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1 message

BJM Editorial Office <em@editorialmanager.com> Tue, Nov 16, 2021 at 6:55 AM
Reply-To: BJM Editorial Office <bjm@markallengroup.com>
To: Mekar Dwi Anggraeni <mekar.dwi@gmail.com>

Dear Dr. Anggraeni,

Your submission entitled "Understanding Early Supplemental Food Practice in the Rural Area of Indonesia: A qualitative Study Early Supplemental Food Practice in Indonesia" has been received by journal British Journal of Midwifery, and assigned manuscript number bjom.2021.0085.

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Thank you for submitting your work to this journal.

Kind regards,

British Journal of Midwifery

Your PDF Understanding Early Complementary Food Practice in Rural Indonesia: A Qualitative Study has been built and requires approval

1 message

BJM Editorial Office <em@editorialmanager.com> Sun, Apr 3, 2022 at 11:53 AM
Reply-To: BJM Editorial Office <bjm@markallengroup.com>
To: Mekar Dwi Anggraeni <mekar.dwi@gmail.com>

Dear Dr. Anggraeni,

The PDF for your submission, "Understanding Early Complementary Food Practice in Rural Indonesia: A Qualitative Study" is ready for viewing.

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5 messages

BJM Editorial Office <em@editorialmanager.com> Thu, Jan 27, 2022 at 4:56 PM
Reply-To: BJM Editorial Office <bjm@markallengroup.com>
To: Mekar Dwi Anggraeni <mekar.dwi@gmail.com>

Ref.: Ms. No. bjom.2021.0085
Understanding Early Supplemental Food Practice in the Rural Area of Indonesia: A qualitative Study Early Supplemental Food Practice in Indonesia
British Journal of Midwifery

Dear Dr. Mekar Anggraeni,

Reviewers have now commented on your paper. For your guidance, reviewers' comments are appended below. You will see that they are advising that you revise your manuscript.

If you are prepared to revise the article, taking into account these comments, I would be happy to reconsider this article for publication.

I would be grateful if you could highlight the changes you have made to the text in yellow (not using tracked changes) and include a summary of the revisions you have made when you resubmit your article.

Your revision is due by 17 Feb 2022.

To submit a revision, go to https://www.editorialmanager.com/bjm/ and log in as an Author. You will see a menu item called Submission Needing Revision. You will find your submission record there.

Yours sincerely

Suzannah Allkins, MSci
Editor
British Journal of Midwifery

Reviewers' comments:

Reviewer #1:
Overall, this is an interesting study, with some interesting insights into the traditional cultural beliefs of Indonesian people.
Significant work to sentence structure, grammar and language is required and the study lacks clear definitions and parameters; e.g. what is stunting, what are the parameters for early supplementation, what classes as additional supplementation (would formula milk be included in this), etc. Without these clear definitions it is difficult at times to unpick the meanings behind the discussions.
The methodology section also needs more detail and specifics as to recruitment of participants.
The findings are presented clearly in the themes found with some interesting quotations provided. A wide range of references have been utilised and there is a fair depth of discussion into early supplementation, however some extra explanation as to the type of evidence these references are would be beneficial and increase the amount of critical analysis.

Please see feedback on attached file for more specific points which need addressing.

Reviewer #2:
Dear authors,

Many thanks for taking the time to write this manuscript. This is a highly important topic and a major public health issue, so many thanks for undertaking this research. This research is not only invaluable for the Indonesian health

professionals but also for any professional around the world that might look after a woman from Indonesia. Having access to a manuscript like this one is of great help when supporting breastfeeding women, as it's important to be aware of cultural beliefs and practices. The article is well structured and the use of tables is very informative. In order to strengthen this article further, I have added my comments throughout the text, I hope you find them useful.

Best wishes,

the reviewer

There is additional documentation related to this decision letter. To access the file(s), please click the link below. You may also login to the system and click the 'View Attachments' link in the Action column.
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2 attachments

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Mekar Anggraeni <mekar.dwi@gmail.com> Fri, Jan 28, 2022 at 9:28 AM
To: Rahmi Setiyani <rahmi.setiyani@gmail.com>, Eni Rahmawati <eni.rahma.ed@gmail.com>, aprilia kartikasari <aprilia_k19@yahoo.co.id>

Dear all,

Terlampir hasil review dari reviewer BJOM.
Minta bantuan untuk dibaca, dipahami, dan kita diskusikan perbaikannya bersama ya.
Waktu diskusi sekitar minggu depan, hari dan jam menyusul.
Terima kasih.

Salam,
MDA
Department of Nursing
Faculty of Health Sciences
Universitas Jenderal Soedirman, Indonesia
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Mekar Anggraeni <mekar.dwi@gmail.com> Wed, Feb 16, 2022 at 7:09 PM
To: BJM Editorial Office <bjm@markallengroup.com>

Dear Suzannah Alkins
Editor of British Journal of Midwifery,

I would like to inform you that I have finished revising the article based on the reviewer's suggestions.
The article is being proofread by a native speaker now.
It takes around ten days so, I would like to ask for additional time to submit the revised article.
Thank you for your consideration.

Understanding Early Supplemental Food Practice in the Rural Area of Indonesia: A qualitative Study

Mekar Dwi Anggraeni[1*], Rahmi Setiyani[1], Aprilia Kartikasari[1], Eni Rahmawati[1], Amin Fatoni[2]

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ABSTRACT

Background: The majority of stunting cases occur in developing countries. Exclusive breastfeeding may prevent stunting however, early complementary food is widely practiced in Indonesia due to cultural beliefs. Few ethnography study examined early complementary food practice in the rural Indonesia. This study aimed to explore cultural beliefs related to early complementary food practice in the rural area of Indonesia.
Methods: This was an ethnographic study involved 16 key informants and 6 general informants. Data were collected using focus group discussions, in-depth interviews, observations, and field notes and analyzed using a thematic analysis method.
Results: This study revealed four themes: reasons of early complementary food practice, the sooner the better, types of selected complementary food, and the influencing people.
Conclusion: This study suggests policy maker to provide a culturaly sensitive and evidence based health information, involve grandmother and Traditional Birth Attendant to prevent early complementary food practice.

Keywords: Early complementary food, non-exclusive breastfeeding, qualitative study, rural area, stunting

Stunting is an impaired of child's growth and development as a result of poor nutrition, repeated infections, and lack of stimulation during early life as indicated by poor linear growth (height-for-age-Z score ≤−2 standard deviations from the World Health Organization's (WHO) child growth standard median) (WHO 2015). Stunting is a major child health problem (Hall et al. 2018; Alam et al. 2020) and the majority of stunting occurred in developing countries (WHO 2018). More than half of stunted children come from Asia (UNICEF et al. 2018). Indonesia is the top three of the highest stunting prevalence in South East Asia Regional (WHO 2018). The stunting prevalence in Indonesia was fluctuating. The prevalence of children younger than five years suffered stunting were 37.2%, 29%, 27.5%, and 29.6% in 2013, 2016, 2017, and 2018,

respectively (National Institute of Health Research and Development Ministry of Health Republic of Indonesia 2018; UNICEF Indonesia 2018).

Stunting is significantly associated with several health problems during childhood and adulthood. A literature review revealed that stunting may affect children's cognitive development, school achievement, economic productivity, and maternal reproductive outcomes as the children' long term effects (Titaley et al. 2019). Other studies also found that stunting syndrome in developing countries caused an increase in child's mortality and morbidity, a low physical neurodevelopmental, a low economic capacity, a higher metabolic disease in adulthood, an intergenerational stunting (Beatty et al. 2017), diarrhea (Budge et al. 2019), a poorer neuro-psychological outcomes (Sanou et al. 2018), a higher risk of pneumonia treatment failure, and a longer hospitalization days among children with pneumonia (Moschovis et al. 2015). Early complementary food practice before infant age 6 months predicted stunting significantly in Indonesia (Nadiyah et al. 2014). Non-exclusively breastfeed children whom received early complementary food before six months old correlated significantly with stunted cases in Indonesia (Paramashanti and Benita 2020). Therefore, understanding non-exclusive breastfeeding, early complementary food practice from the first hand in their natural setting is very needed.

Sufficient nutrition during first 1000 days of life (between a woman's pregnancy and her child's second birthday) may prevent stunting (UNICEF 2017). The overall breastfeeding duration and exclusive breastfeeding duration significantly prevent stunting incidence (Zurita-Cruz et al. 2017). Exclusive breastfeeding practice decrease stunting incidence, while introduction of complementary food before six months of infant's age and poor quality of complementary food increase stunting incidence (Uwiringiyimana et al. 2019). Almost half (43.3%) of stunted children in Indonesia did not exclusively breastfeed up to six months, while only 13.3% of normal children did not exclusively breastfeed up to six months, and the

multivariate analysis result showed that exclusive breastfeeding was a protective factor of stunting in Indonesia (OR 0.234 (95%CI 0.061 – 0.894) (Lestari et al. 2018).

