

Original article:

Maternal Dissatisfaction About Toddler's Body Size And Its Relationship To Children's Eating Behaviours

Wulandari E¹, Wiboworini B¹, Widyaningsih V¹

Abstract

The fulfilment of toddlers' nutritional needs is very dependent on their parents. Parental dissatisfaction can affect feeding practices and food choices for her children that are related to eating behaviour. This study aimed to analyzed the relationship between maternal satisfaction of children's body size and their children's eating behaviour. This cross-sectional study involved 126 pairs of mother-toddler ages 24-59 months. Mother's satisfaction was assessed using Toddler Silhouette Questionnaire, while their children's eating behaviour was assessed using the Children's Eating Behaviour Questionnaire (CEBQ). The result shows that 77.6% of mothers who have well-nourished children desire a heavier child. There is a positive relationship between maternal satisfaction with Food Avoidance behaviour ($p < 0.01$) at subscale Slowness in Eating ($p < 0.01$), Food Fussiness ($p < 0.05$) and Emotional Eating ($p < 0.05$). Mother who wants their children to be heavier tends to have children who are food avoidance, slow to eat, picky eaters and emotional eating.

Keywords: maternal dissatisfaction, children's eating behaviour, toddler

International Journal of Human and Health Sciences Vol. 07 No. 02 April'23
DOI: <http://dx.doi.org/10.31344/ijhhs.v7i2.567>

Introduction

Body satisfaction was psychological sign that compare self-image with desire body size or body size considered ideal, in negatif or possitive ways¹. Body satisfaction can occur in all age groups, but toddler and preschooler had difficulty to perceiving their bodies correctly². The role of dissatisfaction of body size in eating behaviour was mainly focused on tendency to diet³. The fulfillment of nutritional needs at this age also still depends on what is given by their parents, so that the opinion of parents regarding toddler nutritional status or body size is very important. Parental satisfaction determines parent's decisions of food choices for their children and how parents fed them.

There are no studies in Indonesia that look at maternal satisfaction about their toddler body size, but other studies have seen that mothers think a fat toddler is a good thing^{4,5}. Maternal concern about their children weight linked to maternal pressuring of restricting of food⁶. Mothers who want their children to be heavier tend to give more food and tent to push their children to eat that can affects to child's eating behavior⁷.

Children's eating behaviour is tendency of eating behaviour in children which is extracted from the information of the mother as a caregiver. It divided into food approach type and food avoidance type. Food approach type consist of indicator food responsiveness, emotional over-eating, enjoyment

1. Postgraduate Nutrition Science Program, Sebelas Maret University, Surakarta, Indonesia

Correspondence to: Eka Wulandari, student of Postgraduate Nutrition Science Program, Sebelas Maret University, Indonesia, Email: ekawulan.w3@gmail.com

of food, and desire to drink; while food avoidance type consist of indicator satiety responsiveness, slowness in eating, emotional under-eating, and food fussiness⁸. Food responsiveness describe desire to consume food. Enjoyment of food and desire to drink describe children's interest in food and drink. Food fussiness describe picky eating in children. Slowness in eating assesses child's speed to finish their meal. Satiety responsiveness assess child sensitivity of satiety or respon full. Emotional eating which includes over-eating and under-eating examines the influence of emotions on children' food consumption.

Eating behaviour in children can continue become an eating disorder when the child reaches adolescence⁹. It is normal for toddlers to have eating problems because there are certain phases, but there are eating disorders that must be anticipated because it can affect the current growth process and children's future health. Study shows that infantile anorexia, which usually occurs in children aged 6-36 months, is associated with impaired cognitive development and abnormal sleep patterns¹⁰. This study aimed to analyzed the relationship between maternal satisfaction with children's body size and their children's eating behaviour.

Materials and methods

This cross-sectional study was conduct in Kramat Jati, East Jakarta from July to August 2022 involved 126 pairs of mother-toddler ages 24-59 months were selected by using multistage cluster random sampling. Subject's weight and height measured and nutritional status viewed by W/H (Weight per Height) indicators and clasified as "underweight" (Zscore <-2SD), "healthy weight" (Zscore >-2SD - 2SD), and "overweight" (Zscore >2SD).

