Mal J Nutr 30(2): 167-179, 2024

Infant feeding practices and associated factors during the COVID-19 pandemic: Findings from an online cross-sectional study in Indonesia

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ABSTRACT

Introduction: COVID-19 pandemic presents a challenge to ensuring optimal infant feeding practices. This study aimed to assess infant feeding practices and investigate potential factors associated with exclusive and continued breastfeeding practices during the COVID-19 pandemic in Indonesia. **Methods:** An online survey was conducted during December 2020 – August 2021. A total of 817 Indonesian mothers aged ≥18 years old with infants aged <18 months were obtained through convenience sampling. Exclusive breastfeeding was the practice at the time of the survey among infants <6 months old; continued breastfeeding was considered when infants aged ≥6 months received any type of breastfeeding in the previous day. **Results:** Most subjects were aged 25-34 years old (81.3%), had a high education level (85.7%), with middle household income level (40.5%), and lived in Java Island (81.6%). Infants' age and sex were comparable between younger vs. older infants and boys vs. girls, respectively. Exclusive breastfeeding was 81.3%. Continued breastfeeding was 93.4%, with 74.3% meeting the minimum acceptable diet. Breastfeeding intention (92.9%) and husband's support for infant feeding (67.2%) were reported during the COVID-19 pandemic. Multivariate analyses showed that breastfeeding intention was one of the factors associated with exclusive breastfeeding [a*OR*=12.6; 95%CI (4.1-39.1)] and continued breastfeeding [10.9 (4.4-27.0)]. **Conclusion:** The study suggested that mothers' intention to breastfeed during the COVID-19 pandemic provided affirmation of good breastfeeding experiences by allowing mothers to have more time for childcare activities and more opportunities to develop meaningful co-parenting practices while staying at home.

Keywords: breastfeeding intention, COVID-19 pandemic, continued breastfeeding, exclusive breastfeeding, minimum acceptable diet

INTRODUCTION

Proper infant feeding practices are important to ensure adequate nutrition for the survival, growth, and development of children. The Government of Indonesia recommends the following infant feeding practices i.e., exclusive breastfeeding for the first six months

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doi: https://doi.org/10.31246/mjn-2023-0097

of life, introduction of complementary foods after 6 months of age, adequate complementary foods in terms of amount, frequency, and variations, as well as continued breastfeeding (Kemenkes, 2020). However, even before the COVID-19 pandemic, adherence to these recommendations was suboptimal in Indonesia. The national data showed that the proportion of exclusive breastfeeding was 37.3% (Agency of Health Research and Development, 2018). Infants aged 6-11 months who met the minimum acceptable diet (MAD) were 26%. Continued breastfeeding at 1 year old was considerably better, i.e., 77%, but declined to 55% at 2 years old (National Population and Family Planning Board (BKKBN) *et al.*, 2018).

Exclusive breastfeeding practice is known to be associated with multilayer factors from maternal attributes to family characteristics and societal support (Februhartanty *et al.*, 2020), as well as exposure to information on exclusive breastfeeding way before getting pregnant and provision of home support from husbands (Februhartanty *et al.*, 2012). Furthermore, maternal knowledge, workplace environment, attributes of the society, culture and economy were identified as contributory factors to continued breastfeeding practice. In addition, aside from the factors related to support received by mothers, complementary feeding practices are also complicated with the feeding skills of caregivers and the capacity of families to access proper foods (Blaney, Februhartanty & Sukotjo, 2015).

COVID-19 pandemic can present new challenges in infant feeding practices in terms of accessing support and reduced access to foods. The implementation of movement control orders (MCOs) with various levels of restriction may contribute to limited access and utilisation of health services and support, specifically for maternal and newborn health (MNH), nutrition services and counselling for infant and young child feeding (Busch-Hallen *et al.*, 2020). In addition, COVID-19 pandemic also has negative psychological impacts on mothers. In the UK, 11% of mothers reported an impact of the lockdown measures on their mental health, mentioning anxiety, depression, loneliness, and isolation (Vazquez-Vazquez *et al.*, 2020). The restriction of movement and separation from loved ones or other family members, loss of freedom, fear of disease, and changes in income and job, can lead to negative psychological effects, especially for vulnerable groups such as pregnant mothers and new mothers (Brooks *et al.*, 2020). Mother's caregiving desire can be low due to maternal psychological distress. Thus, maternal mental health has an impact on breastfeeding practices, including the cessation of exclusive and partial breastfeeding duration and the introduction of formula (Sha *et al.*, 2019).