Previous studies in other developing countries revelaed that cultural beliefs influence early complementary food practice. Turkish, Nepalese, Ethiopian, and West African mothers provided complementary food to their infant due to their cultural beliefs (Van Eijsden et al. 2015; Issaka et al. 2015; Gautam et al. 2016; Asemahagn 2017). Cultural beliefs among Javanese community to provide early complementary food to infant before six months age also influence exclusive breastfeeding practice in Indonesia (Anggraeni et al. 2016; Anggraeni et al. 2018). The example of early complementary food provided to infants were banana, honey, formula milk (Ruhmayanti and Yasin 2020), instant porridge, biscuit, instant noodle, rice porridge, rice, fish, vegetables, fruit, tempeh, egg, meat (Mangkat et al. 2016). In addtition, the average intake of energy, protein, and zinc from complementary foods below the Indonesian recommended dietary allowance (RDA), they were 30%, 45%, and 5%, respectively (Lestari et al. 2018).

There are, however, ethnic group variation in the prevalence of improper infant feeding practice in Indonesia. Javanese is the largest ethnic group in Indonesia and the majority of them living in rural area (Cukarso and Herbawani 2020). Studies indicated that two third of Nias mothers in Sumatera Island (Inayati et al. 2012) and almost all (90.5%) of Javanese mothers in Java Island (Barati et al. 2018) provide complementary food to their infants before six months old. The Javanese mothers mentioned that infant feeding practice was affected by grandmother's suggestions and cultural beliefs which passed through generations, well known, and practiced widely in the community (Anggraeni et al. 2018).

Although science and technological development have entered Indonesia, cultural beliefs are passed down, accomplished, and rooted as the daily life guidance of society, particularly the elderly in the forms of rituals, folklores, traditions, and behavior (Karmiyati

and Amalia 2018). Furthermore, Javanese culture beliefs focus on living together in peacefulness and avoiding conflict in order to reach harmony in the community (Irawanto et al. 2011). The Javanese culture also propose to respect and appreciate for elder's advice due to the obligation to respect and protect the dignity of parents (Herdaetha et al. 2020). So, the Javanese young generation follow the cultural beliefs without any disapproval in order to respect the older generation and reach harmony. Given the very high prevalence of complementary feeding before six months old of infant's age among Javanese population, a study must target on this specific ethnic group particularly those living in the rural area.

Previous studies related to stunting used a quantitative method as the study design and they selected the demographic characteristics as the study variabel (Egata et al. 2013; El Shafei and Labib 2014; Zaragoza et al. 2018), recruited only mothers as the respondents (Egata et al. 2013; El Shafei and Labib 2014; Areja et al. 2017), and recruited respondents in the hospital setting (Parry et al. 2013). This study contributes to the literature from multiple perspectives by involving not only mothers as study informants but also family members, midwives, and traditional birth attendant (TBA), using an ethnographic approach to provide better understanding regarding the phenomenon. There is a need to provide a culturally sensitive program to prevent early complementary food practice and support exclusive breastfeeding for at least the first 6 months of life and then to continue until 2 years of age or until mother and infant want, while complementing solid foods among mothers living in rural area of Indonesia.

Purpose

The research question in this study was how cultural beliefs affect early complementary feeding among Javanese mothers living in the rural area?. In order to answer the research question, this study aimed to explore the cultural beliefs related to early complementary food practice among Javanese mothers living in the rural area. This study will help healthcare

providers to increase their knowledge and provide culturally sensitive care among people living in the rural area.

Method

Study design

This study was guided by an ethnographic approach that enables reseachers to explore the cultural beliefs related to early complementary food practice among rural Indonesian mothers (Cresswell and Cresswell 2018). The researcher considered to include various informant's characteristics in order to enhance data richness.

Study informants

This study involved 16 key informants who were selected by using both purposive and snowball sampling method in Central Java Province, Indonesia. The inclusion criteria for the study were Javanese women, aged 20 years or above, and had given birth in the past 2 years. The exclusion criteria were woman with health problems which against her to breastfeed her infant, such as HIV/AIDS, under cancer treatment, consume pshycotic drug, or narcotics user, and had infant with health problems such as cleft lip and palate, congenital heart problems. The researchers also involved 6 general informants from family members (n=3), Midwives (n=2), and Traditional Birth Attendant (TBA) (n=1). Midwife is a profesional health worker who complete midwifery school and have license to practice as a midwife. While TBA is a non-profesional/traditional person who take care and provide home care to women during intranatal, postnatal, and infant based on traditional healing method.

The researchers approach the proposed informants through village health volunteers in some Sub-districts. The researchers explained the aim, benefits, data collection procedure, trustworthines, inclusion and exclusion criteria of informant in this study to the health volunteers. Then, the researchers discussed with health volunteer about potential informants. The health volunteers made announcement in social media (community Whatsapp group) about

the study and let the potential informants who met the criteria to join this study voluntery. The researchers and health volunteers discussed the potential informants considering their age, parity, level of education, working status, and area. There were 12 informants join the Focus Group Discussion (FGD) and 4 informants were indepth interviewed because they were working women or multiparous woman whom potentialy had rich data due to their experience in took care more than one child. The researchers and health volunteers discussed the potential general informants based on their experience in took care of breastfeeding women. Then, the general informants were indepth interviewed separately from key informants to obtain independent information.

Study setting

This study was conducted in Java Island which is the most populated Island in Indonesia and the Javanese is biggest ethnicity in Indonesia (Indonesia Central Bureau of Statistics 2014). The data were collected in Banyumas Regency, in the Middle South of Jawa Island which divided into 27 Sub-Districts, have several hills and tropical climate, the majority of population living in the rural area, working as a labour and farmer.

Ethical consideration

The researchers obtained an ethical approval from the Institutional Review Board Medical Faculty University of Jenderal Soedirman No.1204/KEPK/III/2017. The researchers also informed the study aim, benefits, and risks to the informants before collecting data. All of the informants signed the informed consents which reflect their willingness to participate in this study. The participation in this study was voluntary and there was no consequence to the informants if they withdraw from this study. To ensure the anonimity, the researchers put a code on the informant's verbatim, published the study results using that code, and only authorized person may access the data. The informant also be informed that the FGDs and indepth-interviews proccess were audio-recorded with their permissions. In addition, the

researchers let the informants knew that the FGD took time around 1.5-2 hours and the indepth interview took around 1-1.5 hour. The FGD was conducted in the village's meeting room, while in-depth interviews were conducted in the informant's home. It was purposed to minimize the time and location burden because the informant had an infant. The data collection was stopped when there was no additional data added from the last informant in this study which indicated the data saturation obtained (Cresswell and Plano Clark 2011).

Data collection

The data collection was carried out from March to October 2019, in addition, all of the researchers in this study were female, Javanese, health professional, graduated at least master degree in health area, and lived in the same place as the study's informants for more than 10 years. The researchers introduced self as faculty members in a university so informants do not feel that the reserachres are health care providers. The data were collected using three focus group discussions and eight in-depth interviews. Focus group was choosen as the major method to collect the data because it well known as the best method to promote the group members interaction and discussion. In addition, the researchers conducted in-depth interviews and with some informants who potentially had have rich data because they had more than a child (multiparous). The combination of FGD and indepth interviews provide opportunity to obtain the rich data and depth enquiry (Lambert and Loiselle 2008). The researcher also collected data using observation of the informant's daily activities in their home because the researchers should take the data in a natural setting (Cresswell and Cresswell 2018). Observations were conducted 3-4 times per informant at diffirent times of a day around 1 hour per session. The researcher also took field notes as a result of direct observations in the informant's home in order to gain a better understanding about the early complementary food practice and to complete the research data (Cresswell and Cresswell 2018).

Data analysis

The data were transcribed verbatim and checked against the recording for accuracy by four researchers. Then, a classical ethnograpic data analysis method was used in this study, characterized by a cyclic iterative process of informant's interview, observation, and interpretation in the natural setting (Whitehead 2005). Then, a thematic analysis was used to identify, analyze, and report pattern of the early complementary food practices among mothers in rural area in Indonesia (Braun and Clarke 2019). The researchers develop a tentative themes map based on literature review and initial knowledge related to early complementary food parctice. Furthermore, the researchers read the data for several times to make the researchers becoming familiar with the dataset. Then, the researchers developed a preliminary themes and modified the tentative themes map based on the study results. Research questions guided the researchers to find out the themes. The researchers then gave code to the data and organize the code based on the relevancy to the research questions. Furthermore, the researchers developed the final themes and sub-themes by modifyng the tentative themes and let the informants read the study results to ensure the data accuracy**.** The unique and real informant's words were used with quotation rather than translate the term into English in the final report.

