated with stunting in children.<sup>24</sup>

## Conclusion

Fathers should be targeted along with mothers during health education sessions related to prevention of stunting and growth disorders.

**Limitation:** The current review was not registered with the international prospective register of systematic reviews PROSPERO).

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