

BUKTI KORESPONDENSI
ARTIKEL JURNAL KESEHATAN MASYARAKAT NASIONAL

Judul artikel : *The Influence of Exclusive Breastfeeding to Emotional Development of Children Aged 48-60 Months*

Jurnal : Jurnal Kesehatan Masyarakat Nasional (*National Public Health Journal*)

Penulis : Yuni Kusmiyati

No	Perihal	Tanggal
1	Submit melalui OJS	16 September 2017
2	Pemberitahuan review naskah	20 Oktober 2017
3	Pemberitahuan review naskah	11 November 2017
4	Naskah diterima	13 November 2017
5	Review bahasa	16 April 2018
6	Naskah terbit	4 Mei 2018

Kesmas

Jurnal Kesehatan Masyarakat Nasional
(National Public Health Journal)

HOME ABOUT USER HOME SEARCH CURRENT ARCHIVES ANNOUNCEMENTS EDITORIAL TEAM EDITORIAL POLICIES
AUTHOR GUIDELINES PUBLICATION ETHIC REVIEWER ACKNOWLEDGEMENT

Home > User > Author > Submissions > #1724 > Review

#1724 Review

SUMMARY REVIEW EDITING

Submission

Authors Yuni Kusmiyati, Sumarah Sumarah, Nurul Dwiawati, Hesty Widyasih, Yani Widyastuti, Khadzah Haji Abdul Mumin
Title The Influence of Exclusive Breastfeeding to Emotional Development of Children Aged 48-60 Months
Section Articles
Editor Dewi Susanna

Peer Review

Round 1

REGISTER

LOGIN

p-ISSN: 1907-7505
e-ISSN: 2460-0601

LANGUAGE
Select Language
English Submit

JOURNAL CONTENT
Search
Search Scope

journal.fkm.ui.ac.id/kesmas/author/submissionReview/1724

Editor Dewi Susanna

Peer Review

Round 1

Review Version 1724-4389-1-RV.DOC 2017-09-16
Initiated 2017-10-06
Last modified 2017-10-20
Uploaded file None

Editor Decision

Decision Accept Submission 2017-11-13
Notify Editor Editor/Author Email Record 2017-10-20
Editor Version 1724-4682-1-ED.DOC 2017-10-20
Author Version 1724-4857-1-ED.DOC 2017-11-11 DELETE
Upload Author Version Pilih File Tidak ada file yang dipilih Upload

Kesmas: Jurnal Kesehatan Masyarakat Nasional (National Public Health Journal) indexed in



English Submit

JOURNAL CONTENT
Search
Search Scope
All Search

Browse
By Issue
By Author
By Title
Other Journals

USER
You are logged in as...
kusmiyat2006
My Journals
My Profile
Log Out

PREPARING FOR SUBMISSION

Tutorial Submit Article

Covering Letter and Statements

Manuscript Template

INTERNATIONAL EDITOR/REVIEWER FORM

Submission

Authors Yuni Kusmiyati, Sumarah Sumarah, Nurul Dwiawati, Hesty Widyasih, Yani Widyastuti, Khadzah Haji Abdul Mumin
Title The Influence of Exclusive Breastfeeding to Emotional Development of Children Aged 48-60 Months
Original file 1724-4389-1-SM.DOC 2017-09-16
Supp. files None
Submitter Mrs Yuni Kusmiyati
Date submitted September 16, 2017 - 09:40 AM
Section Articles
Editor Dewi Susanna
Abstract Views 1610

THE INFLUENCE OF EXCLUSIVE BREASTFEEDING ON THE EMOTIONAL DEVELOPMENT OF CHILDREN AGED 48-60 MONTH

ABSTRACT

Impaired emotional development is a problem facing children and this can have a negative impact on the function, development and readiness of their schools. Exclusive breastfeeding is able to meet the needs of brain development that affect the development of children. This study aimed to determine correlation between exclusive breastfeeding with the emotional development of children aged 48-60 month. This research used historical cohort. The subjects of this research are 7-12 month old babies who live the area of Borobudur Health Center Central Java Indonesia in 2011-2012. The independent variable of exclusive breastfeeding is when babies receive only breast milk without any additional food or drink including water until 6 months of age. Data were obtained from medical record of child. The emotional development was assessed directly by using questionnaires on emotional mental problems. Data analysis was performed by using cox regression. This study found that the provision of exclusive breast milk is proven to have correlation to the child's emotional development. Babies who did not receive exclusive breastfeeding have more risk of 2.96 to experience abnormal emotional development than babies who received exclusive breastfeeding. Exclusive breastfeeding greatly influences the emotional development of the child, health promotion and giving motivation to mothers to give exclusive breastfeeding must be improved.

Keywords: exclusive breastfeeding, emotional development, children aged 48-60 month

ABSTRAK

Gangguan perkembangan emosional adalah masalah yang dihadapi anak-anak dan hal ini dapat berdampak negatif terhadap fungsi, perkembangan dan kesiapan sekolah mereka. Pemberian ASI eksklusif mampu memenuhi kebutuhan perkembangan otak yang mempengaruhi perkembangan anak. Penelitian ini bertujuan untuk mengetahui hubungan antara pemberian ASI eksklusif dengan perkembangan emosional anak usia 48-60 bulan. Penelitian ini menggunakan kohort historis. Subjek penelitian adalah bayi berumur 7-12 bulan yang tinggal di wilayah Puskesmas Borobudur Jawa Tengah Indonesia tahun 2011-2012. Variabel bebas pemberian ASI eksklusif adalah saat bayi hanya menerima ASI tanpa tambahan makanan atau minuman termasuk air sampai usia 6 bulan. Data diperoleh dari rekam medis anak. Perkembangan emosional dinilai langsung dengan menggunakan kuisioner mengenai masalah mental emosional. Analisis data dilakukan dengan menggunakan *regresi cox*. Studi ini menemukan bahwa pemberian ASI eksklusif terbukti berkorelasi dengan perkembangan emosional anak. Bayi yang tidak mendapat ASI eksklusif memiliki risiko lebih tinggi 2,96

Center in 2015 the number of children who joined the emotionalexamination by using a questionnaire of emotional-mental problems was 246 (children aged 3-6 years) 46 children (18.7%) suffered from emotional distress, and 12 children (26%) got services in advanced health facilities.