Mother as a respondent interviewed about their toddler eating behaviour with Children's Eating Behaviour Questionnaire (CEBQ) includes 30 questions using Likert scale¹¹. Each item of the question will be given a score of 5 (always), 4 (often), 3 (sometimes), 2 (rarely), 1 (never). Mean score from each indicator were measured. Mother's satisfaction was assessed using Toddler Silhouette Questionnaire, which consists of 2 sets

of 7 children's picture with number 1 (thinnest) to 7 (fattest)¹². Mother asked to choose picture's number that describe (1) the body size that most closely resembled their child, and (2) the body size that she want their child to be, and score is obtained from the difference set (1) minus set (2). Score result categorized into "want to be thinner" (negative score), "satisfied" (score= 0), and "want to be heavier" (positif score). Toddler's nutritional status and maternal satisfaction' category analyzed using chi-square test, while CEBQ score and maternal satisfaction score analyzed using the Rank Spearman test.

Results

General characteristics of the data

Table 1. shows distribution of age, gender, and nutritional status of the subject. In this study most subject has a healthy weight (84.9%).

Table 1. Characteristics of respondents

Variables	n	%
Age		
23-35 months	53	42.1
36-47 months	34	27.0
48-59 months	39	31.0
Gender		
Male	56	44.4
Female	70	55.6
Nutritional Status		
Underweight	7	5.6
Healthy weight	107	84.9
Overweight	12	9.5

The significant chi-square analysis suggested that there were differences in maternal satisfaction with their children's body size by the weight status of the children. Table 2. shows that 77.6% of mothers who have children with healthy weight want their children to be heavier, and only 18.7% of them are satisfied with their child's body. As for mothers with overweight children, 16.7% of them still want their children heavier even though they are already overweight

Table 2. Relationship between Maternal Satisfaction and Nutritional Status

		Nutritional Status						χ^2	p
		Underweight		Healthy Weight		Overweight			
		n	%	n	%	n	%		
Maternal Satisfaction	Wants thinner	0	0	4	3.7	5	41.7	32.822	0.000
	Satisfied	0	0	20	18.7	5	41.7		
	Wants heavier	7	100	83	77.6	2	16.7		
Total		7	100	107	100	12	100		

Table 3. Relationships between Maternal Satisfaction and Children Eating Behaviour

		FR	EO	EF	DD	Food approach	SR	SE	EU	FF	Food avoidance
Maternal Satisfaction	ρ	0.093	0.178*	-0.174	0.064	0.059	0.027	0.331**	0.177*	0.182*	0.256**
	p	0.298	0.046	0.051	0.457	0.512	0.766	0.000	0.047	0.041	0.004

*significant at the 0.05 level (Spearman rank)

**significant at the 0.01 level

FR (Food Responsiveness), EO (Emotional Overeating), EF (Enjoyment of Food), DD (Desire to Drink), SR (Satiety Responsiveness), SE (Slowness in Eating), EU (Emotional Undereating), FF (Food Fussiness) Statistical results show a positive relationship (ρ) between mother's satisfaction with children's body size and children's eating behaviour on the food avoidance type behavior especially in indicator slowness in eating, food fussiness, emotional undereating, and the food approach type behavior in indicator emotional overeating.

Discussion

Toddlers are one of the nutritionally vulnerable groups whose nutritional needs still depend on what their parents give them. This study found that most mothers were dissatisfied with their child's current body size and wanted to gain weight. Most of the mothers who have children with healthy weight want their children heavier, and there are still mothers who have overweight children want that too. This is line with similar research^{13,14,15,16} and proves that mother's perception of obese children is a good thing in society was true. Maternal dissatisfaction of children's body size can make mother tend to give more food to their children, choose high-calorie foods or increase their children's portion and snack in effort to increase weight¹³. This can increase the potential for children obesity.

