Family Support for Maternal Health and Child Care during the First 1,000 Days of a Child's Life: An Exploration of the Experiences of Urban Families

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ABSTRACT

This qualitative study examines the families' support regarding maternal health and child care toward mothers who demonstrated Good Compliance (GC) and Poor Compliance (PC) with nutrition interventions during the first 1,000 days of their child's life. The study employed an in-depth interview method to gather data from 20 fathers and 7 grandparents residing in Bogor City. The data were analyzed using a constant comparison approach between the GC and PC groups for each theme. The findings indicated that family members provided more specific support for child feeding than for maternal Iron-Folic Acid Supplementation (IFAS), given that the mothers encountered more difficulties on child feeding. Encouraging the mothers to continue taking IFA supplement despite their hesitance was predominantly reported by fathers in the GC fathers. Regarding child feeding, in addition to encouraging the child to eat and feeding them, the GC fathers often engaged in discussions with their wives. In contrast, the PC fathers rarely engaged in such discussions and were only consulted when their wives reported problem. Furthermore, fathers considered their wives to be more knowledgeable on these issues as fathers had limited time due to work commitment. Grandmothers primarily offered advice on child feeding based on their own experiences, sometimes providing less suitable advice for PC mothers. While fathers in both groups did not proactively seek information about maternal health and child care, the GC fathers were more likely to be encountered such information through discussions initiated by their wives, prompting them to pursue further reading. The interaction of fathers in both groups with health professionals only occurred during antenatal visits, with minimal communication. It is recommended that strategies be developed to engage family more highlight their crucial role in fostering a supportive environment for mothers. It is as advised that antenal visits be optimized and the Maternal and Child Health (MCH) handbook be utilized to raise awareness and enhance paternal involvement.

Keywords: child feeding, families, father, grandmother, maternal iron-folic acid supplementation, stunting

INTRODUCTION

Stunting in children under the age of five represents a significant global nutritional issue, affecting nearly 150 million children worldwide (GNR 2021). Attention to stunting is also linked to its irreversible and long-term effects. In Indonesia, the prevalence of stunting has shown a decrease over the past decade, from 37.2% in 2013 (MoH RI 2013) to 21.5% in 2023 (MoH RI 2023b). However, it is evident that optimal

efforts are still required to achieve the national target of 14% by 2024 (PP 2021).

A comprehensive review has indicated that nutritional interventions during the first 1,000 days life have the greatest impact on reducing stunting if the compliance rate of the target group reaches at least 90% (Bhutta *et al.* 2013). Maternal Iron-Folic Acid Supplementation (IFAS) may mitigate the risk of iron-deficiency anemia during pregnancy, a known risk factor for low birthweight, which in turn reduces

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the risk of stunting. Following birth, adequate intake of energy and nutrients from breast milk and complementary foods is crucial for optimal growth and development in children.

In Indonesia, compliance towards the programs remains relatively low. The Basic Health Survey 2018 (MoH RI 2018) and the Indonesian Health Survey in 2023 (MOH 2023b) indicate that the proportion of mothers who consumed 90 or more IFA supplements during pregnancy was only 38.1% in 2018 and 44.2% in 2023. The surveys also indicated that only 68.6% infants aged 0 to 5 months were exclusively breastfed, and that 80% of children aged 0 to 23 months were still breastfed in 2023. In addition, only 46.6% of children aged 6–23 months consumed diverse foods in 2018, and 39.7% received the minimum acceptable diet in 2023.

The low compliance suggests that mothers encounters obstacles in adhering to the program recommendations. Research has demonstrated that family support is a key factor influencing the adherence among mothers (Pakilaran *et al.* 2022; Pradanie *et al.* 2020). Mothers with strong family support demonstrates higher compliance with IFAS, especially among low educated mothers (Wiradnyani *et al.* 2016). Additionally, urban mothers with good family support have been shown to engage in more optimal feeding practices than those with limited family support (39.2% vs. 27.4%, respectively) (Pradanie *et al.* 2020).

A literature review has suggested that various forms of family support for exclusive breastfeeding practices, including emotional support and appreciation (Pakilaran *et al.* 2022), can enhance mothers' confidence in child care practices (Nguyen *et al.* 2018). Confidence in preparing complementary foods is crucial. As a study has shown that mothers who are less confident are 6.1 times more likely to have stunted children than those who are confident (Piniliw *et al.* 2021).