Trustworthines

The credibility, transferability, dependability, and confirmability are four principles of trustworthiness in qualitative research (Lincoln and Guba 1985). To ensure the credibility of this study results, the researchers conducted interviews with each informants, transcribed verbatim, provided opportunity to all team members to read the verbatim, and discussed the unfamiliar terminology. To ensure the transferability, the researchers presented the study findings clearly to reflect the Javanese mother population. The dependability of this study achieved by provided details description of the study process, methodology, and findings so this study may be repeated by other researchers. The confirmability was achieved by maintain the researcher's neutrality, acknowledge bias, and stated the study methods objectively.

Findings

Informant characteristics

Three focus goup discussions and three indepth interviews were conducted with mothers. Five indepth interviews were conducted with family members, midwives, and traditional birth attendant. The informant's demographic characteristics were presented in Table 1. Mean of the key informant's age was 29.63 years old and age ranged from 21 – 39 years old. They were both primiparous (n=7) and multiparous (n=9). All key informants were married. One of the informants worked as civil servants and two had completed a bachelor's degree. Mean of the children's age were 20.36 months and age ranged from 14 – 27 months old. There were six general informants who taking care or live with mothers during postpartum period. They included grandmother (n=3) who lived with mothers during pregnancy until this study conducted, 2 health care providers, who had been working in maternity for more than 10 years, and one TBA, who had been caring for postpartum mothers for more than 20 years. All of the informants were Javanese and lived in Central Java Province, Indonesia. There were four themes and twelve sub-themes in this study which were presented in Table 2.

1. Reasons of early complementary food practice

Early complementary food practice is a common practice among Javanese mothers. Fourteen of the sixteen informants mentioned that they believed breastmilk is the best infant's feeding source. However, they also provide early complementary food besides breastmilk because of several reasons.

Early complementary food is a common practice

Some informants mentioned that they provided early complementary food to their infant due to commonly practiced and social pressure to follow the other's experience related to providing early supplemnetal food practice.

A multiparous informant stated that she provided early complementary food for all of her children because the society encouraged her to do it.

> 'I give complementary food to all of my kids. They were provided early complementary food because all mothers here did it so, I just follow the norm in the society' (R4, multiparous, 39 years old)

A similar view was also expreseed by a primiparous informant whom mentioned that providing complementary food is widely practice in their society.

> 'Every mother give complementary food besides breastmilk, I think it is good for our baby' (R5, Primiparous, 27 years old)

Following the tradition

The Javanese community believed that they had to respect the tradition which passed down among generations.

> 'My mother suggest me to provide early complementary food when my son was crying...I just follow her because it is our tradition since my grand grandparent' (R1, Multiparous, 30 years old)

The infant's grandmother also mentioned that providing early complementary food is practiced since long time ago following the elder generation.

> 'My parent was provided early complementary food to me…so I suggest my granddaughter to be given early complementary food because it is our tradition' (R10, Mulriparous, 53 years old)

Perceived insufficient breastmilk supply

Some informants stated that the mother's conditions also caused early complementary food practice. Insufficient breastmilk supply was frequently mentioned by some informants as a primary reason of early complementary food practice.

> 'My son always look hungry particularly at night, maybe it due to low breastmilk supply, then, I gave him complementary liquid and it make him have a good sleep'(R5, Primiparous, 27 years old)

The infant's grandmother also mentioned that her daughter's breastmilk did not enough to fulfil the infant's need so, she suggest to provide early complementary food besides breastmilk.

> 'My daughter's breastmilk supply is low and my granddaughter ask for more milk, so I give my granddaughter early complementary food to fulfil her needs' (R16, Multiparous, 61 years old)

Fussy infant

Some informants perceived fussy infant as a sign of more nutrition need. Then, they give complementary food to make infant calm and sleep well.

> 'My infant cried entire night and became fussy even after breastfeeding. Then, I gave banana and soft rice to make him feel full and calm' (R4, multiparous, 39 years old)

A health care provider mentioned that some infants becoming fussy due to grow spurt. Some mothers perceived fussy infants as need more food besides breastmilk.

> 'Some mothers provide early complementary food due to fussy infant at night. They don't know their infant experiencing grow spurt and it make the infant becoming fussy' (R20, Multiparous, 37 years old)

Health related issue

The mother or infant's health conditions affected early complementary food practice. The mother's conditions were including becoming sick, cracked nipple, and inverted nipple. The infant's conditions were including infant's weight booster, infant sleep well, and prevent infant becoming fussy.

> 'I was hospitalized because of typhoid fever and my infant stay at home with her grandmother, so, my infant was provided formula milk since that day until now' (R14, Multiparous, 30 years old)

Boost infant's growth and development

The Javanese community believed that providing early complementary food is good to support infant's growth and development. They believed that providing early suppelmental food make children grow faster.

> 'My daughter always sleep well and having faster weight gain after providing complementary food. I think it good for infant's growth' (R15, Primiparous, 21 years old)
>
> 'Some food are good for my baby growth …I believe providing early suppemental food is good for my baby'(R4, Multiparous, 39 years old)

Results of interview with TBA indicate that several reasons of early complementary food. She believe that providing early complementary food is good for infant's growth and development, so she suggests mothers to provide early complementary food besides breastmilk since it is a tradition among Javanese community.

> 'We practice early complementary food since long time ago. It is normal here and the baby growing well' (R22, Multiparous, 67 years old)

2. The sooner the better

The timing of providing early complementary food to infant varies. Some informants stated that they had provided early complementary food to infants since just birth, two weeks, two months, and four months of infant's age.

> ’I started provided banana to my son since he was 2 weeks old...I give once per day at 10 am...I give him twice per day when he was 4 months old’ (R7, Multiparous, 32 years old)

According to health workers, some mothers gave complementary food to infants since newborn age due to the tradition.

> ’Some mothers give complementary food to infant just after birth and some mothers give complementary food when the baby age two months’ (R20, Multiparous, 37 years old)

3. Types of early complementary food

There were some types of early complementary food provided to infant. Eight informants stated that they provided additional soft food or liquids besides breast milk before infant age six months.

Soft food

The informants explained that they provided soft food to their infants such as banana, instant porridge, rice porridge, and soft rice. Sometimes they also provide family food mixed with warm boiled water to make the food softer.

> ’My son is provided banana, instant baby porridge, and soft rice as complementary food other than breast milk’ (R17, Multiparous, 37 yeras old)

Liquids

The informants also explained that they were suggested to provide some liquids as complementary food to their infans. The liquid types were including formula milk, cow’s milk, and *tajin* (rice water).

> ’My child is provided cow’s milk besides breast milk’ (R4, Multiparous, 43 years old)’

The health worker explained that most of mothers combining breastmilk and early complementary food to their infants. The complementary food types varies depend on the infant's age and social economic background.

> 'Mothers give their infants some kinds of complementary food including banana, formula milk, instant baby porridge, *tajin* (rice water) and rice porridge. Low social economic's mother prefers cheap food…younger baby is provided softer food' (R21, Multiparous, 42 years old)

4. The influencing people

All informants stated that they got information about the cultural belief during postpartum period from the older nearby people such as mother, mother-in-law, grandmother, TBA, neighbors, and friends.

Mother, mother-in-law, and grandmother

Twelve of sixteen informants stated that they were informed about early complementary food practice from their nearest relatives, mother, mother-in-law and grandmother.

> 'My mother and my mother in-law (the infant's grandmother) come to my house almost everyday. She told me that my baby is crying due to feel hungry eventhough after brestfeeding so, she suggest me to give my baby some complementary food' (R17, Multiparous, 37 years old)

Health care providers stated that the role of grandmother, mother and mother-in-law was quite significant in the the postpartum period. They usually accompanied postpartum mothers and provided suggestionts related to child rearing.

> "Based on cultural tradition, family members give big support for a postpartum mothers. They intend to help mother take care the baby include suggesting mother to provide early complementary food for baby due to several reasons' (R20, Multiparous, 37 yeras old)

Traditional Birth Attendant

Thirteen of the sixteen informants asked for the TBA's service during postpartum period. The TBA gave several suggestions to postpartum mothers.

> 'I ask the TBA to come to my house just after return from the hospital. She suggest me to provide complementary food to my baby in order to make my baby grow fast' (R2, Multiparous, 35 yeras old)

Neighbors and friends

Some informants explained that information about cultural beliefs during postpartum period were obtained from neighbors or friends. Javanese community have a habit of *ngendong* (coming and talking in the neighbor's house) and it allows the exchange of cultural beliefs during postpartum period among the community members.

> 'My neighbors share with me about child care, breast massage, and providing complementary food in order to make the baby sleep well' (R5, Primiparous, 27 years old).