The purpose of this study was to determine the effect of exclusive breastfeeding to the emotional development of 48-60 month-old children in Borobudur Public Health Center in 2016. This study can be useful for decision-making basis of exclusive breastfeeding and early detection of developmental disorders in children, especially in the emotional development of all children.

Method

This research is observational studies with a historical cohort design. Research subjects include 369 children within the age range of 7-12 months old. The research coverage was in Borobudur Public Health Center, Central Java in 2011-2012. Children who received exclusive breastfeeding as many as 196 children, and 173 children did not receive exclusive breastfeeding. Sampling was conducted with simple random sampling technique for subjects who met the inclusion criteria: be willing to be the subject of research, live within the coverage of Borobudur Public Health Center. The exclusion criteria were children suffered from chronic pain for the past 1 month and congenital disability. The sample size was calculated based on the formulas of the samples for the study cohort with a power of 90%, and the samples obtained were 178 (89 children getting exclusive breastfeeding vs 89 children who did not receive exclusive breastfeeding).

The independent variable is the provision of exclusive breastfeeding without any additional food or drink, including water, except for medicine, vitamins, and minerals given to infants within the age range from 0 to 6 months. Data were obtained from medical records of children in Borobudur Public Health Center, Central Java. The dependent variable of children emotional development is a process of maturation of organs including the interaction of developing mental / intelligence and physiological and psychological behaviour of children. This skill

mengalami perkembangan emosional abnormal dibandingkan bayi yang mendapat ASI eksklusif. Asi eksklusif mempunyai pengaruh yang besar terhadap perkembangan anak, promosi kesehatan dan motivasi kepada ibu untuk memberikan Asi eksklusif harus selalu ditingkatkan.

Kata kunci : ASI eksklusif, perkembangan emosi, anak usia 48-60 bulan

Introduction

Development refers to the process of maturity interaction between central nervous system and organs by which greatly affected such as neuromuscular system, speaking ability, emotion and socialization. Early age is 'golden age period', and it refers to a golden age for the human development aspect including physical, cognitive, emotional and social development. One of the most important children development is emotional aspect. With their emotional state, children can focus their attention, energize their body, and organize their thought to deal with their needs. The prevalence of emotional and behavioral problems in children is approximately 20%.

Emotional and behavioral problems are influenced by multiple factors which can stand alone or affect each other. The provision of adequate stimulation and nutrition as the basis of children development must be optimal. One of good nutrition for an optimal fulfillment is exclusive breast feeding given for babies from 0 to 6 months. According to Lind et al (2014), breastfeeding heightens the interaction between mother and baby. Breastfeeding improves the mother-baby interaction which is important for cognitive and socio-emotional development of the babies.

Based on data from Health Research Association in 2013, there was a tendency of lower percentage of exclusive breastfeeding (0-6 months) for infants as the babies grow older. Studies showed that Coverage of exclusive breastfeeding (EBF) rate in Indonesia are very low. Scope of exclusive breastfeeding in Central Java in 2014 reached 60.7%, while Borobudur Health Center in Central Java reached 79%⁽¹⁾. According to data from Health Research Association in 2013, the prevalence of mental emotional disorder in Indonesia reached 6%, while in Central Java it reached 4.7%. Based on a preliminary study in Borobudur Health

is used to respond to the surrounding environment, and it was assessed by using a questionnaire of emotional mental problems. External variables studied were sex, mother's education, father's education, maternal employment status, employment status father, and the parents' income. The research was conducted in 2016. Data were analyzed by using chi-square test and cox regression. Cox regression for Odds Ratio (OR) was used to assess the association between exposure and outcome in logistic regression, which is considered the same as risk ratio (RR) in cohort studies, can lead to overestimates. Use of Odds Ratio (OR) was acceptable if the results were relatively rare (<10%). In a research whose outcome is more than 10% of interpretation OR as RR is questionable because OR value will be higher than the RR (overestimate). Therefore, Cox regression was recommended as a suitable method to estimate the RR cohort study using multivariate time constant (number 1).⁽¹⁾ Multivariate analysis was performed on variables with p-value <0.250. Model is fit if the model significance is ≤ 0.05 and partial significance is ≤ 0.1 .

Result

This research was conducted in Borobudur Public Health Center, Central Java in 2016. The total sample of 178 respondents consisted of 89 children who got exclusive breastfeeding and 89 children who did not receive exclusive breastfeeding. The main independent variables was exclusive breastfeeding, and dependent variables were emotional development of children and external variables including sex, mother's education, father's education, parents' employment status, and parents' income. Analysis results of research subjects' characteristics description and the effect on emotional development is presented in Table 1 below.

Table 1. Frequency Distribution of Subjects and Their Relation to Emotional Development of 48-60 Month Old Children.

Variables	Emotional Development		P	RR	95% CI
	Abnormal	Normal			

Comment [1]: Ditambah sedikit kata

Comment [2]: Sebaiknya ibu yang sedang hamil

Comment [3]: Ini kejadiannya dimana dan tahun berapa

Comment [4]: Maksudnya kurang apa - apa tahun lebih tua ..?