In addition to their husbands, mothers living in extended families are also influenced by other family members, particularly grandmothers, with regard to decision-making in complementary feeding practices (Karmacharya *et al.* 2017; UNICEF 2021). Therefore, the attitudes, beliefs, and practices of family members may exert a significant influence on child dietary intake (Young *et al.* 2018).

Thus, it is important to gain insight into how family members perceive their knowledge and roles regarding maternal health and child care to refine strategies aimed at optimizing their roles in healthy maternal and child nutrition for stunting prevention. This study aimed to explore the perception and support provided by families of mothers exhibiting good and poor compliance towards nutrition interventions during the first 1,000 days of life of their children. The study focuses on urban families, given the diverse range of parents' educational levels and employment status, access to healthcare facilities, and exposure to information.

METHODS

Design, location, and time

This qualitative study is part of an umbrella trial, entitled "A Continuum of Care Analysis on Adherence Towards Maternal and Child Nutrition Programs and Its Association to Child Stunting in Indonesia." The study was conducted in urban areas of Bogor City, West Java. Despite the data were collected in 2014, recent national surveys indicate that there has been no appreciable change of mothers' compliance, as outlined in the introduction to this study. This suggests that the obstacles and supports required for implementing recommendations have also remained consistent. Accordingly, the data utilized in the current study remain relevant for describing the current conditions. Ethical clearance of this study was obtained from the Ethics Committee of the Faculty of Medicine, University of Indonesia, with reference number 07/H2.F1/ETIK/2014.

Sampling

This study involved fathers and grandmothers of the children, who categorized into two groups based on the mothers' nutritional practices during pregnancy and childrearing: the Good Compliance Group (GCG) and the Poor Compliance Group (PCG). The GCG met all criteria, as follows: consumption of 90 or more IFA supplements during pregnancy (MoH RI 2023a), exclusive breastfeeding for six months, continued breastfeeding, provision of complementary feeding three times per day with diverse food groups on the day preeceding the interview (WHO 2023; WHO & UNICEF 2021), and administration of vitamin A supplements for

their children over the past six months (MoH RI 2016). In contrast, the PCG did not meet these criteria.

In the umbrella trial, the main participants were the mothers. Consequently, the initial sampling procedure entailed the selection of mothers through on-site visits to local growth monitoring sessions held at *Posyandu*, a widelyestablished Indonesian facility specializing in maternal and child healthcare. Mothers with children aged 6 to 23 months residing in the catchment areas of the Posyandu were informed about the study. The selection was made on the basis of key variations, including compliance with the aforementioned program recommendations, maternal education level, occupation, child's birth order and age, family type, and economic status. Sampling was also conducted using the snowball method, whereby personnel of Posyandu and mothers who had previously participated in the study were asked to provide information about potential further participants. A total of 26 mothers participated in the umbrella trial. For the present analysis, 20 husbands (7 from the GCG and 13 from the PCG) and 7 birth mothers/mothers-inlaw (3 from the GCG and 4 from the PCG) of the selected mothers were invited to participate as subjects based on the representation of mothers' diverse characteristics and their willingness to participate in the interviews.

The GCG fathers had higher levels of education (≥12 years of schooling), better household economic condition, and wives who were employed as working mothers than PCG fathers. The variation of other characteristics, including fathers's and child's age, the child's birth order, and the type of family, was fairly balanced between the two groups.

Data collection

Data were collected via in-depth interviews conducted at the participants' respective residences at mutually agreed-upon times. The interviews were conducted by the primary researcher in accordance with a pre-established interview guide, which addressed predetermined themes. These included perceptions of practices conducted, and challenges faced by the mothers in implementing program recommendations, exposure to information, knowledge of the nutrition program, support provided by the families and expected support in the future to

mothers. Respondents had given their consent before the interview. The information shared by the respondents was kept confidential and used solely for the purposes of this study.

Data analysis

A constant comparative method was employed to analysis the data, with a focus on identifying similarities and differences between the GCG and PCG for each theme. The data analysis were conducted in the field during the period of data collection and after the conclusion of data collection. The filed data analysis entailed the completion of a matrix that documented the key points shared by the participants during the interviews. Further analysis was conducted by confirming the preliminary pattern identified in the matrix through further reading of the verbatim transcription of the interviews. Data analysis was conducted by two individuals, each working with the same matrix independently, followed by discussions for clarification and getting consensus regarding any inconsistencies. In addition, the views and experiences of the families were triangulated with those of the mothers in the umbrella trial. Quotations from the statements made by the participants in the interviews were included to provide further contextual information.