DISCUSSION

In the present study, an attempt was made arly complementary food practice is common among Indonesian mothers. This study involved informants who lived in the rural area to depict the real situation on selected setting. Javanese ethnicity has a significant locus in Indonesia. Javanese becoming the largest ethnic group living in Indonesia (41% of Indonesian). The majority of Javanese people live in Central Java, East Java, and Yogyakarta. According to Javanese cultural beliefs, the nuclear family, kinfolks, and community are part of their social identity (Herdaetha et al. 2020). Javanese cultural beliefs sees health in a simple way, when a person can do daily activities so they are healthy people. Javanese are tough people, they will complaint about their health problems only if they can not do their daily activities by themselves (Dewi et al. 2010).

Cultural beliefs affect almost all of Javanese community's live aspects since birth until death. Breastfeeding is culturally accepted and supported by Javanese community (Anggraeni et al. 2020). The Indonesian mothers are highly pressured by the community to follow the cultural beliefs. According Suwarsih (2016), 90.5% of Javanese people provide early complementary food to their infants and 82.8% of them provide early complementary food in order to obey the cultural beliefs (Suwarsih 2016). Javanese people are highly encouraged to respect elders, follow their advice, do not make a conflict, and live peacefully in harmony with others. This culture prevent young generation to give opinions to elder people about

inappropriate health-related beliefs. Health care providers have to apply culturally competent care which focus on principles that every individual is entitled to get health care and hs right to access quality health care, participate in care decisions, and prevented from harmful traditional practice (Douglas et al. 2014).

Javanese community belief that providing early complementary food is good for infant. This study results highlight almost all of informants gave early complementary food for several reasons. Cultural beliefs, maternal and infant's health were the major motives explained by informants. Previous studies in Indonesia also revealed that some reasons of early complementary food practice were cultural beliefs (Suwarsih 2016), following the previous generation's tradition (Anggraeni et al. 2014), fussy infant (Utami 2010), fulfil infant's need (Utami 2010), boost infant's weight (Rahmawati 2014), cracking nipple (Rahmawati 2014), lack of appropriate infant's feeding practice knowledge (Areja et al. 2017) and perceived insufficient breastmilk supply (Rahmawati 2014). Mistaken beliefs about insufficient breastmilk supply, fussy baby, thin baby, and lack of knowledge about exclusive breastfeeding play an important role in early complementary food decision making among Indonesian mothers (UNICEF 2019). Without proper education, this cultural beliefs and lack of knowledge related to lactation physiology and breastfeeding problems may lead to increase infant's morbidity and mortality in Indonesia.

Some of early complementary food types are unsafe for infant's health due to immature renal, immunological, gastrointestinal, and neurological development (Romero-Velarde et al. 2016). This study found that the types of early complementary food provided to the infant were any kinds of soft foods. In line with previous study, informants provided banana, rice porridge, and other soft food to their infants as a complementary food (Utami 2010). This study also found that formula milk, cow milk, and *tajin* (rice water) are selected as liquid complementary sources. A systematic review study found that cow's milk and cow's milk derivatives were

used as complementary foods for infant (Pearce and Langley 2013). Animal milk protein may causes allergic reaction (Rangel et al. 2016) in which diarrhea was the most common symptom of cow's milk allergy (Pearce and Langley 2013) and may cause stunting due to lack of nutrition during infant's period (Beal et al. 2018). The high stunting prevalence might be due to inproper infant's feeding practice. After discussion with TBA and health care providers, soft food is provided in order to prevent fussy infant, make infant sleep well and grow faster. From this findings, the informants need education about newborn growth and development, particularly about growth sprut.

The Javanese community has a strong cultural belief that food affect individual body, mind, and spirit. There is a significant correlation between food choice and cultural beliefs. Cultural beliefs affected food choice and diet preference (Chakona and Shackleton 2019). Informants in this study mentioned that cultural beliefs are the guidance of their daily life and passed through generation. Food did not only serve as nourishment to the body but also rituals, attitudes, folklore, rule, customs that identify a specific group of community (Sibal 2018). Informant's point of view was confirmed by the TBA and health care providers who explained that Javanese community hold culture beliefs in everyday life very closely. This study findings are in accordance with previous study which found that Javanese community believe that early complementary food was good for infant based on previous generation tradition which perceived good for infant's growth and development (Utami 2010). Although health care provider provide health education (72%), however it did not enough to increase exclusive breastfeeding practice among Indonesian women which may be influenced by psychological status, social cultural, and family support (Labangara and Yauri 2018).

In this study, informants mentioned that their mother, mother in-law, and the TBA are the most influencing people in early complementary food decision making. Indonesian have a close relationship among family and community members since the majority of Indonesian live

in an extended family. The family and community members influence almost all aspect of Indonesian people's live (Kartikasari et al. 2019). Family members opinion strongly influenced the early complementary food practice among Indonesian mothers (Sunarti et al. 2017). Grandmother significantly affected decision making about early complementary food among Javanese mothers (Amalia et al. 2018). In addition, the TBA had an important role in Javanese community. The TBA also influenced infant feeding decision making and she gave *jamu* (herbal liquid) to infant when infant age 40 days (Suwarsih 2016). Information gained from the family members and the TBA, they suggest postpartum women to provide early complementary food. However, the informants in this study mentioned that they modify their parent's suggestions which did not fit with the health sciences, particularly young mothers whom do not live together with their parents. From this findings, the community health care providers have to involve informant's mother/mother in-law and the TBA in health education, particularly about exclusive breastfeeding. This study result in line with previous study among Javanese which found that closest relative, particularly grandmother play an important role in complementary food practice decision making (Suryati et al. 2020). The midwives in this study also explained that the majority of Javanese still hold cultural belief strongy and obeying their parents to show respect as a common in their society.

The strengths of this study are exploring the cultural beliefs from the first hand people who live in Java island since birth. The researchers had been conducted some qualitative researches, and all of the researchers are Javanese who live in Java for a long time and familiar with the informant's local language. The limitations of this study are involved only three working mothers and some in-depth interviews conducted while other family members at home, so it may infere the informants' explanation. These limitations may be improved by involving more informants from different characteristics and providing privacy to informants during in-depth interviews.

Conclusions

This study provides a recent picture about early complementary food practice in the natural setting in rural area of Indonesia. Early complementary food was practiced widely by Javanese mothers living in rural area. Obey cultural beliefs related to infant's feeding practice and lack of exclusive breastfeeding support from closest people contributed to their early complementary food practice. Furthermore, the power of respect to older generations and cultural beliefs also greatly influenced non-exclusive breastfeeding practice. Policy maker and community health care providers should take early complementary food practice into consideration and develop a culturally sensitive education program involve grandmother and TBA.

Acknowledgements

We would like to acknowledge our informants and reasearch assistants.

Funding

The researchers would like to thank the Universitas Jenderal Soedirman for the research funding, the research's informants, the research's assistants, and the research's team for the great work.

Conflicts of interest

The authors declare that no conflicts of interest.

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Table 1. Demographic characteristics of informants (*n*=22)

Code	Age (years)	Parity	Educational level	Employment	Child's age (months)	Marital Status	Role
R1	30	M	Diploma	Housewife	21	Married	Key informant
R2	35	M	Junior school	Housewife	14	Married	Key informant
R3	21	P	High school	Housewife	18	Married	Key informant
R4	39	M	Junior school	Housewife	20	Married	Key informant
R5	27	P	Bachelor	Private employee	16	Married	Key informant
R6	25	P	High school	Housewife	22	Married	Key informant
R7	32	M	Bachelor	Civil servants	15	Married	Key informant
R8	34	M	Junior school	Housewife	19	Married	Key informant
R9	22	P	High school	Housewife	20	Married	Key informant
R10	53	M	Junior school	Housewife	21	Married	General informant
R11	23	P	Diploma	Private employee	24	Married	Key informant
R12	27	P	Junior school	Housewife	18	Married	Key informant
R13	31	M	High school	Housewife	25	Married	Key informant
R14	30	M	Junior school	Housewife	21	Married	Key informant
R15	21	P	High school	Housewife	27	Married	Key informant
R16	61	M	Elementary school	Housewife	15	Married	General informant
R17	37	M	Diploma	Housewife	16	Married	Key informant
R18	36	M	High school	Housewife	22	Married	Key informant
R19	64	M	Junior school	Housewife	23	Married	General informant
R20	37	M	Diploma	Health worker	25	Married	General informant
R21	42	M	Diploma	Health worker	20	Married	General informant
R22	67	M	Elementary school	TBA	26	Widowed	General informant

Table 2. Themes and subthemes of cultural beliefs related to early complementary food practice

Theme	**Sub-theme**
Reasons for early complementary food practice	Early complementary food is a common practice
	Following the tradition
	Perceived insufficient breastmilk supply
	Fussy infant
	Health related issue
	Boost infant's growth and development
The sooner the better	The sooner the better
Types of early complementary food	Soft foods
	Liquids
The influencing people	Mother, mother-in law, and grand mother
	Traditional birth attendance

Key points

- Early complementary food is practiced widely among mothers living in the rual area of Indonesia
- Early complementary food aimed to adhere cultural beliefs which passed down generation to generation
- Infants were provided early complementary food during new born period.
- Having a close relationship with extended family members and neighbor affect early supplemental food practice in the rural area of Indonesia.
- Cultural beliefs have been modified in the younger generations as a result of higher education level and getting information from the internet

CPD reflectice questions

- How cultural beliefs related to early complementary food practice affect stunting in the rural area?
- How young generations change cultural beliefs practice without any conflict with elder generation?
- What is the most suitable program to promote exclusive breastfeeding and prevent early complementary food practice among people living in the rural area?