Based on these conditions, a study is needed to assess infant feeding practices and investigate the potential factors associated with exclusive and continued breastfeeding practices during the COVID-19 pandemic in Indonesia.

MATERIALS AND METHODS

The study was a cross-sectional study administered online from December 2020 to August 2021. Subjects were mothers aged 18 years or older, had an infant aged <18 months, and were Indonesian citizens. Mothers who were pregnant and stayed outside Indonesia were excluded from the study.

The study used an online structured questionnaire adapted from the UK COVID-19 New Mums study and the Malaysia COVID-19 Mom-Baby study. The questionnaire of this study consisted

of 6 parts, namely: 1) Information of the survey; 2) Informed consent and screening questions; 3) Background and socio-demographic characteristics; 4) The impact of COVID-19 on household, work, and finances; 5) Infant feeding and behaviour; and 6) Impact of COVID-19 on mother's activities. The socio-demographic characteristics questionnaire collected data on maternal age, maternal education, household income, household/family composition, and living location. Infant feeding and behaviour questionnaire collected data on infant feeding practices, infant feeding plans (including intention to breastfeed), support on infant feeding, and feeding-related infant behaviours. Additional questions on infant and young child feeding practices, such as exclusive breastfeeding at time of survey, complementary feeding practices, i.e., time of complementary foods introduced, complementary food frequency and diversity, including the indicators for minimum meal frequency (MMF), minimum dietary diversity (MDD), and MAD [adopted from the 2018 Indonesia Basic Health Research (Agency of Health Research and Development, 2018) and the 2017 Indonesian Demographic Health Survey (BKKBN *et al.*, 2018)] were also included. Infants currently breastfeeding in the present study were defined as those who received any type of breastfeeding in the previous day, including exclusive breastfeeding, predominant breastfeeding, and mixed feeding (breast milk + formula + solid). Breastfeeding intention was identified from a single question on the plan (during pregnancy) of the mode of infant feeding practices. The options to this question included breastfeeding, formula feeding, mixed feeding, or no preference yet. The impact of COVID-19 on mother's activities questionnaire comprised of how maternal mood was affected by the COVID-19 pandemic. Mothers' mood condition was assessed based on the mood experienced in the last 7 days, including feeling connected with family, friends, and local community; available time to do exercise, personal interest, or hobbies; coping with situations; relaxation; appetite; and loneliness. Total maternal mood score was calculated by summing the scores of all 17 question items; the higher the score, the better the maternal mood condition.

The questionnaire was translated into Bahasa Indonesia by the authors and back translated by a certified translator. To ensure the questionnaire's validity and reliability, content review and pre-testing of 43 mothers with similar characteristics with study subjects were conducted. This study used convenience sampling to obtain the samples. The link to the questionnaire was posted on websites and further distributed through various links and networks via social media. Invitation to the online survey was also communicated through various mother support or community groups and personal contacts. Duplicate and incomplete survey responses were excluded from the analysis.

Data were processed and analysed using IBM Statistical Package for Social Science (SPSS) Version 20.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics were used to display distribution of key indicators concerned in this study. For feeding practices, data were divided into practices related to exclusive breastfeeding among respondents with infants aged <6 months (n=347) and complementary feeding among infants aged ≥6 months (n=470). Multivariate analyses using logistic regression with the Enter method were performed to assess factors associated with exclusive breastfeeding among respondents with infants <6 months old and continued breastfeeding among those with infants ≥6 months old, with p<0.05 for significant association. Factors included