RESULTS AND DISCUSSION

A summary of the results by theme is presented in Table 1, with detailed results provided below and organized according to each theme.

Perceived maternal and child care practices and associated challenges

The GCG family perceived the mothers' practices to be highly commendable, both in relation to pregnancy and child care. Mothers with multiple children drew upon their previous experiences to ensure that they performed as well as or better than they had with their first pregnancy and firstborn child. In contrast, first-time mothers sought to make their initial experience the best. One GCG grandmother, provided the following remark during the interview:

"She's (the mother's) been doing a good job. My daughter is very meticulous, maybe because he (the child) is her firstborn. Before going to (see) the doctor, she looks for information on the internet. So, I trust her (judgement). Her choices must be right (because I can see) her child is healthy. Her husband is as just meticulous."

Families in both groups acknowledged that mothers faced challenges. With regard to maternal IFAS the challenges identified included the boredom of daily tablet consumption (both groups), fear of potential risk of high blood pressure (PCG only), and reluctance to take any medicine (PCG only). With regard to the issue of boredom, the GCG fathers provided encouragment, even for mothers who were generally capable of administering the supplement independently. Some mothers, while self-reliant, acknowledged and valued family support, especially during critical times (Martin et al. 2017). The PCG fathers shared that their wives intentionally skipped taking the IFA supplements because of fear of high blood pressure. This perception was not reported by GCG fathers. Below is a statement from one PCG father to illustrate the finding:

"My wife is reluctant to take the supplement because her blood pressure was high during her second pregnancy. She took the supplement daily back then, but she doesn't take it (regularly) now. It seems like she only takes them when she feels fatigued. I understand that she is afraid."

Another challenge was managing time for preparing complementary foods. Some GCG mothers were able to successfully address this issue with the support from their family as illustrated below:

"The tricky part is feeding our child, since my wife is a working mom. In the morning, she usually gets the main tasks done first, (like) preparing meals and getting our older child ready for school. I take care of the children while she is preparing meals."

It is unfortunate that some mothers, particularly those in the PCG, were unable to overcome this issue. Nevertheless, the family understood this situation as illustrated by the following statement from a grandmother in the PCG:

"She (the mother) only gives (the child) bakso (meatball) broth bought from a mobile vendor. The child probably gets bored. I suggested she add chicken feet, but she said it's a hassle (because chicken feet have) too many bones. I also suggested eggs, but she's afraid the child

would have itchy skin. Well, I just let her do what she wants. Maybe she's tired from doing house chores, so she just opts for something quick. She's not used to cooking yet."

This finding is consistent with previous studies that have demonstrated that 73.3% of mothers do not employ a variety of cooking methods (Nirmala et al. 2016), and that half of the mothers (50.9%) avoid providing certain foods to their children due to health concerns, including eggs, which may cause allergies (Ekawidyani et al. 2015). In the present study, financial condition was not identified by family members in both groups as a facilitating or hindering factor affecting the mother's practices.

Exposure to information on maternal health and child care

The majority of fathers in both groups did not proactively seek information regarding maternal health and child care. However, they did occasionally seek advice on how to handle their children's fussy eating habits from their co-workers, who were also parents, and referred to the handbook on Maternal and Child Health (MCH). This was either at the suggestion of their wives or out of curiosity. Some fathers in both groups reported difficulties in comprehending the content of the MCH handbook. One GCG father provided the following statement:

"I have read the MCH handbook, (which gives me an idea of) what a child can do at a certain age and what food to give at a certain month. I don't fully understand, but I'm keen to find out more. My wife always tell me about our child's weight after (she's made) a Posyandu visit."

In contrast, a different perspective about the was shared by one PCG father as illustrated below:

"My wife once asked me to read the MCH handbook so I could understand more about children's development. She sometimes talks about things regarding our child, and I just listen, but to be honest, I don't understand (what she's talking about), so I don't respond much."