Best regards,
Mekar Dwi Anggraeni
Department of Nursing
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bjm <bjm@markallengroup.com> Thu, Feb 17, 2022 at 12:39 AM
To: Mekar Anggraeni <mekar.dwi@gmail.com>

Good afternoon,

Thank you for getting in touch - I am happy to extend the deadline for your revision. I will update our system accordingly.

Best wishes,
Suzannah

From: Mekar Anggraeni <mekar.dwi@gmail.com>
Sent: Wednesday, February 16, 2022 12:09 PM
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Mekar Anggraeni <mekar.dwi@gmail.com> Mon, Feb 21, 2022 at 8:32 PM
To: bjm <bjm@markallengroup.com>

Dear Suzannah Alkins
Editor of British Journal of Midwifery

I have submitted the revised manuscript to the journal online system.
Please let me know if there is any additional information needed.

Best regards,
Mekar Dwi Anggraeni

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1 message

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Ref.: Ms. No. bjom.2021.0085R1
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Dear Mekar Anggraeni,

British Journal of Midwifery has received your revised submission.

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3 messages

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Understanding Early Complementary Food Practice in the Rural Area of Indonesia: A Qualitative Study
British Journal of Midwifery

Dear Dr. Mekar Anggraeni,

Your article has been reviewed and we are now in a position to give you an editorial decision.

We are pleased to inform you that we would be happy to publish your article in British Journal of Midwifery, subject to some specific revisions. We would be particularly grateful if you could address the points listed below this email.

When submitting the revised manuscript, I would be grateful if you could highlight the changes you have made to the text in yellow (not using tracked changes) and include a summary of the revisions you have made when you resubmit your article.

Your revision is due by 04 Apr 2022.

To submit a revision, go to https://www.editorialmanager.com/bjm/ and log in as an Author. You will see a menu item called Submission Needing Revision. You will find your submission record there.

Yours sincerely

Suzannah Allkins, MSci
Editor
British Journal of Midwifery

Reviewers' comments:

Reviewer #2:
Dear author/s,
Many thanks for reviewing the manuscript and your hard word, the article has benefited from the changes made. There are, however, still some areas that need attention, which I have highlighted and made comments accordingly.
Please consider proofreading the article again, particularly paying attention to the latest additions, sometimes the sentences are unclear and difficult to understand.
I hope you find this comments useful.
Best wishes,
The reviewer

Reviewer #3:
Thank you for giving me the opportunity to review this paper for publication.
It is clear that you have embedded the feedback in your recent version here for consideration. This is shown from page 30 of the pdf under review. The abstract and introduction is clearer for the reader with this additional information. The definition of stunting is key here for the reader's understanding, thank you. I have also learned a great deal regarding the cultures which I know the readership will also benefit from.

* P2 of the new version [p31 on the pdf] - what is meant by adequate nutrition - is there a definition of what this means - you may decide not to add this in word dependant, and '…13.3% of normal ones…' - what are normal ones? Can you rephrase because 'normal' is very subjective - it could be that it is typical infants or infants who present with a growth within x parameters….
* Under the section titles Purpose - your new 1st sentence is not a question you need to rephrase this or remove the question mark and the word question.
* If word space is an issue you can remove a number of the words such as = however, interestingly, moreover

etc
* Numbers less than ten should be written in full especially if you have a number at the start of a sentence which you may do if you consider removing words as suggested in the point above
* P7 [p36 of the pdf] - change data was to data were.
* Do you mention loss of meaning in translation to English - is this an issue - you may have this already

There is additional documentation related to this decision letter. To access the file(s), please click the link below. You may also login to the system and click the 'View Attachments' link in the Action column.
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Mekar Anggraeni <mekar.dwi@gmail.com> Mon, Mar 21, 2022 at 8:35 PM
To: BJM Editorial Office <bjm@markallengroup.com>

Dear Suzannah Allkins, MSci
Editor of British Journal of Midwifery,

I receive the reviewer's comments and I will revise the manuscript based on the reviewer's suggestions.

Best regards,
Mekar Dwi Anggraeni
[Quoted text hidden]
--
Department of Nursing
Faculty of Health Sciences
Universitas Jenderal Soedirman, Indonesia

Mekar Anggraeni <mekar.dwi@gmail.com> Sun, Apr 3, 2022 at 12:00 PM
To: BJM Editorial Office <bjm@markallengroup.com>

Dear Suzannah Allkins, MSci
Editor of British Journal of Midwifery,

I have submitted the revised manuscript and I have proofread the article to a British proofreader.
Thank you for your consideration.

Best regards,
Mekar Dwi Anggraeni
Department of Nursing
Faculty of Health Sciences
Universitas Jenderal Soedirman, Indonesia

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Understanding Early Complementary Food Practice in Rural Indonesia: A Qualitative Study

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ABSTRACT

Background: Almost all stunting cases occur in developing countries and most could be prevented through exclusive breastfeeding. However, due to cultural beliefs, early complementary food is widely practiced in Indonesia. This study therefore explores the cultural beliefs related to early complementary food practices in Indonesia's rural areas.

Methods: This ethnographic study involved 16 key and six general participants. Data were collected via focus group discussions (FGDs), in-depth interviews, observations, and field notes, and then thematically analyzed.

Results: Four themes emerged from the results, namely; reasons for early complementary feeding; the idea of 'the sooner the better', types of complementary food, and influencing people.

Conclusion: Findings suggest using policymakers to provide culturally sensitive and evidence-based health information involving grandmothers and traditional birth attendants (TBAs) to prevent early complementary feeding.

Keywords: Early complementary feeding, non-exclusive breastfeeding, qualitative study, rural area, stunting

Stunting is an impairment related to a child's development as a result of malnutrition, repeated infections, or lack of social stimulation during early years. Stunting is indicated by poor linear growth (height-for-age-Z score ≤−2 standard deviations from the World Health Organization's (WHO) child growth standard median (WHO 2015). It is a major health problem (Hall et al, 2018; Alam et al. 2020) that commonly occurs in developing countries (WHO, 2018). More than half of stunted children are Asians (UNICEF et al, 2018), and Indonesia is among the top three countries in South East Asia Regional with the highest prevalence (WHO, 2018). According to data, in 2013, 2016, 2017, and 2018, the prevalence of stunted children below five years was 37.2%, 29%, 27.5%, and 29.6% respectively (National Institute of Health

Research and Development Ministry of Health Republic of Indonesia, 2018; UNICEF Indonesia, 2018).

Stunting is significantly associated with several health problems. One literature review found it affects children's cognitive development, achievement, economic productivity, and maternal reproductive outcomes as long-term effects (Titaley et al, 2019). Preliminary studies have also found that in developing countries stunting leads to increased child mortality and morbidity rates; low physical neurodevelopmental and economic capacities; higher rates of metabolic disease in adulthood; intergenerational stunting (Beatty et al, 2017); higher rates of diarrhea (Budge et al, 2019); poorer neuropsychological outcomes (Sanou et al, 2018); higher risks of pneumonia; and lengthy hospitalization stays during childhood (Moschovis et al. 2015). The early introduction of complementary feeding in infants aged below six months has been called a significant cause of stunting in Indonesia (Nadiyah et al, 2014). According to Paramashanti and Benita (2020), non-exclusively breastfed children that received early complementary food before the age of six months were reported to correlate with stunted case. With these findings in mind, we deemed it necessary to explore non-exclusive breastfeeding and early complementary feeding practices first-hand in their natural setting.

Adequate nutrition during the first 1000 days i.e., from conception and the child's second birthday, reportedly prevents stunting (UNICEF 2017). The overall exclusive breastfeeding duration significantly inhibits the incidence of stunting (Zurita-Cruz et al, 2017). By contrast, infants given poor quality complementary food before the age of six months are more likely to be stunted (Uwiringiyimana et al, 2019). However, one study found that fewer than half (43.3%) of stunted children in Indonesia were not exclusively breastfed before six months, and 13.3% of the children with adequate growth were exclusively breastfed (Lestari et al., 2018). The authors of this study carried out a multivariate analysis which showed

exclusive breastfeeding for six months to be a protective factor against stunting (OR 0.234 (95%CI 0.061 – 0.894) (Lestari et al., 2018).