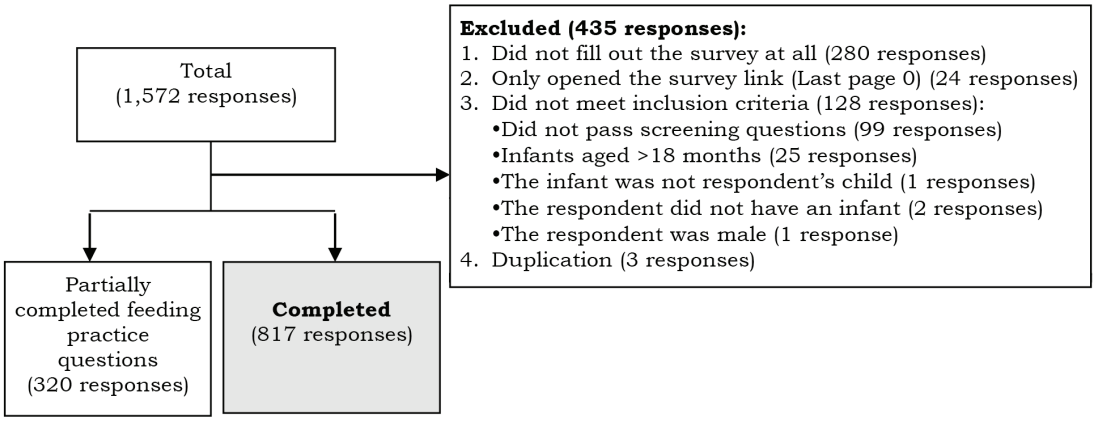

Figure 1. Total responses used in the analysis

in the multivariate analyses were decided based on their potential associations shown in the bivariate analyses (p<0.2) and prior literature.

The study was carried out in accordance with the Declaration of Helsinki. An ethical approval for conducting this study was obtained from the Research Ethics Committee of the Faculty of Medicine, Universitas Indonesia – Cipto Mangunkusumo General Hospital with the number KET-1357/UN2.F1/ETIK/PPM.00.02/2020.

RESULTS

As many as 1,572 survey responses were collected. However, only 817 responses were included in the analysis due to the reasons explained in Figure 1. Mothers' and infants' characteristics are shown in Table 1. Most mothers were between 25-34 years old (81.3%), with a median age of 29 years old, had an undergraduate degree (72.7%), and lived in Java Island (81.6%). Almost half of the mothers were housewives (49.2%) and had a middle household income level (40.5%), with a range of IDR. 3,000,000 – IDR. 7,199,999 (equivalent to USD 192.76 – 462.63). The mean age of infants was 6 months, with 57.5% of them aged 6-18 months, 53.2% males, and 53.4% being the first child. Almost all infants had a normal birth weight (93.3%).

Table 2 shows the self-reported impacts of the COVID-19 pandemic regarding risks of COVID-19 infection, abilities in household matters, feeding support, and breastfeeding practices. A few mothers reported having COVID-19 symptoms (11.9%) and positively tested for COVID-19 (5.9%). Almost half of the mothers reported having experienced major to moderate impacts on their ability to pay rent (44.2%), food (42.2%), and other necessities (46.9%). Even though almost all reported having breastfeeding intentions (92.9%), a few mothers reported a change in feeding their children during the pandemic. Husband was identified as the most influential source of feeding support by mothers (67.2%). In addition, the maternal mood score was generally good.

Among infants <6 months old, 81.3% were breastfed exclusively. Among older infants, continued breastfeeding and meeting the MAD were 93.4% and 74.3%, respectively (Table 3).

Table 4 shows the multivariate analyses to assess which among the maternal attributes and risks of COVID-19, infant's characteristics, and impact of the COVID-19 pandemic on

household financial security, support, and breastfeeding changes were associated with exclusive breastfeeding (among younger infants) and continued breastfeeding (among older infants), assessed 24-hour prior to the survey. It revealed that exclusive breastfeeding was likely to be practised among mothers with higher education level (a*OR*; 95% *CI*=2.8; 1.2-6.4), not working (2.1; 1.1-3.9), and

Table 1. Characteristics of mothers and infants (*n*=817)