Interestingly, GCG fathers received nutritional infoemation unintentionally whether while they were browsing the internet for work-related matters or being propmted by their wives to read articles/news on pregnancy and child care. This unintentional exposure prompted further interest in learning about healthy pregnancy and

Table 1. The themes and results of each theme

No	Theme	Results
1	Perceived pregnancy and child caring practices of the mother	- Fathers acknowledged that mothers faced challenges for pregnancy and childcare (both groups) Managing time was the main challenge in child feeding. It was well managed within GCG, and poorly managed within PCG.
2	Exposure to information on pregnancy and child care	 - Fathers did not actively seek for information on pregnancy and childcare (both groups). - Fathers were exposed with MCH book although they have difficulties to understand its content (both groups). - Fathers in GCG showed more interest and curiosity about pregnancy and childcaring. - Grandmothers relied on their past practices rather than actively seeking information (both groups)
3	Knowledge and perceived benefits of nutrition programs	 Fathers were more convinced on the program benefits upon observing the good impact on the mothers' and child health. GCG fathers had better knowledge on pregnancy and childcare than PCG fathers .
4	Interaction with health staff	- Most fathers did not join mothers to examination room during antenatal visit (both groups) Fathers had very limited communication with health staff.
5	Perceived support need ed by mothers and actual support given by families	 Mothers directly asked for support from fathers (both groups). Fathers used their intuitive to identify the support needed by mothers (both groups). Families were happy to be a discussion partner of the mothers (GCG). Fathers became more involved when mothers reported problem (PCG). Limited knowledge and high work commitment perceived as barrier to provide support (PCG). Some advice from grandmothers was inappropriate (PCG).
6	Expected support provided by the families in the future	 Wanted to increase their involvement (both groups). Work commitments was a main barrier to get involved (PCG). Believed that mothers did not need much support because they have had experiences (PCG). Grandmothers wanted to offer advices on childcare (both groups).

GCP: Good Compliance Group; PCG: Poor Compliance Group; MCH: Maternal and Child Health

child development. It is possible that the higher educational level of husbands in the GCG may have contributed to this interest and curiosity. No such experiences were reported by husbands in the PCG. Below is a view shared by a GCG father:

"I do check the internet every day for work-related matters, and my wife sometimes asks me to look for information about pregnancy and child care. Once I open several news articles about it, similar article pop up, so I keep reading. It's interesting and important to know about child development."

The result of an intervention study conducted in West Java showed husbands and their wives read the MCH handbook together. This lead to significant enhancement of husbands' support with regard to pregnancy and child feeding (Osaki *et al.* 2019). Similarly, a study conducted in Ethiopia revealed an 8.6-fold increase in paternal involvement among fathers who had received information about maternal health and child care (Bogale *et al.* 2022).

One grandmother in the GCG felt obliged to provide the mother with information regarding maternal health and optimal childcaring practices,

given her role as a *Posyandu* personnel. In both groups, other grandmothers typically relied on their past practices rather than actively seeking information regarding these issues. The advices provided by the grandmothers are discussed in greater detail later in this article.

Knowledge and perceived benefits of nutrition programs

All respondents in both groups demonstrated positive perceptions regarding the government's nutrition programs for pregnant women and children. Therefore, they considered it unnecessary for mothers to seek approval from other parties to adhere to the program recommendations. A study conducted in South Kalimantan revealed that pregnant women felt compelled to seek permission from their husbands regarding health-related decisions, despite having already made their own choices. It indicates respect and honor toward the husband and was necessary for mother's comfort in implementing these practices (Setyobudihono et al. 2016). Some GCG fathers became more convinced of the program's benefits when they observed positive

health outcomes in their child or a reduction in their wife's pregnancy-related dizziness.

With regard to their understanding of maternal care, the husbands were aware that their wives were taking "vitamins" during the pregnancy. However, only some of them, particularly those in the GCG, demonstrated awareness of their contents, specific benefits, and recommended frequency of consumption. Overall, family in both groups exhibited satisfactory knowledge regarding breastfeeding, including its benefits and recommended duration, as well as complementary foods, including examples of nutritious complementary foods and responsive feeding. Knowledge about exclusive breastfeeding and food variety to ensure complete nutrient intake was only demonstrated by GCG fathers.

Research indicates that fathers with good knowledge are 3.8 times more likely to be actively involved in child feeding than those with poor knowledge (Bogale *et al.* 2022). This finding is supported by research conducted in Nepal, where the grandmother's good knowledge influenced the mother's understanding of child feeding, resulting in improved practices (Karmacharya *et al.* 2017).