Previous studies in other developing countries have shown that cultural beliefs can influence early complementary feeding procedures. Turkish, Nepalese, Ethiopian, and West African mothers are known to engage in this practice (Van Eijsden et al, 2015; Issaka et al, 2015; Gautam et al, 2016; Asemahagn, 2017). One study found that the Javanese community believe that the introduction of complementary food to infants below the age of six months is good for infant's health, which contrary with exclusive breastfeeding program (Anggraeni et al, 2016; 2018). Foods given to young infants include banana, honey, formula milk (Ruhmayanti & Yasin, 2020), instant porridge, noodles, biscuits, rice porridge, rice, fish, vegetables, fruit, tempeh, egg, and meat (Mangkat et al, 2016). Intake of energy, protein, and zinc derived from complementary foods, namely, 30%, 45%, and 5%, respectively, are below the Indonesian recommended dietary allowance (RDA) (Lestari et al, 2018).

There are, however, ethnic group variations in the prevalence of improper infant feeding practices in Indonesia, of which the Javanese ethnicity are the largest and the majority reside in rural areas (Cukarso & Herbawani 2020). Previous studies have found that two thirds of mothers on Sumatera Island (Inayati et al, 2012) and virtually all (90.5%) mothers on Java Island (Barati et al, 2018) engage in early complementary feeding. One study found this commonly feeding practice to be affected by grandmothers' suggestions and cultural beliefs passed down through the generations (Anggraeni et al, 2018).

Irrespective of technological advancement, these cultural beliefs are strictly adhered to. They may be communicated via rituals, folklore, and traditional behaviours (Karmiyati & Amalia, 2018). One study concluded that Javanese are peaceful people that tend to live in harmony, avoiding all forms of conflict (Irawanto et al, 2011). In Javanese culture it is normal to follow the advice given by elders and respect one's parents (Herdaetha et al, 2020). The

younger generation is expected to adhere to these cultural beliefs without question. Given the high prevalence of complementary feeding in Javanese infants under the age of 6 months, there is a need to study this specific ethnic group, particularly those residing in rural areas.

Previous studies related to stunting have employed quantitative methods and selected demographic characteristics as variables (Egata et al, 2013; El Shafei & Labib, 2014; Zaragoza et al, 2018). Three studies recruited only mothers as participant (Egata et al, 2013; El Shafei & Labib, 2014; Areja et al. 2017), and one study recruited participants in hospital settings (Parry et al, 2013). This study was carried out to gain multiple perspectives. Participants included not only mothers but also family members, midwives, and traditional birth attendants (TBA). An ethnographic approach was employed to provide a better understanding of the phenomenon. Findings reveal a need to adopt a culturally sensitive program to prevent early complementary feeding and to support exclusive breastfeeding for at least the first 6 months and then continue till 2 years of age or above.

Purpose

The research question in this study is how cultural belief affect the introduction of early complementary feeding among Javanese people in rural area. The purpose is to boost healthcare providers' knowledge of the subject so they can provide culturally sensitive programmes for their patients residing in rural areas.

Method

Study design

This study employed an ethnographic approach to explore the cultural beliefs related to early complementary food practices among Javanese mothers residing in rural areas (Cresswell & Cresswell, 2018). A variety of participant characteristics were included to enhance data richness.

Study participants

Sixteen key participants from Central Java Province were selected using purposive and snowball sampling methods. The inclusion criteria were Javanese women aged 20 years or above who had given birth in the past two years. Excluded from the study were those with health issues that prevented them from breastfeeding such as HIV/AIDS; those undergoing cancer treatment; those using psychotic drugs or narcotics; and the mothers of babies with cleft lip and/or palate or other conditions such as congenital heart problems. Additionally, six general participants were also included, made up of family members (n=3), licensed midwives (n=2), and traditional birthing assistant (TBA) (n=1). TBAs are non-professional birthing assistants that use indigenous healing methods to help mothers during intranatal and postnatal period.

Village health volunteers approached the proposed participants in several sub-districts. The aims of the study, benefits, data collection procedures, trustworthiness, and inclusion and exclusion criteria were explained. Discussions about potential participants were held with the health volunteer and details of the discussion were shared on community's Whatsapp group. Those meeting the criteria were advised to join voluntarily. Data collected included participants' age, parity, educational background, and working status. In total, 12 participants joined the focus group discussions (FGDs) which involved four participants in each FGD, and four were interviewed separately because they were either working class whom may not join FGD due to job schedule or multiparous women experienced in taking care of more than a child whom have more experiences to be explored. The general participants underwent in-depth interviews separately from the key participants to obtain independent information.

Study setting

This study was carried out in Java, the most populated island in Indonesia. Javanese is the biggest ethnicity in the country (Indonesia Central Bureau of Statistics 2014). The data were collected in Banyumas Regency, situated in the Middle South of Jawa Island. This area is

divided into 27 sub-districts with several hills and a tropical climate. The majority of the population resides in rural areas and works as laborers or farmers.

Ethical consideration

Ethical approval for the study was obtained from the Institutional Review Board Medical Faculty University of Jenderal Soedirman No.1204/KEPK/III/2017. The participants were informed of the studies aim, benefits, and risks, and signed informed consent forms before data collection, reflecting their willingness to participate in the study. They were also informed that the study was voluntary, and that they could withdraw at any time. To ensure anonymity, a code was put on the participant's verbatim. The code was also used to publish the results of the analysis, and only authorized persons had access to the data. Participants were informed that the FGDs and in-depth-interview processes which lasted for approximately 1.5 to two hours and one to 1.5 hours respectively, were audio-recorded with their permissions. The FGDs were conducted in the village meeting room, and in-depth interviews were conducted at the participants' homes. This was designed to minimize participants'time away from their babies and location burden. Data saturation was reached when no additional information was obtained from the final participant, and the data collection process was stopped as per Cresswell and Plano Clark (2011).

Data collection

The data collection process was carried out between March and October 2019. It was performed by female Javanese faculty members who were graduates holding at least a master's degree in health and had been residing in the same area as the participants for more than 10 years. They introduced themselves as members of a particular faculty at the university to ensure the participants knew they were not health care providers. The data were collected during three FGDs (four participants per session) and ten in-depth interviews. The focus group was selected as the main method because it is well known to promote interactive discussions between group

members (Nyumba et al, 2018). Those participants with more than one child (multiparous) were invited for in-depth interviews. The combination of FGDs and in-depth interviews contributed to the richness of the data in this study and provided an opportunity for in-depth inquiry as per Lambert and Loiselle (2008).

The researchers used open, non-direct questions that were designed to explore the participantnts' experiences. The interview guide was developed by researchers. They were based on the literature review and validated by three maternity experts who each had more than ten years' experience as health care provision in the study's setting. A further two mothers of infants were recruited for the pilot study. The interview guide covered five main topics: experience of infants' feeding practices before the age of six months; reasons behind the practice; types of food; times feeding was initiated; and influencing people. The questions can be seen in Table 1.

Table 1. Illustrative questions in the discussion guides

Core Topics Discussed	Interview Guide
Experience of infants' feeding practices before the age of six months	How did you get the idea to provide food to your infant before the age of six months?
Reasons behind the practice	For what reasons did you provide complementary food to your infant before the age of six months?
Types of food	Can you describe your experiences of the best time to start providing complementary food to your infant before the age of six months
Times feeding was initiated	What complementary food did you provide to your infant before the age of six months?
Influencing people	Which people in your life suggested you provide complementary food to your infant before the age of six months?

Data were also collected by observing participants carrying out their daily activities at their respective homes in order to get the most natural data, as per Cresswell and Cresswell (2018). These observations were carried out between three and four times per participant on

different occasions, and each session lasted for one hour. Field notes were taken during these sessions to gain a better understanding of early complementary food practices and to complete the research data as suggested by Cresswell and Cresswell (2018).

Data analysis

The data were transcribed verbatim and cross-checked with the recordings for accuracy by four personnel. A classical ethnographic data analysis method was employed, characterized by a cyclic iterative process relating to participants' interviews and personell observations and interpretations in the natural setting, as suggested by Whitehead (2005). A thematic review was then carried out to identify, analyze, and report the pattern of early complementary food practices among Javanese mothers in rural areas as per Braun and Clarke (2019). A tentative themes map was developed, based on the literature review and data collected. The data sets were read several times in order for personell to become familiar with the information they contained. Preliminary and modified tentative theme maps were produced based on the answers to the research questions. Codes were assigned to the various data and organized in accordance with their relevance to the analysis. Furthermore, both the final themes and sub-themes were modified tentatively, and the participants were allowed to review the analysis results to ensure data accuracy. Certain unique terms were used in the participants' answers, and these were translated to English in the final report.

Trustworthiness

The four principles of trustworthiness in qualitative research are credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). To ensure the credibility of the results obtained from this study, each participant was interviewed. The outcome was transcribed verbatim, which allowed all team members to discuss the unfamiliar terminology. The findings were presented to reflect the Javanese maternal population to ensure transferability. Dependability was achieved by providing a detailed description of the study

process, methodology, and findings, thereby enabling this study to be repeated. Confirmability was achieved by maintaining neutrality, acknowledging bias, and objectively stating the methods used.