Comment [5]: Emosi dipisahkan berapa dipisahkan chi square

	n	(%)	n	(%)			
Sex							
- Male	21	27,3	56	72,7	0,063	1,84	1,015-3,321
- Female	15	14,9	86	85,1			
Mother's Education							
- Low	31	31	69	69	0,000*	4,84	1,972-11,859
- High	5	6,4	73	93,6			
Father's Education							
- Low	31	36,5	54	63,5	0,000*	6,78	2,765-16,645
- High	5	5,4	88	94,6			
Mother's Occupation							
- Not Working	20	10,8	81	80,2	1,000	0,95	0,530-1,714
- Working	16	20,8	61	70,2			
Father's Occupation							
- Not Working	9	48,9	13	59,1	0,022	2,36	1,287-4,342
- Working	27	17,3	129	82,7			
Parents' Income							
- <Rp. 1.410.000	29	43,9	37	56,1	0,000*	7,03	3,264-15,143
- >Rp. 1.410.000	7	6,2	105	93,8			

Note: *Significance p-value < 0,05

Table 1 shows that the characteristics of the variables related to the emotional development are the mother's education, father's education, father's occupational status, and parents' income (p-value < 0.05). The boy has higher risk 1.8 times for experiencing abnormal emotional development than girls, but it is not statistically significant (P-value 0.063 > 0.05). Children with low-educated mothers have a risk of 4.8 (95% CI 1.972 to 11.859) to have abnormal emotional development than children with highly educated mothers. Children with low educated father have a risk of 6,8 (95% CI 2.765-16.645) for having abnormal emotional development than children with highly-educated father. Mothers who did not work was a protective factor for children experiencing emotional development is not normal, but this was not statistically significant. Children with jobless fathers have a risk of 2.4 (95% CI 1.287 to 4.342) for having abnormal emotional development than children with working fathers. Children whose parents' incomes is below the regional minimum wage (UMR) are at risk 7 times (95% CI 3.264 to 15.143) for having abnormal emotional development than children whose parents' income is above the regional minimum wage. The effect

Comment [16]: < 0,05

5

Father's Education						
- Low	1,091	0,03	2,98	1,110-7,984		
- High						
Father's Occupation						
- Not Working	0,791	0,069	2,21	0,940-5,179		
- Working						
Parents' Income						
- < Rp. 1.410.000	1,575	0,001	4,83	1,973-11,817		
- > Rp. 1.410.000						

Table 3 shows the fit model of the effect of exclusive breastfeeding on emotional development of children by involving other factors such as parents' educational background, father's occupation and parents' income. The results show that exclusive breastfeeding has an influence on the emotional development of children. Babies who are not given exclusive breastfeeding have a risk of 2.96 (95% CI 1.384 to 6.315) to suffer from abnormal emotional development than babies who received exclusive breastfeeding as controlled by such variables as parents' educational background, father's occupation and parents' income.

Discussion

The growth and development of children are strongly influenced by two main factors, internal (genetic) and external factors (environment)¹³. Early childhood is a "golden age period". It means that it is a golden period for all aspects of human development, which include physical, cognitive, emotional and social development¹⁴. The development is a process of maturation of body organs including mental development / intelligence and behavior of the children¹⁴. Emotions are feelings which children physiologically and psychologically have and are used to respond to events that occur in their surrounding¹⁵. Thus, the emotional development is a process of maturation of organs including the interaction of mental development / intelligence and behavior of children which are physiologically and psychologically used to respond to their surrounding environment.

This study has purpose to determine the relationship of exclusive breastfeeding with the emotional development in 48-60 month old children...

Comment [18]: Variabel jenis, indikator lebih banyak ya...

Comment [19]: Tujuan penelitian lebih untuk apa, di mana, di penelitian...

7

of exclusive breastfeeding to the children's emotional development can be seen in Table 2 below.

Table 2. The effect of exclusive breastfeeding to emotional development of 48-60 month old children.

Variables	Emotional Development		P	RR	95% CI		
	Abnormal	Normal					
	n	(%)	n	(%)			
Exclusive Breastfeeding							
- No	26	29,2	63	70,8	0,005	2,60	1,334-5,068
- Yes	10	11,2	79	88,8			

Table 2 shows that exclusive breastfeeding has influence to the children's emotional development without considering external variables. Babies who do receive exclusive breastfeeding have a risk 2.6 times higher (95% CI 1.334-5.068) of having abnormal emotional development than babies who receive exclusive breastfeeding.

The effect of exclusive breastfeeding to children's emotional development by including other external factors is analyzed by using cox regression. The fit model is presented in Table 3 below.

Table 3. The effect of exclusive breastfeeding, parents' educational background, parents' employment status, and parents' income to children's emotional development.

Variables	Koef B	P	RR	95% CI
Exclusive Breastfeeding				
- No	1,084	0,005	2,96	1,384-6,315
- Yes				
Mother's Education				
- Low	1,333	0,014	3,79	1,307-11,012
- High				

Comment [17]: Berisi di dukukan, emosi dan anak yang tidak normal, karena masalahnya itu exclusive yang sudah di bahas sebelumnya

6

Emotional development problems occur due to various factors. Factors affecting the development included in this study were sex, nutrition (exclusive breastfeeding), education of parents (mother and father), employment status of parents (mother and father) and socio-economic (parents' income).

Exclusive breastfeeding and variable which influence emotional development of 48-60 month-old children.

Breast milk is the best food for babies. Breast milk contains complete nutrition which is good for growth and development. Breast milk can affect intelligence and improve the bond of affection between mother and baby. This bond of affection will induce a feeling of being loved and protected, so this feeling becomes a spiritual base and establishes a good self confidence and emotional development. Breastfeeding activity is a physical activity which improves interaction between mother and her baby. Thus, it is important for cognitive and socio-emotional development¹⁶. The results of the analysis in this study proves that exclusive breastfeeding has a great influence and significant effect on emotional development of 48-60 month-old children. This study supports research conducted by Metwally et al who demonstrated that exclusive breastfeeding has a positive relationship with the emotional development of the children¹⁷. Lind et al also stated that children who received exclusive breastfeeding have fewer emotional problems than children who did not receive exclusive breastfeeding¹⁸.