Characteristics	*n (%)*	*Median (Min-Max)*
Mother's age		29 (18-44)
18-24 years old	67 (8.2)	
25-34 years old	664 (81.3)	
35-49 years old	86 (10.5)	
Mother's education level		
Basic to secondary school	117 (14.3)	
Undergraduate	594 (72.7)	
Postgraduate	106 (13.0)	
Mother's occupation		
Civil servant/Army/Police	118 (14.4)	
Private employee	170 (20.8)	
Self-employed	58 (7.1)	
Others†	69 (8.4)	
Housewife	402 (49.2)	
Household income		
≤IDR 2,999,999	194 (23.7)	
IDR 3,000,000 – IDR 7,199,999	331 (40.5)	
≥IDR 7,200,000	292 (35.7)	
Geographical region		
Java	667 (81.6)	
Sumatra	77 (9.4)	
Others‡	73 (8.9)	
Infant's age		6 (0-18)
<6 months	347 (42.5)	
6-18 months	470 (57.5)	
Infant's sex		
Male	435 (53.2)	
Female	382 (46.8)	
Infant's birth order		1 (1-7)
First	436 (53.4)	
Second or above	381 (46.6)	
Infant's birth weight		3,100 (1,000-4,500)
Low (<2,500 g)	41 (5.0)	
Normal (2,500-4,000g)	762 (93.3)	
Large (>4,000g)	14 (1.7)	

1 USD = IDR 15,563.39

†Health care workers (doctor, dentist, nurse, midwife, pharmacist), teacher (honorary teacher, private tutor, early childhood teacher), contract employee, honorary employee, non-civil servant government employee, researcher, finance administrator, student

‡Bali, Nusa Tenggara, Kalimantan, Sulawesi, Maluku, Papua

with intention to breastfeed during the pregnancy period (12.6; 4.1-39.1), but not among first-time mothers (0.4; 0.2-0.8) as compared to their counterparts. Meanwhile, among mothers with older infants, mothers who had the intention to breastfeed at the last pregnancy had 10.1 higher odds (95% *CI*: 4.4-27.0) to continuously breastfeed than those who did not. In addition, mood scores

Table 2. Reported impacts of COVID-19 pandemic (*n*=817)

Relevant impact	*n (%)*	*Median (Min-Max)*
Mother's related risks of COVID-19[†]		
Had COVID-19 symptoms	97 (11.9)	
Tested positive for COVID-19	48 (5.9)	
Recommended to stay at home	344 (42.1)	
Household members had COVID-19 symptom	145 (17.7)	
Impact of COVID-19 pandemic on household matters		
Ability to pay rent		
Major to moderate impact	361 (44.2)	
Minor impact	128 (15.7)	
No impact	240 (29.4)	
Too soon to tell	88 (10.8)	
Ability to pay for food		
Major to moderate impact	345 (42.2)	
Minor impact	198 (24.2)	
No impact	226 (27.7)	
Too soon to tell	48 (5.9)	
Ability to pay for other necessities		
Major impact to moderate impact	383 (46.9)	
Minor impact	202 (24.7)	
No impact	182 (22.3)	
Too soon to tell	50 (6.1)	
Change in breastfeeding related practices		
Frequency of feeding		
Decrease	17 (2.1)	
Same	660 (80.8)	
Increase	127 (15.5)	
Irrelevant	13 (1.6)	
Duration of feeding		
Decrease	17 (2.1)	
Same	669 (81.9)	
Increase	118 (14.4)	
Irrelevant	13 (1.6)	
Most influential source of feeding support perceived by mothers		
Husband	549 (67.2)	
Parents/in-law	128 (15.7)	
Health worker	51 (6.2)	
Friends/relatives/nanny/support group	89 (10.9)	
Maternal mood scores		48 (21-66)
Breastfeeding intention	759 (92.9)	

[†]Multiple response

also showed a significant association with continued breastfeeding, but due to the low effect, this association was disregarded.