Maternal dissatisfaction is related to children's eating behaviour with food avoidance type, one of which indicator is food fussiness or called picky eating in several studies^{17,18,19}. Mothers who want to increase their child's weight but their children are picky eaters, will be more permissive so that they give whatever food their children want, as long as they willing to eat^{20,21}.

Food fussiness and slowness in eating indicator in eating behaviour has negative relationship with children's weight²², which makes it more difficult for mothers who want to gain weight. Research shows that mothers who have value conflict about giving healthy-unhealthy snacks and tend to give their children what they like, even though they know it's unhealthy²³. Children naturally like sweet food³. In indonesia, this age group rank first for consuming most sugary foods and drinks in a day²⁴. Excessive sugary foods and drinks increase the risk of healthy problems both now and in the future.

Eating behaviour is formed in toddler and tends to carry over into their adolescence and adult^{9,25}. Emotional eating may not have an significant effect to current nutritional status²² because the mother will try to meet the nutritional needs of her child. But, emotional eating in early life can lead to eating disorder if not treated early. The age at which they can determine their own diet, eating disorders can cause various nutritional problems.

Children's overeating is also associated with the incidence of hyperlipidemia, hypercholesterolemia and hyperlipoprotein whereas undereating is lack of micronutrients in adolescence. It is necessary to provide knowledge to mothers about healthy child's body size, good feeding practice and healthy food choices.

Conclusion

Mother who dissatisfied and wants their children to be heavier tends to have children who are food avoidance, slow to eat, picky eaters and emotional eating both undereating and overeating. Health providers should give education about healthy body size and healthy food for children with difficulty eating so as not to increase the risk of obesity.

Conflict of interest

None declared

Ethical clearance

This study has been approved by research ethics committee Faculty of Medicine Universitas Sebelas Maret No. 93/UN27.06.11/KEP/EC/2022

Authors' contribution

Eka Wulandari conceptualized and designed the study, conducted the study, data analysis, interpretation and drafting manuscript. Budiyantri Wiboworini assisted in conceptualized and designed the study, and review the manuscript. Vitri Widyaningsih assisted in designed the study, analysis data and review the manuscript.