The study also found that the child's emotional development is also influenced by other factors, such as the father and mother's educational background, father's occupation and parents' income status. Parents' education affects the development of children¹⁹. Mother's education is often associated with the children development. Mother's education affects parenting knowledge about the fulfillment of food intake in children, the provision of stimulation and child rearing²⁰. Children with low-educated mothers have a higher risk of 4.8 to have abnormal emotional development than children with highly educated mothers. The results support Metwally et al who showed that low-educated

8

mothers have a higher risk to have children who experience emotional developmental disorders than highly-educated mothers'. Children with low educated father have a risk of 6,8 higher for having abnormal emotional development than children with highly-educated father. This fact supports finding of Ribas et al who stated that parents' high education will affect the parenting knowledge about food intake, the provision of stimulation and child rearing.¹⁷

Father's employment status is mainly related to family income which will eventually affect the family economy. Father's job status has a significant relationship with the emotional development in 48-60 month-old children. This result supports research of Lee et al which states that employment status affects the index of children's mental and emotional development.¹⁸ Working parents will have a good income to provide sufficient food intake and good facilities for children.¹⁹

Family economic status can be seen from families (parents)'s income... Poverty is associated with inadequate amount of food, bad health, bad environment, and ignorance which will hinder the children's growth and development.²⁰ The higher the income the better the child's development because the child get adequate supply of food (nutrition).²¹ Parents with a low income will have problems to provide adequate nutrition for their children, so it will affect the growth and development of the child, including her/his social and emotional development.²² Children with low-income parents are at risk 7 times higher for having abnormal emotional development than children with high-income parents. Income families (parents) can be a risk factor which will affect the children's emotional and social health as well as their development.²³ This supports the finding of Metwally et al who stated that higher family income results in better the emotional development of children. This condition is due to insufficient food intake (nutrition), providing facility to stimulate the child's development and opportunities for learning and interaction on the social environment.²⁴

NOTE : PERLU DITAMBAH PEMBAHASAN PENGARUH ASI EKSKLUSIF YG THD EMOTIONAL, DENGAN MENGAITKAN PENGARUH VARIABEL

EKSTERNAL, SEPERTI PENDIDIKAN PENDIDIKAN ORTU, PEKERJAAN ORTU, DLL

Conclusion

Exclusive breastfeeding has an influence on the emotional development of 48-60 month-old children after being controlled by other factors such as parents' educational background, father's occupation and parents' income. Babies who are not given exclusive breastfeeding have a risk of 2.96 (95% CI 1.384 to 6.315) to suffer from abnormal emotional development than babies who received exclusive breastfeeding as controlled by such variables as parents' educational background, father's occupation and parents' income.

Recommendation

Exclusive breastfeeding greatly influences the emotional development of the child, so it is important for practitioners in the field of health to provide health promotion and motivation to mothers to give exclusive breastfeeding.

Acknowledgment:

The authors would like to thank all the participants for take part in this study. Finally, many thanks to the peer reviewers for providing constructive and insightful feedback to improve this manuscript.

REFERENCES

1. Departemen Kesehatan Pedoman pelaksanaan stimulasi deteksi dan intervensi dini tumbuh kembang anak di tingkat pelayanan kesehatan dasar. Jakarta: Kementerian Kesehatan, 2012.
2. Marteni W. Metode stimulasi perkembangan anak usia dini. Jurnal Psikologi. 2012;39 (1): 112 - 120.
3. Hansen C & Zambo D. Loving and learning with wimberly and david fostering emotional development in early childhood education. Early Childhood Education Journal. 2007;34(4): 273-278
4. Rahmadi FA, Hardiningsih G & Pratiwi R. Prevalensi dan jenis masalah emosional dan perilaku pada anak usia 9-11 tahun dengan perawakan pendek di Kabupaten

Comment [110]: UTMANYA KEPADA BUU YG SEDANG HAMIL

- Brebes. Departemen Ilmu Kesehatan Anak Fakultas Kedokteran Universitas Diponegoro. 2015;3(2) : 116-119.
5. Jedrychowski W, Perera F, Janikowski J. Effect of exclusive breastfeeding on the development of children's cognitive function in the krakow prospective birth cohort study. Eur J Pediatr. 2012;177(1):151-158.
6. Lind JN, Li R, Perrine C G. Breastfeeding and later psychosocial development of children at 6 years of age. American Academy of Pediatrics. 2014; 134(1):13-20.
7. Metwally A M, Salah E D, Shehata M A. Early life predictors of socio-emotional development in a sample of egyptian infants. PLoS ONE 11. 2016 (7) :e0158086
8. Badan Penelitian dan Pengembangan Kesehatan Kementerian Kesehatan Republik Indonesia. Riset kesehatan dasar 2013. Jakarta : Badan Litbangkes 2013.
9. Fikawati S, Syaifi A. Penyebab keberhasilan dan kegagalan praktik pemberian ASI eksklusif. Keemas Nasional Public Health Journal, 2009; 4(3): 120-131
10. Dinas Kesehatan Provinsi Jawa Tengah. Profil kesehatan, Provinsi Jawa Tengah Tahun 2014. Semarang : Dinakes Provinsi Jawa Tengah. 2014.
11. Dinas Kesehatan Kabupaten Magelang. Profil kesehatan Kabupaten Magelang Tahun 2014. Magelang : Dinas Kesehatan Kabupaten Magelang 2014.
12. Qujian, FA. A simple method for estimating relative risk using logistic regression. BMC Medical Research Methodology. 2012; 12:14.
13. Latifah E, Hastuti D, Latifah M. Pengaruh pemberian ASI dan stimulasi psikososial terhadap perkembangan sosial emosi anak balita pada keluarga bekerja dan tidak bekerja. Jurnal Ilmu Kei & Kons. 2010 : 35-45
14. Soejatiningsih. Tumbuh kembang anak. Edisi 3. Surabaya : EGC. 2013.
15. Gunasa, SD. Psikologi perkembangan anak dan remaja cetakan ke 13. Jakarta: Gunung Mulia. 2008.
16. Ikatan Dokter Anak Indonesia (IDAI) Cabang DKI Jakarta. Bedah ASI kajian dari berbagai sudut pandang ilmiah. Jakarta : Balai Penerbit FKUI. 2008.
17. Ribas J R C, Maura M L, Bornstein M H. Socioeconomic status in Brazilian psychological research: socioeconomic status and parenting knowledge. Estudos de Psicologia. 2003; 8 (3) : 385-392
18. Lee H, Park H, Ha E. Effect of breastfeeding duration on cognitive development in infants: 3-year follow-up study. The Korean Academy of Medical Science 2016
19. Wachs, Theodore D. Risk factors and the development of competence in children from low-income countries: the importance of social-emotional outcomes and multiple process models. Child Health and Education 2009; 1(2): 107-121
20. Cooper JL, Masi R, Vick J. Social-emotional development in early childhood. National Center for Children in Poverty (NCCP). 2009.