DISCUSSION

The present study involved 81.3% of exclusively breastfed infants at the time of the survey, which is higher than the national exclusive breastfeeding prevalence in 2018 (Agency of Health Research and Development, 2018). According to a previous online survey in Belgium during the COVID-19 outbreak, most breastfeeding women had no plans or intention of discontinuing breastfeeding (Burgess *et al.*, 2021). It can be inferred that the pandemic provided several opportunities for mothers to maintain breastfeeding practices that were not available prior to the pandemic, such as increased home support, more time at home to feed their child, fewer visitors, greater partner support, a longer time for returning to work, less pressure, and more time for family bonding (Brown & Shenker, 2020; Sakalidis *et al.*, 2021). In contrast, a study in Thailand found that exclusive breastfeeding rates declined during the COVID-19 pandemic. These inconsistent results could be attributed to the fact that the Thai study was conducted during the peak of COVID-19 infection where an adverse effect on mothers' breastfeeding was experienced due to limited access to breastfeeding support (Nuampa *et al.*, 2022). The present study also found that exclusive breastfeeding was more likely to be performed by higher educated and non-working mothers, but less likely by first-time mothers. Practising exclusive breastfeeding requires an understanding of appropriate information to be used for improving the confidence to breastfeed and attaining higher education may

Table 3. Infant and young child feeding practices (*n*=817)

Feeding practices	*n (%)*
Feeding practices among <6 months (*n*=347)	
Exclusive breastfeeding at the time of the survey	282 (81.3)
Predominant breastfeeding	37 (10.7)
Formula feeding	7 (2.0)
Mixed feeding (breast milk + formula + solid)	21 (6.0)
Feeding practices among ≥6 months (*n*=470)	
Continued breastfeeding practice	439 (93.4)
Timely introduction of solid food/semi solid/soft foods[†] (*n*=237)	233 (98.3)
Meeting minimum meal frequency (MMF)[‡]	434 (92.3)
Meeting minimum dietary diversity (MDD)[§]	371 (78.9)
Meeting minimum acceptable diet (MAD)[¶]	349 (74.3)

[†]Infants aged 6-8 months who were fed with solid/semisolid/soft food in the previous day

[‡]Breastfed infants aged 6-8 months and 9-11 months who were given solid, semi-solid, or soft foods minimum 2 and 3 times in the previous day. Non-breastfed children aged 6-11 months who were given solid, semi-solid, or soft foods a minimum 4 times (including milk feeds), with at least 1 meal must be semi-solid or soft feed in the previous day (World Health Organization & UNICEF, 2021).

[§]Infants aged 6-11 months who were given at least 5 from 8 food groups in the previous day (World Health Organization & UNICEF, 2021).

[¶]Infants aged 6-11 months who met minimum meal frequency and minimum dietary diversity for breastfed children and for non-breastfed children met minimum meal frequency and dietary diversity, as well as at least 2 milk feeds (World Health Organization & UNICEF, 2021).

Table 4. Factors associated with exclusive and continued breastfeeding practices

Variables	*Exclusive breastfeeding (n=347)*		*Continued breastfeeding (n=470)*	
	p-value†	*aOR (CI 95%)*	*p-value*†	*aOR (CI 95%)*
Maternal attributes and risks of COVID-19				
Education level				
Low-Middle	0.017*	1	0.781	1
High		2.775 (1.198 – 6.425)		1.157 (0.415 – 3.225)
Occupation				
Working	0.026*	1	0.546	1
Not working		2.078 (1.094 – 3.946)		1.295 (0.559 – 2.998)
Mood score	0.109	1.029 (0.994 – 1.067)	0.044*	1.048 (1.001 – 1.098)
Related risks of COVID-19				
At risk	0.750	1	0.985	1
Not at risk		1.129 (0.171 – 3.172)		1.009 (0.382 – 2.665)
Infants' characteristics				
Birthweight				
Low	0.682	1	0.505	1
Normal		0.737 (0.171 – 3.172)		0.621 (0.153 – 2.520)
Birth order				
>1	0.005*	1	0.110	1
1st		0.413 (0.222 – 0.768)		0.110 (0.853 – 4.753)
Related impacts during COVID-19 pandemic				
COVID-19 impact on the ability to pay for food, for rent, and other necessity				
Impacted	0.359	1	0.132	1
Not impacted		0.726 (0.366 – 1.439)		2.755 (0.738 – 10.289)
Most influential source of support				
Others	0.895	1	0.233	1
Husband		0.958 (0.506 – 1.813)		1.661 (0.722 – 3.820)
Breastfeeding intention				
No	<0.001*	1	<0.001*	1
Yes		12.586 (4.050 – 39.111)		10.880 (4.379 – 27.033)