Interaction with healthcare professionals regarding pregnancy and child care

Majority fathers in this study accompanied their wives to antenatal visits because (1) it aligned with their work schedules; (2) the antenatal location was quite far; (3) they were concerned about their wives' safety; or (4) they were asked to do so by their wives. In this study, some fathers entered the examination room while others waited outside. One GCG father provided the following rationale for accompanying his wife to the examination room:

"I always go (into the examination room with my wife) and ask (the health professional). If my wife and I don't ask for more information, we only get the basics, (like) her weight, blood pressure, and whether there are any abnormal signs. I ask if my wife's weight is appropriate (for the month of pregnancy she's in) because there's recommendation for (weight gain for) each month, right?"

Concurently, most fathers who waited outside explained their reasons for doing so. These reasons included feeling uncomfortable

because most fathers usually waited in the waiting room, not having any pertinent questions to ask the midwife, assuming that mothers would inform them if any issues arose, believing they were not permitted to join their wives, or not receiving an invitation from the midwife to enter the examination room.

"I waited in the waiting room because I wasn't sure if I'd be allowed (to enter the examination room). I'd heard some midwives don't allow (the husband of the pregnant mother to come along). I saw other fathers waiting in the waiting room too. The midwife never asks (the mothers making antenatal visit about) where their husbands are."

Similarly, one study in Central Java reported that only a small number of midwives provided counseling to mothers and their husbands regarding the importance of family support during the postnatal period (Probandari et al. 2017). In fact, such communication is of great importance for the development of fathers' knowledge and awareness, necessary for better involvement (Paramashanti et al. 2023). Husbands who have received counseling and participated in a fatherhood class provide more support to their wives during pregnancy (Nguyen et al. 2018).

The discrepancy between the perceived support required by mothers and the actual support provided by family members

The GCG fathers mentioned that the mothers occasionally requested assistance, such as accompanying them for antenatal visits, searching for information online, or purchasing ready-to-eat baby porridge. However, they generally relied on their intuition to identify the support needed by mothers, for instance, when their wives were bored in taking IFA supplements. The GCG husbands did not perceive the necessity of daily reminding their wives to take the supplements. This finding is supported by a study indicating that some husbands were reluctant to remind their wives, as they believed they were already well-informed and aware of the matter (Darmawati *et al.* 2022).

Furthermore, fathers in both groups also used their intuition to discern whether mothers were overwhelmed with the household chores and child care. In the majority of cases, fathers in both group provided assistance by playing

with the child, encouraging the child to eat and feeding the child. Additionally, they listened to mothers insights on child care articles, a practice demonstrated exclusively by GCG fathers.

"I think feeding a child can sometimes be challenging. So, after work, I take my son for a ride on the motorcycle (to lift his mood) and get him to eat. My wife needs my support, so I play with the child while she does the household chores."

It is noteworthy that the majority of GCG fathers who sought out information did so at the encouragement of their wives. Nevertheless, they expressed satisfaction at being involved in discussions and made time to read articles shared by their wives. Additionally, grandmothers in the GCG indicated that their daughters or daughters-in-law often have access to many information sources but nevertheless perceive a need for advice from them.

"She often searches for recipes on the Internet, but she also often asks me (for recipes). I always tell her that it's healthier to cook at home, as I used to do. If we buy ready-to-eat meals, we don't know what's in them."

Conversely, husbands in the PCG rarely engage in discussion pertaining maternal and child care with their wives. This finding is consistent with a study conducted in Tanzania, wherein fathers, despite understanding the importance of communication and collaboration between parents in child care, only expressed a willingness to start doing so in approximately half of the cases (Martin *et al.* 2021).

According to PCG fathers, their wives usually informed them of any issues, such as when their child got sick. In such circumstances, the fathers became more involved in the child's care, for example, by purchasing the child's preferred food, comforting the child, and encouraging them to eat. Some fathers particularly in the PCG, wanted to provide more assistance but felt that mothers have better knowledge about these issues. Moreover, fathers' involvement was constrained by their full-time work obligations outside the home, as illustrated by two PCG fathers below:

"It seems like she doesn't have difficulty taking the supplements, but I think she rarely takes them because (I still see) the supplements on the table. I'm also not sure about how many times they (the supplements) should be consumed. I get home late from work, (so) I'm already tired. It's not like I don't care."

"She doesn't discuss it (child feeding) either. I don't ask her because if there's a problem, she just lets me know. If she (the child) is sick, (she) my wife will call me. Occasionally, I'll ask how our daughter is, and as long as she's healthy, that's all that matters."