Findings

Participant characteristics

Participating mothers were engaged in three FGDs and in-depth interviews, while, family members, midwives, and traditional birth attendant were involved in six in-depth interviews. The respondents' demographic characteristics are shown in Table 2. The mean age of key participants was 29.63 years old, which lies within the range of 21 to 39 years old. They were both categorized as primiparous (n=7) and multiparous (n=9). In addition, they were all married. One of them was a civil servant and the remaining two held bachelor's degrees. The mean of the children's age was 18.7 months, which is within the range of 14 to 27 months. Six of the general participants either took care of or lived with these women during their postpartum periods. They were grandmothers (n=3) who lived with the expectant mothers until the time of this study, two health care providers, and a TBA who had worked in the maternity and taken care of postpartum mothers for more than 10 years and 20 years respectively. All the participants were Javanese women residing in Central Java Province, Indonesia. Four themes and 12 sub-themes emerged from the data, as shown in Table 3.

1. Reasons for engaging in early complementary food practices

Early introduction of complementary food is a common practice among Javanese mothers. In this study, 14 of the 16 participants stated believing breastmilk to be the best infant feeding source. However, they also gave their babies early complementary food for several reasons.

Early complementary food is a common practice.

Some participants stated that they engaged in this practice because they are accustomed to do so, citing social pressure as an influencing factor. One multiparous participant stated that she engaged in this practice because it was encouraged by society.

> 'I gave all my kids complementary food because virtually all mothers practice this. Besides, it is perceived as a societal norm' (R4, multiparous, 39 years old).

A similar view was shared by a primiparous participant who agreed that it was widely practiced in their society.

> 'Every mother gives their babies complimentary food as well as breastmilk because it is believed to be good for them' (R5, Primiparous, 27 years old).

Following the tradition

The Javanese mothers believed that they had to respect the traditions passed down from older generations.

> 'My mother suggested that I give my son early complementary food whenever he was crying...I adhered to her advice because it has been the tradition since my great grandparents' (R1, Multiparous, 30 years old).

The infant's grandmother agreed.

> 'My parents gave me early complementary food…therefore, I suggested that it be given to my granddaughter because it is our tradition' (R17, Multiparous, 53 years old).

Perceived insufficient breastmilk supply

Some participants stated that the mothers' conditions led to early complementary feeding. Insufficient breastmilk supply was frequently mentioned as a primary reason.

> 'My son was always hungry at night due to low breastmilk supply. When I gave him complimentary foods he was able to have a good sleep' (R5, Primiparous, 27 years old).

One infant's grandmother also mentioned that her daughter's breastmilk was insufficient to satisfy her baby's needs, saying the mother was forced to give him early complementary food.

> 'My daughter's breastmilk supply was low, and I was forced to give my granddaughter early complementary food to fulfill her needs' (R18, Multiparous, 61 years old).

Fussy infants

Some participants perceived fussiness in infants to be a sign of higher nutritional needs, stating they were forced to give their babies complimentary food to calm them and enable them to sleep well.

> ‘My infant cried throughout the entire night and even became fussy after breastfeeding. Then, I gave him banana and soft rice to make him calm’ (R4, multiparous, 39 years old).

One health care provider mentioned that some infants were fussy due to growth spurts, and some mothers believed their babied needed food besides breastmilk.

> 'Some mothers gave their babies early complementary food due to the fuss they made at night. They are not aware that their infants are experiencing growth spurts and this makes them fussy' (R20, Multiparous, 37 years old).

Health-related issues

The early introduction of complementary food is also affected by mothers’ and infants’ health conditions. Issues related to mothers include becoming sick and having cracked and inverted nipples. Reasons given regarding the infants’ health include to booster weight, to assist with sleep, and to prevent fussiness.

> 'I was hospitalized because of typhoid fever and my infant stayed at home with her grandmother. She has been given formula milk since that day’ (R13, Multiparous, 30 years old).

To boost infant growth and development

The participants believed that providing early complementary and supplementary food supports an infant's growth and development.

> 'My daughter always sleeps well and gains weight after being fed with complimentary food. Therefore, I think it’s good for her growth' (R14, Primiparous, 21 years old).

> 'Some food is good for my baby's growth …I believe providing early supplementary formula is ideal for their development' (R4, Multiparous, 39 years old).

The interview results with the TBAs indicate that the early introduction of complementary foods was practiced for several reasons. They believed that providing early

complementary food is ideal for infants' growth and development and suggested that mothers should engage in such practices, calling it a tradition within the Javanese community.

> 'Early complementary food has been practiced for a long time. It is normal, and the baby is believed to grow well' (R22, Multiparous, 67 years old).

2. The sooner, the better

The timing for providing early complementary food to infants varies. Some participants stated having started at birth, others started at two weeks, and others started at between two and four months of age.

> 'I started giving my son banana when he was two weeks old...I gave him it once per day, usually at 10 am...and when he was four months old, I increased it to twice daily' (R7, Multiparous, 32 years old).

According to health workers, some mothers started giving their babies complementary food immediately after birth due to tradition.

> 'Some mothers give complementary food to their babies immediately after birth while others give it to their infants when they are two months old' (R20, Multiparous, 37 years old).

3. Types of early complementary food

There were several types of early complementary food given to babies. Eight of the participants stated they provided additional soft food or liquids besides breast milk before their infants reached six months.

Soft food

Participants stated feeding their babies with soft food such as bananas, instant porridge, rice porridge, and soft rice. Occasionally, they also fed them family food mixed with warm water to soften it.

> 'I usually feed my son with bananas, instant porridge, and soft rice as complimentary food other than breast milk' (R15, Multiparous, 37 years old).

Liquids

The participants also stated they had been advised to give their babies liquids such as formula milk, cow milk, and *tajin* (rice water).

'My child is given cow milk as well as breast milk' (R4, Multiparous, 43 years old).

The health workers explained that most mothers combine breastmilk and early complementary food, which varies depending on the infant's age and socioeconomic background.

'Mothers give their infants certain kinds of complimentary food including banana, formula milk, instant baby porridge, *tajin*, and rice porridge. Meanwhile, those with low social-economic incomes prefer cheap food…and the younger ones are provided with softer diets' (R21, Multiparous, 42 years old).

4. The influencing people

All participants stated hearing about cultural beliefs during the postpartum period from their mothers, mother-in-laws, grandmothers, TBAs, neighbors, and friends.

Mothers, mother-in-laws, and grandmothers

Twelve of the 16 participants stated they were informed about early complementary food practices by their nearest relatives, namely mothers, mothers-in-law, and grandmothers.

'My mother and mother-in-law (the infant's grandmothers) visited virtually every day. They told me that my baby cries a lot even after being breastfed due to hunger, and therefore, suggested some complimentary food be added' (R15, Multiparous, 37 years old).

Health care providers stated that grandmothers, mothers, and mother-in-laws played a significant role during the postpartum period. They assisted the mothers and provided suggestions related to child-rearing.

"Based on tradition, family members hugely support postpartum mothers. They help them take care of the baby and advise them to engage in the early introduction of complementary food for several reasons' (R20, Multiparous, 37 years old).

Traditional birth attendants

Thirteen of the 16 participants requested TBAs services during the postpartum period.

> 'I invited the TBA to my house immediately after returning from the hospital. She suggested that I give my baby complementary food to rapidly boost their growth' (R2, Multiparous, 35 years old).

Neighbors and friends

Some participants stated that information related to cultural beliefs was obtained from neighbours or friends during the postpartum period. The Javanese community has a habit of *ngendong* (coming and talking in the neighbor's house), and this allows the exchange of some traditional beliefs among the members.

> 'My neighbours share information about childcare, breast massage, and complimentary food practices in order to make babies sleep well' (R5, Primiparous, 27 years old).

DISCUSSION

Participants reported that early introduction of complementary food is a common practice among Indonesian mothers. Forty one percent of Indonesians are Javanese. The majority reside in Central and East Java, including Yogyakarta (Indonesia Central Statistical Bureau, 2011). According to their cultural beliefs, the nuclear family, kinfolks, and community are part of their social identity (Herdaetha et al, 2020). Javanese tend to view health from a simple perspective, believing that when a person is able to engage in daily activities, they are healthy (Widayanti et al, 2020). The Javanese are strong people, and they usually seek health advice when they are unable to engage in their day-to-day activities (Dewi et al, 2010).