CI: Confidence interval, aOR: Adjusted odds ratio

†Tested using logistic regression (method: Enter), *p-value<0.05

give benefits to this process. As for non-working moms, they are known to be equipped with time that can be used to give full attention for practising exclusive breastfeeding (Februhartanty, 2011). On the other hand, "just" being a first-time mother is already challenging, let alone facing the complexities of factors surrounding infant feeding practices. A previous study in Jakarta revealed a similar finding that first-time mothers not receiving enough support would be less likely to practise exclusive breastfeeding (Februhartanty *et al.*, 2020).

The present study also found that the proportion of continued breastfeeding practice was high during the COVID-19 pandemic. This finding is similar to studies in Indonesia with only 11.2% of young children below 24 months (Muslimatun, 2021) and Malaysia with 1.6% below 18 months (Mohd Shukri *et al.*, 2022) who were reported to have completely stopped breastfeeding during the pandemic. As compared to before the pandemic, the breastfeeding rates of 105-110 countries in 2019 were 88.7% at 6 months old and 81.1% at 1 year old (Neves *et al.*, 2021). This suggests that generally the COVID-19 pandemic did not diminish breastfeeding practice.

The current study also indicated that 98.3% of the children had a timely introduction to complementary foods and 74.3% met MAD by meeting the necessary frequency (92.3%) and diversity (78.9%). These figures are higher than those of the Health Surveillance System in Indonesia (BKKBN *et al.*, 2018) and Asia Pacific (Neves *et al.*, 2021). A higher proportion of young children meeting MAD during the COVID-19 pandemic may be contributed by staying-at-home orders where parents had more time to cook, cared for their children, received support from other family members, and focused on child nutrition to prevent infection (Bahatheg, 2021; Brown & Shenker, 2020). Another reason may be due to the online survey method used, which is known to be more accessible to respondents with higher education and income, better internet access, and high interest in the survey topic (Andrade, 2020). This phenomenon is also reflected in a recent online survey in Indonesia, revealing that mothers with higher education and more regular income were more likely to have children meeting the MAD (Fadlina, Februhartanty & Bardosono, 2021).

In this study, 92.9% of the mothers chose breastfeeding as their feeding intention and it became the determinant factor of exclusive and continued breastfeeding practices. Mothers who intended to breastfeed were 12.6 times more likely to exclusively breastfeed and 10.1 times more likely to continue breastfeeding. Similar findings are noted from a 5-country study involving Thailand, United Kingdom, South Korea, Taiwan, and Brazil during COVID-19 pandemic (Chien *et al.*, 2022). This study validated conventional knowledge and demonstrated that intention to breastfeed is important even during the COVID-19 pandemic. Breastfeeding intention is a primary driver of breastfeeding practices regardless of other factors (Nazirah *et al.*, 2020). This may be explained through Theory of Planned Behaviour (TPB), in which intention is considered a direct component that shapes behaviour. According to TPB, one of the elements that influence intention is attitude towards behaviour, which refers to a person's subjective likelihood of performing the behaviour of interest to produce a particular outcome or provide a particular experience (Ajzen, 2020). During the COVID-19 pandemic, studies highlighted favourable perceptions of the impact of the COVID-19 pandemic on breastfeeding benefits and experiences, such as protecting the baby from virus infection and more time for motherhood, which could improve mothers' intention

to continue breastfeeding (Busch-Hallen *et al.*, 2020; Pacheco *et al.*, 2021).

No significant associations were found between mother's mood condition and both breastfeeding practices in the current study. A possible reason for this discovery is that the COVID-19 pandemic may have both positive and negative effects on breastfeeding expectations, altering mothers' psychological mood and mental health status (Pacheco *et al.*, 2021). A study on maternal mental health during the COVID-19 lockdown in the UK discovered that while there was a significant number of mothers with symptoms of low mood, anxiety, and loneliness, there was also a high proportion of mothers who were able to cope with the circumstances (Dib *et al.*, 2020). Meaningful parenting experiences due to increased time at home during the COVID-19 pandemic may explain better mental health outcomes of mothers (Pacheco *et al.*, 2021). Furthermore, the current study was conducted several months after the onset of the COVID-19 pandemic, when slightly relaxed MCOs were applied.