This finding is consistent with the results of a systematic review showing that mothers generally assume the primary caregiver role, while fathers assume a supporting one (Sarkadi *et al.* 2008). The majority of fathers offer help only when their partners are engaged in household tasks or when they are not present (Bilal *et al.* 2016).

With the exception of one grandmother in the GCG who served as *Posvandu* personnel, grandmothers in both groups demonstrated a lack of awareness of nutrition recommendations during pregnancy because mothers rarely discussed this topic with them. As a result, the grandmothers lacked awareness of the potential assistance that the mothers might require. However, mothers in both groups generally sought guidance from grandmothers on child feeding practices. Among grandmothers in the PCG, unfortunately, the advice provided was not always appropriate. For instance, some advised giving the child formula milk or snacks, opting for instant baby porridge for its convenience, and giving the child whatever their preferred food is to prevent food waste in the case of a fussy eater child. Such advice was not reported by the grandmothers in the GCG A PCG grandmother shared her insight as follow:

"(I suggest she) give her child snacks. I did the same with my other grandchildren to make sure they ate something (food). Also, children don't like to sit still, so it's difficult to feed them. Usually, they're calm when they're given snacks."

One literature review indicated the intergenerational transmission of inappropriate feeding practices from grandmothers to mothers (Young *et al.* 2018). This included advice for mothers to rely on breastfeeding if the child refuses to eat, based on the common belief that breast milk is still sufficient for infants above six months of age (Nsiah-Asamoah *et al.* 2022).

Despite rarely, the grandmothers in the PCG did offer good advices regarding child feeding However, as previously discussed, mothers were often preoccupied with household chores, which prevent them from implementing the advices.

Expected support provided by the family members in the future

Majority of the husbands in both groups would seek to enhance their involvement, particularly in child care, in the future. Nevertheless, the PCG fathers identified their work commitment as the main obstacle, as illustrated below:

"I still feel I don't give (my wife) enough support because of my professional commitments. My wife doesn't complain, though; she is understanding my work. Ideally, we should both share equal responsibilities in (child) feeding and seeking information (related to child care)."

As evidenced by previous studies, fathers who are constrained by work obligations tend to have limited expectations regarding their involvement in daily child care (Bilal *et al.* 2016). In the context of this study, some fathers in the PCG even held the view that their spouses did not need additional support with regard to pregnancy and child care in the future. This is particularly the case when the mother is perceived to possess considerable experience, as illustrated below:

"I think I've provided (my wife with) all the assistance she needs. In any case, my wife (already) knows what to do. She's gained experiences from (having and caring for) our older child, (for example) in taking the vitamins (IFA supplements), breastfeeding to avoid diarrhea, which is something she experienced with our older son. For feeding, we opt for convenient options like xx (a brand of instant baby porridge), so there's no need to worry."

In general, grandmothers in both groups expressed the intention to provide advice regarding child care in the future, citing a lack of knowledgeable about supplements during pregnancy as the rationale.

The present study offers insights into the roles of family members in maternal health and child care, as well as the challenges associated with these roles. The participants exhibited diverse socio-demographic characteristics, which enhanced the information gathered by this study. Triangulation of the data by two analysts reduced subjectivity in interpreting the information. Study limitations included the inability to interview fathers who lived away from their family and went home monthly, as well as the potential influence on grandmothers' responses due to the mothers' presence during the interview.

CONCLUSION

Family, particularly those in the GCG, considered that the mothers' practices during pregnancy and childrearing were commendable. Furthermore, they also believed that the mothers had better knowledge regarding the pertinent issues. The fathers were generally passive in seeking information, mainly engaging with healthcare providers during antenatal visit with minimal communication. In the GCG, sharing from the mothers on pregnancy and child care prompted the fathers to seek further information on these topics. Most fathers were introduced to the MCH handbook but still have difficulty understanding its content.

Family support for child feeding was more frequently reported than that for maternal IFAS, likely due to the perception of greater challenges assocciated with child feeding. Encouraging mothers to persist in their intake of IFA supplements, despite the hesitance, was a form of support that was predominantly reported by fathers in the GCG. Moreover, GCG fathers consistently provided tangible support and acted as discussion partners for mothers whenever the mothers need one, whereas PCG fathers rarely engaged in discussion with the mother due to a lack of knowledge and work commitments, responding only when issues arose. Grandmothers typically offered advice based on their experiences, which, among the PCG, was not always aligned with the recommendation.