THE INFLUENCE OF EXCLUSIVE BREASTFEEDING ON THE EMOTIONAL DEVELOPMENT OF CHILDREN AGED 48-60 MONTH

ABSTRACT

Impaired emotional development is a problem facing children and this can have a negative impact on the function, development and readiness of their schools. Exclusive breastfeeding is able to meet the needs of brain development that affect the development of children. This study aimed to determine correlation between exclusive breastfeeding with the emotional development of children aged 48-60 month. This research used historical cohort. The subjects of this research are 7-12 month old babies who live the area of Borobudur Health Center Central Java Indonesia in 2011-2012. The independent variable of exclusive breastfeeding is when babies receive only breast milk without any additional food or drink including water from birth until 6 months of age. Data were obtained from medical record of child. The emotional development was assessed directly by using questionnaires on emotional mental problems. Data analysis was performed by using cox regression. This study found that the provision of exclusive breast milk is proven to have correlation to the child's emotional development. Babies who did not receive exclusive breastfeeding have more risk of 2.96 to experience abnormal emotional development than babies who received exclusive breastfeeding. Exclusive breastfeeding greatly influences the emotional development of the child; health promotion and giving motivation to mothers, especially mothers who are pregnant to give exclusive breastfeeding must be improved.

Keyword: exclusive breastfeeding, emotional development, children aged 48-60 month

ABSTRAK

Gangguan perkembangan emosional adalah masalah yang dihadapi anak-anak dan hal ini dapat berdampak negatif terhadap fungsi, perkembangan dan kesiapan sekolah mereka. Pemberian ASI eksklusif mampu memenuhi kebutuhan perkembangan otak yang mempengaruhi perkembangan anak. Penelitian ini bertujuan untuk mengetahui hubungan antara pemberian ASI eksklusif dengan perkembangan emosional anak usia 48-60 bulan. Penelitian ini menggunakan kohort historis. Subjek penelitian adalah bayi berumur 7-12 bulan yang tinggal di wilayah Puskesmas Borobudur Jawa Tengah Indonesia tahun 2011-2012. Variabel bebas pemberian ASI eksklusif adalah saat bayi hanya menerima ASI tanpa tambahan makanan atau minuman termasuk air sejak lahir sampai usia 6 bulan. Data diperoleh dari rekam medis anak. Perkembangan emosional dinilai langsung dengan menggunakan kuesioner mengenai masalah mental emosional. Analisis data dilakukan dengan menggunakan regresi cox. Studi ini menemukan bahwa pemberian ASI eksklusif terbukti berkorelasi dengan perkembangan emosional

breastfeeding in Central Java in 2014 reached 60.7%, while Borobudur Health Center in Central Java reached 79%⁽¹⁾. According to data from Health Research Association in 2013, the prevalence of mental emotional disorder in Indonesia reached 6%, while in Central Java it reached 4.7%. Based on a preliminary study in Borobudur Health Center in 2015 the number of children who joined the emotionalexamination by using a questionnaire of emotional-mental problems was 246 (children aged 3-6 years) 46 children (18.7%) suffered from emotional distress, and 12 children (26%) got services in advanced health facilities.

The purpose of this study was to determine the effect of exclusive breastfeeding to the emotional development of 48-60 month-old children in Borobudur Public Health Center in 2016. This study can be useful for decision-making basis of exclusive breastfeeding and early detection of developmental disorders in children, especially in the emotional development of all children.

Method

This research is observational studies with a historical cohort design. Research subjects include 369 children within the age range of 7-12 months old. The research coverage was in Borobudur Public Health Center, Central Java in 2011-2012. Children who received exclusive breastfeeding as many as 196 children, and 173 children did not receive exclusive breastfeeding. Sampling was conducted with simple random sampling technique for subjects who met the inclusion criteria: be willing to be the subject of research, live within the coverage of Borobudur Public Health Center. The exclusion criteria were children suffered from chronic pain for the past 1 month and congenital disability. The sample size was calculated based on the formula of the samples for the study cohort with a power of 90%, and the samples obtained were 178 (89 children getting exclusive breastfeeding vs 89 children who did not receive exclusive breastfeeding).

The independent variable is the provision of exclusive breastfeeding without any additional food or drink, including water, except for medicine,

anak. Bayi yang tidak mendapat ASI eksklusif memiliki risiko lebih tinggi 2,96 mengalami perkembangan emosional abnormal dibandingkan bayi yang mendapat ASI eksklusif. Asi eksklusif mempunyai pengaruh yang besar terhadap perkembangan anak, promosi kesehatan dan motivasi kepada ibu, khususnya ibu hamil untuk memberikan Asi eksklusif harus selalu ditingkatkan.

Kata kunci : ASI eksklusif, perkembangan emosi, anak usia 48-60 bulan

Introduction

Development refers to the process of maturity interaction between central nervous system and organs by which greatly affected such as neuromuscular system, speaking ability, emotion and socialization. Early age is 'golden age period', and it refers to a golden age for the human development aspect including physical, cognitive, emotional and social development. One of the most important children development is emotional aspect. With their emotional state, children can focus their attention, energize their body, and organize their thought to deal with their needs. WHO research in 2001 showed that 20% of young children until the age of adolescents suffering from mental disorders. Health Research results report Basic (Raskesdas) 2013 using SRQ (Self Reporting Questionnaire) to assess the mental health of the population, the prevalence of emotional mental disorders in the Indonesian population aged over 15 years of 6.0%⁴.

Emotional and behavioral problems are influenced by multiple factors which can stand alone or affect each other. The provision of adequate stimulation and nutrition as the basis of children development must be optimal.

One of good nutrition for an optimal fulfillment is exclusive breast feeding given for babies from 0 to 6 months. According to Lind et al (2014), breastfeeding heightens the interaction between mother and baby⁶. Breastfeeding improves the mother-baby interaction which is important for cognitive and socio-emotional development of the babies⁷.