In general, fathers have specific roles in supporting mothers' breastfeeding practices, including facilitating psychological support for breastfeeding, childcare involvement, engagement in decision about infant feeding mode, and enthusiasm for fatherhood (Februhartanty *at al.*, 2020). The present study found husbands as the most influential source of feeding support during the pandemic as perceived by mothers, followed by parents/in-law, friends/relatives/nanny/support group, and health workers. However, this study found no association between husband's support and both breastfeeding practices.

A similar result was found from another study in Indonesia (Agustin, Februhartanty & Bardosono, 2021). Some mothers who received their husband's support may still face challenges to breastfeed because a mother's decision to breastfeed is influenced by a variety of circumstances including personal experience, social and professional support, changes in family dynamic, and others (Asiodu *et al.*, 2017). In contrast, other studies have shown that husband's support increases the likelihood of longer breastfeeding duration during the COVID-19 pandemic. This is because mothers during the pandemic have limited access to support from other family members or friends, thus husband's support comes first (Vazquez-Vazquez *et al.*, 2021). Husbands spend more time at home during the pandemic, which increases mental and physical support through their involvement in domestic tasks and childcare (Brown & Shenker, 2020).

Ajzen (2020) suggests that time availability and cooperation by other people or other resources are important influencing factors of intention. These key elements observed in the present study (i.e., being at home during the pandemic and the presence of supportive husbands/family members) should be used as a guide to improving the implementation of breastfeeding promotion programmes by creating or providing mothers with opportunities or sources that are commonly found during the pandemic period to increase mothers' intention to breastfeed after the pandemic ends. For example, providing time available to care for their newborn, particularly for working mothers, through flexible working arrangements or remote working (working from home), as well as providing informational and action support through various distant services or media, such as webinars, online lactation classes, telehealth services, and social media marketing, that can reach not only mothers, but

also husbands and families. In addition, the timing for information exposure is key as found in previous studies that breastfeeding intention was frequently made before or during pregnancy (Febrianingtyas, Februhartanty & Hadihardjono, 2019; Februhartanty *et al.*, 2012).

As with other online surveys, our current study purposely sampled subjects with better internet literacy, characterised dominantly by those living in Java Island and having higher levels of education. Furthermore, the survey recruited subjects with less heterogeneity in terms of their current breastfeeding practices. This can be explained in two ways, i.e., the survey was done online in which any potential subjects with the survey link could participate, thus random sampling was not feasible; the recruited subjects truly represented the current population who were breastfeeding due to better opportunities during lockdowns. Nevertheless, the present study was able to provide insights into the magnitude of some key infant feeding practices during the COVID-19 pandemic among these socio-economically better-off subjects to be a basis for the estimation of a contrary situation among the socio-economically disadvantaged population in Indonesia.

CONCLUSION

The present study found that exclusive breastfeeding at the time of the survey among infants <6 months old was 81.3%, whilst among older infants, continued breastfeeding was 93.4%, with 74.3% of infants meeting MAD. Breastfeeding intention was found to be associated with both exclusive and continued breastfeeding practices. Mothers who had breastfeeding intentions planned during pregnancy were 12.6 and 10.9 times more likely to perform exclusive and continued breastfeeding practices, respectively. Further studies need to investigate factors that are likely to shape breastfeeding intention. Understanding these factors may help refine current breastfeeding promotion to more effectively address the intention to breastfeed.

Acknowledgement

This study and the publication of this article were supported by the Southeast Asian Ministers of Education Organization - Regional Centre for Food and Nutrition (SEAMEO RECFON). We are also grateful to Dr. Nurul Husna (Universiti Putra Malaysia) for introducing us to the research group.

Authors' contributions

Februhartanty J, conceptualised and designed the study; Agustin CA & Fadlina A, collected the data. All authors analysed and interpreted the data, drafted the initial manuscript, and approved the manuscript for submission.

Conflict of interest

The authors declare that they have no competing interests.

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