It is essential to provide family with the requisite knowledge and skills, given their limited ability to seek information independently. Tailored strategies should account for fathers' work commitments and grandmothers' reliance on past experiences. The utilization of antenatal visits and the MCH handbook to raise awareness and enhance paternal involvement in maternal health and child care is strongly recommended.

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DECLARATION OF CONFLICT OF INTERESTS

We have no conflict of interest to disclose.

REFERENCES

- Bhutta ZA, Das JK, Rizvi A, Gaffey MF, Walker N, Horton S, Webb P, Lartey A, Black RE. 2013. Evidence-based interventions for improvement of maternal and child nutrition: What can be done and at what cost? The Lancet 382(9890):452–477. https://doi.org/10.1016/S0140-6736(13)60996-4
- Bilal S, Spigt M, Czabanowska K, Mulugeta A, Blanco R, Dinant G. 2016. Fathers' perception, practice, and challenges in young child care and feeding in Ethiopia. Food Nutr Bull 37(3):329–339. https://doi.org/10.1177/0379572116654027
- Bogale SK, Cherie N, Bogale EK. 2022. Fathers involvement in child feeding and its associated factors among fathers having children aged 6 to 24 months in Antsokia Gemza Woreda, Ethiopia: Cross-sectional study. Plos One 17(11):e0276565. https://doi.org/10.1371/journal.pone.0276565
- Darmawati D, Siregar T, Kamil H, Husna C. Tahlil T. 2022. Husband's perception on anemia among pregnant women based on cultural perspective: A qualitative study. Open Access Maced J Med Sci 10(G):6–13. https://doi.org/10.3889/oamjms.2022.7617

- Ekawidyani KR, Wibowo L, Rospita L, Wiradnyani, LA, Manjilala, Putriani SD, Marini R. 2015. Child Feeding Pattern During Transitional Period (6–8 Months) in Jonggat Sub District, Central Lombok, West Nusa Tenggara. J Gizi Pangan 10(2).
- [GNR] Global Nutrition Report. The State of Global Nutrition. 2021. Bristol (UK): Development Initiatives Poverty Research Ltd.
- Karmacharya C, Cunningham K, Choufani J, Kadiyala S. 2017. Grandmothers' knowledge positively influences maternal knowledge and infant and young child feeding practices. Public Health Nutr 20(12):2114–2123. https://doi.org/10.1017/S1368980017000969
- Martin SL, Matare CR, Kayandra RA, Owoputi I, Kazoba A, Bezner KR, Nnally L, Khan, M, Locklear KH, Dearden KA. 2021. Engaging fathers to improve complementary feeding is acceptable and feasible in the Lake Zone, Tanzania. Matern Child Nutr 17:e13144. https://doi.org/10.1111/mcn.13144
- Martin SL, Omotayo MO, Chapleau GM, Stoltzfus RJ, Birhanu Z, Ortolano SE, Pelto GH, Dickin KL. 2017. Adherence partners are an acceptable behaviour change strategy to support calcium and iron-folic acid supplementation among pregnant women in Ethiopia and Kenya. Matern Child Nutr 13(3):e12331. https://doi.org/10.1111/mcn.12331
- [MoH RI] Ministry of Health Republic of Indonesia. 2013. Riset Kesehatan Dasar. Jakarta (ID): MoH RI.
- [MoH RI] Ministry of Health Republic of Indonesia. 2016. Panduan Manajemen Terintegrasi Suplementasi Vitamin A. Jakarta (ID): MoH RI
- [MoH RI] Ministry of Health Republic of Indonesia. 2018. Riset Kesehatan Dasar. Jakarta (ID): MoH RI.
- [MoH RI] Ministry of Health Republic of Indonesia. 2023a. Buku Saku Pencegahan Anemia pada Ibu Hamil dan Remaja Putri. Jakarta (ID): MoH RI.
- [MoH RI] Ministry of Health Republic of Indonesia. 2023b. Survei Kesehatan Indonesia (SKI) 2023 Dalam Angka. Jakarta (ID): MoH RI