Based on data from Health Research Association in 2013, there was a decreasing pattern of exclusive breastfeeding (0-6 months) percentage for infants as the baby's age increases⁸. Studies showed that coverage of exclusive breastfeeding (EBF) rate in Indonesia are very low⁹. Scope of exclusive

vitamins, and minerals given to infants within the age range from 0 to 6 months. Data were obtained from medical records of children in Borobudur Public Health Center, Central Java. The dependent variable of children emotional development is a process of maturation of organs including the interaction of developing mental / intelligence and physiological and psychological behaviour of children. This skill is used to respond to the surrounding environment, and it was assessed by using a questionnaire of emotional mental problems. External variables studied were sex, mother's education, father's education, maternal employment status, employment status father, and the parents' income. The research was conducted in 2016. Data were analyzed by using chi-square test for the purpose of bivariate analysis because the data was categorical and cox regression for multivariate analysis. Cox regression for Odds Ratio (OR) was used to assess the association between exposure and outcome in logistic regression, which is considered the same as risk ratio (RR) in cohort studies, can lead to overestimates. Use of Odds Ratio (OR) was acceptable if the results were relatively rare (<10%). In a research whose outcome is more than 10% of interpretation OR as RR is questionable because OR value will be higher than the RR (overestimate). Therefore, Cox regression was recommended as a suitable method to estimate the RR. cohort study using multivariate time constant (number 1).¹¹ Multivariate analysis was performed on variables with p-value <0.250. Model is fit if the model significance is ≤ 0.05 and partial significance is ≤ 0.1 .

Result

This research was conducted in Borobudur Public Health Center, Central Java in 2016. The total sample of 178 respondents consisted of 89 children who got exclusive breastfeeding and 89 children who did not receive exclusive breastfeeding. The main independent variables was exclusive breastfeeding, and dependent variables were emotional development of children and external variables including sex, mother's education, father's education, parents' employment status, and parents' income. Analysis results of research subjects'

characteristics description and the effect on emotional development is presented in Table 1 below.

Table 1. Frequency Distribution of Subjects and Their Relation to Emotional Development of 48-60 Month Old Children.

Variables	Emotional Development		P	RR	95% CI
	Abnormal n (%)	Normal n (%)			
Sex					
- Male	21 (27,3)	56 (72,7)			
- Female	15 (14,9)	86 (85,1)	0,063	1,84	1,015-3,321
Mother's Education					
- Low	31 (31)	69 (69)			
- High	5 (6,4)	73 (93,6)	0,000*	4,84	1,972-11,859
Father's Education					
- Low	31 (36,5)	54 (63,5)			
- High	5 (5,4)	88 (94,6)	0,000*	6,78	2,765-16,645
Mother's Occupation					
- Not Working	20 (19,8)	81 (80,2)			
- Working	16 (20,8)	61 (79,2)	1,000	0,95	0,530-1,714
Father's Occupation					
- Not Working	9 (40,9)	13 (59,1)			
- Working	27 (17,3)	129 (82,7)	0,022	2,36	1,287-4,342
Parents' Income					
- <Rp. 1.410.000	29 (43,9)	37 (56,1)			
- >Rp. 1.410.000	7 (6,2)	105 (93,8)	0,000*	7,03	3,264-15,143

Note: *Significance p-value $\leq 0,05$

Table 1 shows that the characteristics of the variables related to the emotional development are the mother's education, father's education, father's occupational status, and parents' income (p-value $<0,05$). The boy has higher risk 1.8 times for experiencing abnormal emotional development than girls, but it is not statistically significant (P-value $0,06 > 0,05$). Children with low-educated mothers have a risk of 4.8 (95% CI 1.972 to 11.859) to have abnormal emotional development than children with highly educated mothers. Children with low educated father have a risk of 6.8 (95% CI 2.765-16.645) for having abnormal emotional development than children with highly-educated father. Mothers who did not work was a protective factor for children experiencing emotional

development is not normal, but this was not statistically significant. Children with jobless fathers have a risk of 2.4 (95% CI 1.287 to 4.342) for having abnormal emotional development than children with working fathers. Children whose parents' incomes is below the regional minimum wage (UMR) are at risk 7 times (95% CI 3.264 to 15.143) for having abnormal emotional development than children whose parents' income is above the regional minimum wage. The effect of exclusive breastfeeding to the children's emotional development can be seen in Table 2 below.

Table 2. The effect of exclusive breastfeeding to emotional development of 48-60 month old children.

Variables	Emotional Development		P	RR	95% CI
	Abnormal n (%)	Normal n (%)			
Exclusive Breastfeeding					
- No	26 (29,2)	63 (70,8)			
- Yes	10 (11,2)	79 (88,8)	0,005	2,60	1,334-5,068

Table 2 shows that exclusive breastfeeding has influence to the children's emotional development without considering external variables. Babies who do receive exclusive breastfeeding have a risk 2,6 times higher (95% CI 1,334-5,068) of having abnormal emotional development than babies who receive exclusive breastfeeding.

The effect of exclusive breastfeeding to children's emotional development by including other external factors is analyzed by using cox regression. The fit model is presented in Table 3 below.

Table 3. The effect of exclusive breastfeeding, parents' educational background, parents' employment status, and parents' income to children's emotional development.

Variables	Koeff	P	RR	95% CI
Exclusive Breastfeeding				
- No	1,084	0,005	2,96	1,384-6,315
- Yes				
Mother's Education				
- Low	1,333	0,014	3,79	1,307-11,012
- High				
Father's Education				
- Low	1,091	0,03	2,98	1,110-7,984
- High				
Father's Occupation				
- Not Working	0,791	0,069	2,21	0,940-5,179
- Working				
Parents' Income				
- < Rp. 1.410.000	1,575	0,001	4,83	1,973-11,817
- > Rp. 1.410.000				

Table 3 shows the fit model of the effect of exclusive breastfeeding on emotional development of children by involving other factors such as parents' educational background, father's occupation and parents' income. The results show that exclusive breastfeeding has an influence on the emotional development of children. Babies who are not given exclusive breastfeeding have a risk of 2.96 (95% CI 1.384 to 6.315) to suffer from abnormal emotional development than babies who received exclusive breastfeeding as controlled by such variables as parents' educational background, father's occupation and parents' income.