Cultural beliefs affect virtually all aspects of Javanese lives, from birth until death, and Indonesian mothers are highly pressured to adhere to these cultural beliefs (Aryastami and Mubasyiroh, 2021). Breastfeeding is culturally accepted and supported by this community (Anggraeni et al, 2020). However, according to Suwarsih (2016), 90.5% of Javanese mothers give their babies early complementary food, with 82.8% citing they engage in this practice due to cultural beliefs. The Javanese are highly encouraged to respect their elders, follow their advice, avoid conflict, and live in peace and harmony with others (Probandari et al, 2017). This

culture does not allow the younger generation to express its opinions about inappropriate health-related beliefs (Anggraeni et al, 2018). Health care providers usually focus on the principles that every individual is entitled to quality health care, should participate in decision-making regarding their health care, and should be protected from harmful traditional practices (Douglas et al, 2014).

The Javanese community believes that the early introduction of complementary food is good for infants. This study highlights various reasons for this belief. However, answers mainly centered on cultural beliefs maternal and infant health status. Findings are in line with previous studies carried out in Indonesia which also revealed that mothers enage in the early introduction of complimentary food because of cultural beliefs (Suwarsih, 2016); tradition (Anggraeni et al, 2014); fussy infants (Utami, 2010); to fulfil the baby's need (Utami, 2010); to boost weight (Rahmawati, 2014); cracked nipples (Rahmawati, 2014); a lack of appropriate feeding practice knowledge (Areja et al, 2017); and perceived insufficient breastmilk supply (Rahmawati, 2014). UNICEF (2019) also lists inappropriate beliefs about insufficient breastmilk supply; fussy and thin babies; and lack of knowledge concerning exclusive breastfeeding as factors that play an important role in Indonesian mothers' introduction of early complementary feeding. Without proper education, these cultural beliefs and lack of knowledge related to lactation physiology and breastfeeding problems could increase infant morbidity and mortality in Indonesia.

Some early complementary food types are unsafe for infants because of their immature renal, immunological, gastrointestinal, and neurological development (Romero-Velarde et al, 2016). In line with previous research, the participants of this study reported feeding their babies banana and rice porridge as well as other complimentary foods (Utami, 2010). Participants also reported giving their infants formula milk, cow milk and *tajin* as liquid sources. One previous systematic review reported that cow milk derivatives served as complementary foods for

infants (Pearce & Langley 2013). However, animal milk protein tends to cause more allergic reactions (Rangel et al, 2016), with diarrhea being the most common symptom (Pearce & Langley, 2013). Cow milk fed to infants has also been found to cause stunting due to malnutrition (Beal et al, 2018), and its high prevalence is due to improper feeding practices. Discussions with TBAs and health care providers highlighted the belief that soft food is needed to prevent fussy infants, make them sleep well, and promote rapid growth. Based on these findings, new mothers need to be educated about newborns' developmental process, particularly related to growth spurts.

The Javanese community strongly believes that feeding affects individual bodies, minds, and spirits. There is a significant correlation between the choice of food and cultural beliefs. According to Chakona and Shackleton (2019), it is also affected by diet preference. The participants in this study reported that these beliefs, passed down from the older generations, serve as guidance for their daily activities. Food does not only serve as nourishment for the body; rather, it is also perceived as a ritual that is linked to the attitudes, folklore, rules and customs used to identify a specific group within the community (Sibal, 2018). The participants' points of view were confirmed by the TBAs and health care providers, who explained that the Javanese community strongly upholds its cultural beliefs in daily activities. These findings are in accordance with a previous study that found participants believed that early complementary feeding was good for infant growth and development, based on traditions passed down from the older generations (Utami, 2010). Although health care providers offer health education, it was not enough for mothers to learn the importance of exclusive breastfeeding among Indonesian women, influenced by psychological states, social-cultural, and family support (Labangara and Yauri 2018).

In this study, participants stated that their mothers, mother-in-laws, and the TBAs are the most influential people when it comes to deciding whether to engage in early

complementary feeding. A close relationship usually exists among community members since most Indonesians practice the extended family system, and this influences almost all aspects of their lives (Kartikasari et al, 2019). The practice of early complementary feeding is therefore strongly affected by family members' opinions (Sunarti et al, 2017), and significantly affected by grandmothers (Amalia et al, 2018) and TBAs. It is common in this community to advise mothers to give their babies *jamu* (herbal liquid) at forty days (Suwarsih, 2016). While family members and TBAs advise postpartum women to engage in early complementary feeding, a previous study reported that some participants modifying those suggestions which did not fit with the health sciences, particularly young mothers not living with their parents (Anggraeni et al, 2018) . Based on these findings, community health care providers need to involve new mothers' mothers, mother-in-laws, and TBAs in health education, particularly with regard to exclusive breastfeeding. This result is in line with a previous study that found in Javanese culture, the closest relative, often the grandmother, plays an important role in the decision-making regarding infant feeding (Suryati et al, 2020). In this study the midwives confirmed that most Javanese people strongly uphold their cultural beliefs and obey their parents out of respect.

The strength of this study is that it explored first-hand the cultural beliefs of those who have lived on Java Island since birth. This qualitative study were carried out by those who have lived in Java for a long time and are familiar with the participant's local language. However, this study also has some limitations. Only three working-class mothers were recruited, and some family members that might influence the new mothers were not interviewed. therefore, it tends to interfere with the participants' explanation. These limitations could be improved by involving more participants with different characteristics and providing privacy during in-depth interviews.

Conclusions

This study provides a recent picture of early complementary feeding, highlighting that it is widely practiced by Javanese mothers in rural areas. These mothers tend to adhere to cultural beliefs related in infant feeding, and a lack of exclusive breastfeeding support from the mothers' closest family members contributtes to the adoption of this practice. The need to show respect to older generations and their traditional cultural beliefs is shown to greatly influence non-exclusive breastfeeding practices in this community. Policymakers and community health care providers must consider this and implement a culturally sensitive educative program that involves grandmothers and TBAs.

Acknowledgments

The authors are grateful to the participants and research assistants.

Funding

The authors would like to thank the Universitas Jenderal Soedirman for funding this study and the participants, assistants, and team for the great work.

Conflicts of interest

The authors declare no conflicts of interest.

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Table 2. Demographic characteristics of participants (*n*=22)

Code	Age (years)	Parity	Educational level	Employment	Child's age (months)	Marital Status	Role
R1	30	M	Diploma	Housewife	21	Married	Key participant
R2	35	M	Junior school	Housewife	14	Married	Key participant
R3	21	P	High school	Housewife	18	Married	Key participant
R4	39	M	Junior school	Housewife	20	Married	Key participant
R5	27	P	Bachelor	Private employee	16	Married	Key participant
R6	25	P	High school	Housewife	22	Married	Key participant
R7	32	M	Bachelor	Civil servants	15	Married	Key participant
R8	34	M	Junior school	Housewife	19	Married	Key participant
R9	22	P	High school	Housewife	20	Married	Key participant
R10	23	P	Diploma	Private employee	24	Married	Key participant
R11	27	P	Junior school	Housewife	18	Married	Key participant
R12	31	M	High school	Housewife	25	Married	Key participant
R13	30	M	Junior school	Housewife	21	Married	Key participant
R14	21	P	High school	Housewife	27	Married	Key participant
R15	37	M	Diploma	Housewife	16	Married	Key participant
R16	36	M	High school	Housewife	22	Married	Key participant
R17	53	M	Junior school	Housewife	-	Married	General participant
R18	61	-	Elementary school	Housewife	-	Married	General participant
R19	64	-	Junior school	Housewife	-	Married	General participant
R20	37	-	Diploma	Health worker	-	Married	General participant
R21	42	-	Diploma	Health worker	-	Married	General participant
R22	67	-	Elementary school	TBA	-	Widowed	General participant

Table 3. Themes and subthemes of cultural beliefs related to early complementary food practice

Theme	Sub-theme
Reasons for early complementary food practice	Early complementary food is a common practice
	Following the tradition
	Perceived insufficient breastmilk supply
	Fussy infant
	Health-related issue
	Boost infant's growth and development
The sooner the better	The sooner the better
Types of early complementary food	Soft foods
	Liquids
The influencing people	Mother, mother-in-law, and grand mother
	Traditional birth attendance
	Neighbors and friends

Key points

- Early complementary food is practiced widely among mothers living in the rural area of Indonesia
- Early complementary food aimed to adhere cultural beliefs which passed down generation to generation
- Infants were provided early complementary food during new born period.
- Having a close relationship with extended family members and neighbor affect early supplemental food practice in the rural area of Indonesia.
- Cultural beliefs have been modified in the younger generations as a result of higher education level and getting information from the internet

CPD reflective questions

- How do cultural beliefs related to early complementary food practice affect stunting in the rural area?
- How young generations change cultural beliefs practice without any conflict with elder generation?
- What is the most suitable program to promote exclusive breastfeeding and prevent early complementary food practice among people living in the rural area?

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2 messages

BJM Editorial Office <em@editorialmanager.com> Wed, Apr 13, 2022 at 12:21 AM
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It was accepted on 12 April 2022.

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With kind regards

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