- Nguyen PH, Frongillo EA, Sanghvi T, Wable G, Mahmud Z, Tran LM, Aktar B, Afsana K, Alayon S, Ruel MT. 2018. Engagement of husbands in a maternal nutrition program substantially contributed to greater intake of micronutrient supplements and dietary diversity during pregnancy: Results of a cluster-randomized program evaluation in Bangladesh. J Nutr 148(8):1352–1363. https://doi.org/10.1093/jn/nxy090
- Nirmala IR, Februhartanty J, Wiradnyani LAA. 2016. Maternal attributes are positively associated with feeding practices of children aged 2–5 years in West Java, Indonesia. Malays J Nutr 22(2).
- Nsiah-Asamoah C, Adjei G, Agblorti S, Doku DT. 2022. Association of maternal characteristics with child feeding indicators and nutritional status of children undertwo years in Rural Ghana. BMC Pediatrics 22(1):581. https://doi.org/10.1186/s12887-022-03651-1
- Osaki K, Hattori T, Toda A, Mulati E, Hermawan L, Pritasari K, Bardosono S, Kosen S. 2019. Maternal and Child Health Handbook use for maternal and child care: A cluster randomized controlled study in rural Java, Indonesia. J Public Health 41(1):170–182. https://doi.org/10.1093/pubmed/fdx175
- Pakilaran G, Rasni H, Nur KRM, Wijaya D. 2022. Family support on exclusive breastfeeding in babies aged 0–6 months in Indonesia: Literature Review. NHSJ 2(2):104–107. https://doi.org/10.53713/nhs.v2i2.53
- Paramashanti BA, Dibley MJ, Huda TM, Prabandari YS, Alam NA. 2023. Factors influencing breastfeeding continuation and formula feeding beyond six months in rural and urban households in Indonesia: a qualitative investigation. Int Breastfeed J 18(1):48. https://doi.org/10.1186/s13006-023-00586-w
- Piniliw MB, Africa LS, Agne JP. 2021. Factors associated with stunting among 24–35-month-old Kalinga Indigenous children in Pinukpuk, Kalinga, Philippines: A case-control study. J Gizi Pangan 16(2):81–90. https://doi.org/10.25182/jgp.2021.16.2.81-90
- [PP RI] Peraturan Presiden Republik Indonesia.
 Peraturan presiden nomor 72 tahun 2021:
 Percepatan penurunan stunting. https://
 peraturan.bpk.go.id [Accessed 10th
 January 2024].

- Pradanie R, Rachmawati PD, Cahyani MD. 2020. Factors associated with mothers' behaviors in selecting complementary feeding in Surabaya, Indonesia. Nurse Media J Nurs 10:306–316. https://doi.org/10.14710/ nmjn.v10i3.27706
- Probandari A, Arcita A, Kothijah K, Pamungkasari EP. 2017. Barriers to utilization of postnatal care at village level in Klaten district, central Java Province, Indonesia. BMC Health Serv Res 17:1–9. https://doi.org/10.1186/s12913-017-2490-y
- Sarkadi A, Kristiansson R, Oberklaid F, Bremberg S. 2008. Fathers' involvement and children's developmental outcomes: A systematic review of longitudinal studies. Acta Paediatr 97(2):153–158. https://doi.org/10.1111/j.1651-2227.2007.00572.x
- Setyobudihono S, Istiqomah E, Adiningsih S. 2016. Husband influences on pregnant women who following consumption iron supplementation program. Procedia Soc Behav Sci 222:160–168. https://doi.org/10.1016/j.sbspro.2016.05.207
- [UNICEF] United Nation of Children Fund. 2021. Southeast Asia Regional Report on Maternal Nutrition and Complementary Feeding. Bangkok (TH): UNICEF East Asia and the Pacific Regional Office.
- [WHO] World Health Organization. 2023. WHO Guideline for Complementary Feeding of Infants and Young Children 6–23 Months of Age. Geneva (CH): WHO.
- [WHO & UNICEF] World Health Organization and United Nation of Children Fund. 2021. Indicators for Assessing Infant and Young Child Feeding Practices: Definitions and Measurement Methods. Geneva (CH): WHO & UNICEF.
- Wiradnyani LAA, Khusun H, Achadi EL, Ocviyanti D, Shankar AH. 2016. Role of family support and women's knowledge on pregnancy-related risks in adherence to maternal iron-folic acid supplementation in Indonesia. Public Health Nutr 19(15):2818–2828. https://doi.org/10.1017/S1368980016001002
- Young KG, Duncanson K, Burrows T. 2018. Influence of grandparents on the dietary intake of their 2–12-year-old grandchildren: A systematic review. Nutrition & Dietetics 75(3):291–306. https://doi.org/10.1111/1747-0080.12411