Discussion

The growth and development of children are strongly influenced by two main factors, internal (genetic) and external factors (environment)¹³. Early childhood is a "golden age period". It means that it is a golden period for all aspects of human development, which include physical, cognitive, emotional and social development¹⁴. The development is a process of maturation of body organs

including mental development / intelligence and behavior of the children¹⁴. Emotions are feelings which children physiologically and psychologically have and are used to respond to events that occur in their surrounding¹⁵. Thus, the emotional development is a process of maturation of organs including the interaction of mental development / intelligence and behavior of children which are physiologically and psychologically used to respond to their surrounding environment. Emotional development problems occur due to various factors. Factors affecting the development included in this study were sex, nutrition (exclusive breastfeeding), education of parents (mother and father), employment status of parents (mother and father) and socio-economic (parents' income).

Exclusive breastfeeding and variable which influence emotional development of 48-60 month-old children.

Breast milk is the best food for babies. Breast milk contains complete nutrition which is good for growth and development. Breast milk can affect intelligence and improve the bond of affection between mother and baby. This bond of affection will induce a feeling of being loved and protected, so this feeling becomes a spiritual base and establishes a good self confidence and emotional development. Breastfeeding activity is a physical activity which improves interaction between mother and her baby. Thus, it is important for cognitive and socio-emotional development¹⁶. The results of the analysis in this study proves that exclusive breastfeeding has a great influence and significant effect on emotional development of 48-60 month-old children. This study supports research conducted by Matulyally et al who demonstrated that exclusive breastfeeding has a positive relationship with the emotional development of the children¹⁷. Lind et al also stated that children who received exclusive breastfeeding have fewer emotional problems than children who did not receive exclusive breastfeeding¹⁸.

The study also found that the child's emotional development is also influenced by other factors, such as the father and mother's educational background, father's occupation and parents' income status. Parents' education

Comment [NW1]: variabel jenis kelamin tidak masuk model karena p-value > 0,1 dan hasil analisis menunjukkan bukan confounder.

affects the development their children¹⁷. Mother's education is often associated with the children development... Mother's education affects parenting knowledge about the fulfillment of food intake in children, the provision of stimulation and child rearing¹⁸. Children with low-educated mothers have a higher risk of 4.8 to have abnormal emotional development than children with highly educated mothers. The results support Metwally et al who showed that low-educated mothers have a higher risk to have children who experience emotional developmental disorders than highly-educated mothers' Children with low educated father have a risk of 6.8 higher for having abnormal emotional development than children with highly-educated father. This fact supports finding of Ribas et al who stated that parents' high education will affect the parenting knowledge about food intake, the provision of stimulation and child rearing.¹⁹

Father's employment status is mainly related to family income which will eventually affect the family economy. Father's job status has a significant relationship with the emotional development in 48-60 month- old children. This result supports research of Lee et al which states that employment status affects the index of children's mental and emotional development²⁰. Working parents will have a good income to provide sufficient food intake and good facilities for children²¹.

Family economic status can be seen from families (parents)' income... Poverty is associated with inadequate amount of food, bad health, bad environment, and ignorance which will hinder the children's growth and development²². The higher the income the better the child's development because the child get adequate supply of food (nutrition)... Parents with a low income will have problems to provide adequate nutrition for their children, so it will affect the growth and development of the child, including her/his social and emotional development²³. Children with low-income parents are at risk 7 times higher for having abnormal emotional development than children with high-income parents. Income families (parents) can be a risk factor which will affect the children's emotional and social health as well as their development²⁴. This supports the finding of Metwally et al who stated that higher family income result in better the

Exclusive breastfeeding greatly influences the emotional development of the child, so it is important for practitioners in the field of health to provide health promotion and motivation to mothers, especially mothers who are pregnant to give exclusive breastfeeding.

Acknowledgment:

The authors would like to thank all the participants for take part in this study. Finally, many thanks to the peer reviewers for providing constructive and insightful feedback to improve this manuscript.

REFERENCES

1. Departemen Kesehatan. Pedoman pelaksanaan stimulasi deteksi dan intervensi dini tumbuh kembang anak di tingkat pelayanan kesehatan dasar. Jakarta: Kementerian Kesehatan. 2012.
2. Martani W. Metode stimulasi perkembangan anak usia dini. *Jurnal Psikologi*. 2012;39 (1): 112 – 120.
3. Hansen C & Zambo D. Loving and learning with wimberly and david: fostering emotional development in early childhood education. *Early Childhood Education Journal*. 2007;34(4): 273-278.
4. Rahmadi FA, Hardiansyah G & Pratiwi R. Prevalensi dan jenis masalah emosional dan perilaku pada anak usia 9-11 tahun dengan parawakan pendek di Kabupaten Brebes. *Departemen Ilmu Kesehatan Anak Fakultas Kedokteran Universitas Diponegoro*. 2015;3(2) :116-119.
5. Jedrychowski W, Perera F, Janickowski J. Effect of exclusive breastfeeding on the development of children's cognitive function in the Krakow prospective birth cohort study. *Eur J Pediatr*. 2012;17(1):151-158.
6. Lind JN, Li R, Perrin C G. Breastfeeding and later psychosocial development of children at 5 years of age. *American Academy of Pediatrics*. 2014; 134(3):13-20.
7. Metwally A M, Salah E D, Shahata M A. Early life predictors of socio-emotional development in a sample of Egyptian infants. *PLoS ONE* 11. 2016 (7) :e0158086
8. Badan Penelitian dan Pengembangan Kesehatan Kementerian Kesehatan Republik Indonesia. *Riset kesehatan dasar 2013*. Jakarta : Badan Litbangkes 2013.
9. Fikawati S, Syaifiq A. Penyebab keberhasilan dan kegagalan praktik pemberian ASI eksklusif. *Kesmas Nasional Public Health Journal*, 2009; 4(3): 120-131
10. Dinas Kesehatan Provinsi Jawa Tengah. *Profil kesehatan Provinsi Jawa Tengah Tahun 2014*. Semarang : Dinas Kesehatan Provinsi Jawa Tengah 2014.
11. Dinas Kesehatan Kabupaten Magelang. *Profil kesehatan Kabupaten Magelang Tahun 2014*. Magelang : Dinas Kesehatan Kabupaten Magelang 2014.
12. Quinanez FA. A simple method for estimating relative risk using logistic regression. *BMC Medical Research Methodology* . 2012; 12:14.

emotional development of children. This condition is due to insufficient food intake (nutrition), providing facility to stimulate the child's development and opportunities for learning and interaction on the social environment.