Reference

1. Navarro-Patón R, Mecías-Calvo M, Pueyo Villa S, Anaya V, Martí-González M, and Lago-Ballesteros J. Perceptions of the Body and Body Dissatisfaction in Primary Education Children According to Gender and Age. A Cross-Sectional Study. *Int. J. Environ. Res. Public Health* 2021; 18, 12460
2. León M, González-Martí I, Fernández-Bustos J, and Contreras O. Perception of body size and dissatisfaction in children aged 3 to 6: a systematic review. *Anales de Psicología*, 2018; 34(1): 173-183
3. Dovey T, Eating Behaviour, London: Open University Press, 2010
4. Sari R, Gambaran Persepsi Ibu Terhadap Obesitas Pada Anak Usia Prasekolah di Kelurahan Grogol Selatan Kebayoran Lama Jakarta Selatan, 2015
5. Wijayanti HS and Syahidah ZA. Perbedaan Aktivitas Fisik, Screen Time, Dan Persepsi Ibu Terhadap Kegemukan Antara Balita Gemuk Dan Non-Gemuk Di Kota Semarang. *Journal of Nutrition College*, 2017; 6(1): 11-18
6. Scaglioni S, Cosmi VD, Ciappolino V, Parazzini F, Brambilla P, and Agostoni C. Factors Influencing Children's Eating Behaviours. *Nutrients*, 2018; 10, 706
7. Costa A, Hetherington M, and Oliveira A. Maternal perception, concern and dissatisfaction with child weight and their association with feeding practices in the Generation XXI birth cohort. *The British Journal of Nutrition*, 2022; 127(7): 1106-1116
8. Wardle J, Guthrie CA, Sanderson S, Rapoport L. Development of the children's eating behavior questionnaire. *J Child Psychol Psychiatry*, 2001; 42(7): 963-70
9. Herle M, Stavola BD, Hübel C, Abdulkadir M, Ferreira DS, Loos RJJ, et al. A longitudinal study of eating behaviours in childhood and later eating disorder behaviours and diagnoses. *Br J Psychiatry*, 2020; 216(2): 113-119
10. Agustina NN, Santosa Q, Munaya NA and Dwijayanti GC. Association of Infantile Anorexia with Sleep Pattern and Cognitive Development of Children at Southern Region of Central Java, Indonesia. *J Compr Ped*, 2021; 12(2): e99766
11. Purwaningrum DN, Arcot J, Hadi H, Hasnawati RA, Rahmita RS and Jayasuriya R. A cultural adaptation and validation of a child eating behavior measure in a low- and middle-income country. *Public Health Nutrition*, 2020; 23(11): 1931-1938
12. Adeniyi OF, Ekure E, Olatona FA, Ajayi EO and Nworgu N. Nutritional Assessment and Maternal Perception of Toddler Body Size using Toddler Silhouette Scale in Nigeria a Developing Country. *International Journal of MCH and AIDS*, 2018; 7(1): 9-16
13. Flax VL, Thakwalakwa C, Phuka JC and Jaacks LM. Body size preferences and food choice among mothers and children in Malawi. *Matern Child Nutr*; 2020; 16:e13024
14. Allen J and Prkachin GC. Parental Awareness and Perception of Their Children's Body Size. *Open Journal of Medical Psychology*, 2013; 2: 77-80
15. Hager ER, Candelaria M, Latta LW, Hurley KM, Wang Y, Caulfield LE, and Black MM. Maternal Perceptions of Toddler Body Size: Accuracy and Satisfaction Differ by Toddler Weight Status. *Arch Pediatr Adolesc Med*, 2012; 166(5): 417-422
16. Killion L, Hughes SO, Wendt JC, Pease D and Nicklas TA. Minority mothers' perceptions of children's body size. *International Journal of Pediatric Obesity*, 2006; 1(2): 96-102
17. Cerdasari C, Helmyati S, and Julia M. Pressure to eat with picky eater in 2-3 years old children. *Jurnal Gizi Klinik Indonesia*, 2017; 13(4): 170-178
18. Hardianti R, Dieny FF and Wijayanti HS. Picky eating dan status gizi pada anak prasekolah. *Jurnal Gizi Indonesia (The Indonesian Journal of Nutrition)*, 2018; 6(2): 123-130
19. Putri AN and Muniroh L. Correlation of Picky Eater with Intake Adequacy and Nutritional Status in Preschool-Aged Children in Gayungsari. *Amerta Nutr*, 2019; 232-238
20. IDAI. Rekomendasi Ikatan Dokter Anak Indonesia: Pendekatan Diagnosis dan Tata Laksana Masalah Makan pada Batita di Indonesia, 2014
21. Lestari RF, Sari AB and Daniati M. Pengalaman Ibu Yang Memiliki Anak Usia Prasekolah Kesulitan Makan Di Paud Imanuel Pekanbaru; Studi Fenomenologi. *Jurnal Photon*, 2017; 7(2): 21-27
22. Webber L, Hill C, Saxton J, Jaarsveld CV, and Wardle J. Eating Behaviour and Weight in Children. *Int J Obes (Lond)*, 2009; 33(1): 21-28
23. Damen FW, Luning PA, Hofstede GJ, Fogliano V, Steenbekkers BL. Value conflicts in mothers' snack choice for their 2- to 7-year old children. *Matern Child Nutr*, 2020; 16:e12860
24. Ministry of Health, Riskesdas 2018
25. Lewer M, Bauer A, Hartmann AS and Vocks S. Different Facets of Body Image Disturbance in Binge Eating Disorder: A Review. *Nutrients*, 2017; 9:1294
26. Hübel C, Herle M, Ferreira DLS, Abdulkadir M, Bryant-Waugh R, Loos RJJ, et al. Childhood overeating is associated with adverse cardiometabolic and inflammatory profiles in adolescence. *Scientific Reports*, 2021; 11:12478