Multivariate analysis results can be seen that factors that have a significant relationship to emotional development is the income of parents, mother education, father education and exclusive breastfeeding. Children aged 48-60 months with low-income parents have a 4.83 times risk of developing abnormal emotions compared with children with high-income parents. Living in poverty is more at risk for developmental disorders because of susceptibility to infection and malnutrition, in addition to living in low financial conditions will reduce opportunities in education (learning) and social communication for children²⁵. Parental education can increase family resources, income, increase time allocation for the maintenance of children's health, improving productivity and effectiveness of health care, and improving the reference of family life. According to Metwally et al low-educated mothers, children tend to get food intake and less stimulation, so that will experience abnormalities of emotional development high parental education will affect the fulfillment of parenting knowledge about food intake, stimulation and parenting²⁶. Incomes and education of good parents will affect the fulfillment of good nutrition needs also for child growth.

Conclusion

Exclusive breastfeeding has an influence on the emotional development of 48-60 month-old children after being controlled by other factors such as parents' educational background, father's occupation and parents' income. Babies who are not given exclusive breastfeeding have a risk of 2.96 (95% CI 1.384 to 6.315) to suffer from abnormal emotional development than babies who received exclusive breastfeeding as controlled by such variables as parents' educational background, father's occupation and parents' income.

Recommendation

13. Latifah E, Hastuti D, Latifah M. Pengaruh pemberian ASI dan stimulasi psikososial terhadap perkembangan sosial emosi anak balita pada keluarga bekerja dan tidak bekerja. *Jurnal Ilmu Kel & Kons*. 2010 : 35-45
14. Sewjningsih. *Tumbuh kembang anak*. Edisi 2. Surabaya : EGC. 2013.
15. Gunarsa, SD. *Psikologi perkembangan anak dan remaja* cetakan ke 13. Jakarta: Gunung Mulia. 2008.
16. Ikatan Dokter Anak Indonesia (IDAI) Cabang DKI Jakarta. *Bedah ASI lajian dari berbagai sudut pandang ilmiah*. Jakarta : Balai Penerbit FKUI. 2008.
17. Ribas J R C, Maura M L, Bornstein M H. Socioeconomic status in Brazilian psychological research: socioeconomic status and parenting knowledge. *Estudos de Psicologia*. 2003 8 (3): 385-392
18. Lee H, Park H, He E. Effect of breastfeeding duration on cognitive development in infants: 3-year follow-up study. *The Korean Academy of Medical Science*. 2016
19. Wachs, Theodore D. Risk factors and the development of competence in children from low-income countries: the importance of social-emotional outcomes and multiple process models. *Child Health and Education* 2009; 1(2): 107-121
20. Cooper J L, Masi R, Vick J. Social-emotional development in early childhood. *National Center for Children in Poverty (NCCP)*. 2009.

Fwd: Volume 12 Issue 4 (Konfirmasi Penulis)

Dari: Jurnal Kesmas (jurnalkesmas.ui@gmail.com)

Kepada: yuni_kusmiyati@yahoo.co.id

Tanggal: Senin, 16 April 2018 pukul 16.42 WIB

Yth. Ibu Yuni Kusmiyati

Berikut ini kami kirimkan artikel Ibu tentang *Exclusive Breastfeeding* yang telah diedit bahasa oleh redaksi bahasa Jurnal Kesmas. Kami mengirimkan 2 file antara lain 1 file (edited) telah rapi diedit sedangkan file lain (track changes) berisi masukan kami. Mohon dicek apakah hasil edit bahasa kami telah sesuai. Kami tunggu hasil koreksinya maksimal kami terima tanggal 19 April 2018.

Terima kasih
Redaksi



Exclusive Breastfeeding (edited).doc
189.5kB



Exclusive Breastfeeding (track changes).doc
251kB

Dummy Artikel dan Surat Persetujuan Cetak

Dari: Jurnal Kesmas (jurnalkesmas.ui@gmail.com)

Kepada: yuni_kusmiyati@yahoo.co.id

Tanggal: Selasa, 22 Mei 2018 pukul 14.56 WIB

Yth. **Ibu Yuni Kusmiyati**

Bersama ini kami lampirkan Dummy artikel PDF beserta Surat Persetujuan Cetak artikel Ibu yang berjudul **The Influence of Exclusive Breastfeeding to Emotional Development of Children Aged 48-60 Months** yang akan dipublikasi pada edisi **Volume 12 Issue 4 May 2018**. Mohon dilakukan pengecekan terhadap dummy artikel tersebut terkait nama penulis, afiliasi, korespondensi dan seluruh isi artikel terutama yang kami beri warna kuning karena terdapat beberapa pertanyaan (klik warna kuning akan keluar pertanyaan) mohon dicek.

Jika terdapat koreksi mohon dituliskan pada jawaban email atau lampirkan dalam word dan dikirimkan beserta Surat Persetujuan Cetak yang telah dibubuhi tanda tangan.

Surat pernyataan dan koreksi paling lambat kami terima hari **Jum'at, 25 Mei 2018** melalui email ini. Jika sudah dicetak, masing-masing penulis akan mendapatkan sertifikat dan 2 eksemplar jurnal. Mohon menginformasikan jika jurnal telah dicetak jurnal akan dikirimkan ke rumah atau instansi? Mohon mengirimkan alamat lengkap rumah atau instansi pengiriman?

Terima kasih atas kerja samanya.

Salam
Redaksi