Jurnal Pengabdian Kepada Masyarakat Mandiri (JPMM)
Juni 2025 | Vol. 3 | No. 2
ISSN : 2964-2795
Doi : 10.556442

Protocol for Educational Model on Chil Feeding Practices Realted to Ultra – Processed Foods

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Abstract

Stunting and poor nutrition remain significant challenges in Indonesia, partly due to inappropriate feeding practices and the growing prevalence of ultra-processed food (UPF) consumption among children. Midwives play a central role in providing accurate education and guidance on complementary feeding (MP-ASI). This community service program aimed to enhance midwives' awareness and knowledge regarding appropriate feeding practices while reducing dependence on UPF. The activity involved online education and discussions with professional experts, targeting 100 midwives .

Keywords: *Ultra-processed food, Midwives, Complementary feeding, Nutrition education*

INTRODUCTION

Child nutrition during the first two years of life is critical for growth and development. The World Health Organization (WHO) recommends exclusive breastfeeding for the first six months, followed by nutritionally adequate and safe complementary feeding . (WHO and UNICEF, 2021; Zong *et al.*, 2021)However, recent studies highlight an alarming increase in ultra-processed food (UPF) consumption among children, contributing to obesity, cardiovascular risks, and poor dietary patterns (Hall *et al.*, 2019; Rauber *et al.*, 2020).

In Indonesia, despite guidelines for infant and young child feeding, many parents still introduce UPFs, including commercial complementary foods and formula milk, which often contain excessive sugar. (Hadihardjono *et al.*, 2019) Compounding this issue, health workers, including midwives, sometimes inadvertently promote UPF products, conflicting with the International Code of Marketing of Breast-milk Substitutes. (Srour *et al.*, 2019).

Midwives, as frontline maternal and child health professionals, play an essential role in shaping parents' feeding behaviors. Strengthening their knowledge and adherence to nutrition guidelines is crucial to ensuring appropriate MP-ASI practices and reducing the risks posed by UPFs. This study documents a community engagement program to educate midwives about appropriate feeding and the risks of UPFs.

METHOD

This program was designed as a community service activity under the RKAT scheme. The intervention consisted of:

1. **Educational Seminar (Webinar):** Delivered by experts, including a pediatrician and breastfeeding counselor, focusing on MP-ASI guidelines, NOVA classification of UPF, and the ethical aspects of nutrition counseling.
2. **Discussion Sessions:** Interactive Q&A sessions to clarify misconceptions and strengthen midwives' role in advocacy.

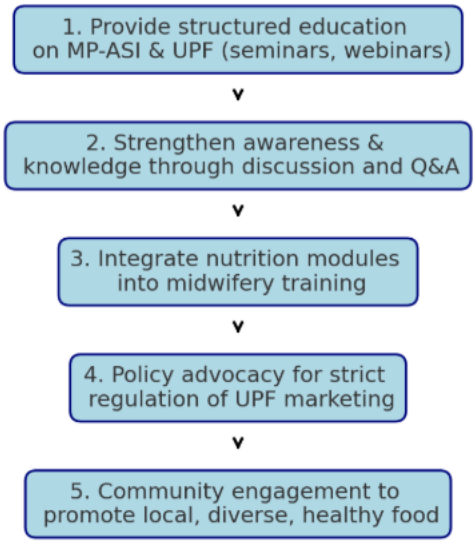

Figure 1. Protocol to improve midwives knowledge & Practice on IYCF (Source: Personal documentation)

RESULT AND DISCUSSION

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These protocol based on literature suggestion, that targeted education effectively improves midwives' awareness. Education not only enhances knowledge but may also influence attitudes and practices, aligning with previous studies linking professional training to improved counseling quality. (Ahluwalia *et al.*, 2016; Reidy *et al.*, 2017)

Furthermore, the involvement of professional organizations such as AIMI and Helen Keller Indonesia strengthened the advocacy component, bridging gaps between evidence-based recommendations and field practices. Nonetheless, challenges remain regarding systemic issues such as weak regulation of UPF marketing in Indonesia (Hadihardjono et al., 2019).

This initiative demonstrates that short-term interventions can lead to measurable knowledge gains. However, sustainable improvement requires continuous training, institutional policy support, and stricter regulation of UPF marketing.

The importance of this intervention is supported by global evidence on the detrimental effects of UPF consumption. Hall et al. (2019) showed that diets high in UPFs cause excessive calorie intake and weight gain in randomized controlled trials, indicating direct implications for obesity risk among children and adults (Rauber et al. (2020) further demonstrated that UPF consumption is positively associated with obesity indicators in the UK population . This underscores that early exposure to UPFs, often facilitated by inappropriate feeding practices, can have long-term health consequences.

In Indonesia, the issue is particularly concerning given the aggressive promotion of commercial complementary foods and formula products. Hadihardjono et al. (2019) documented how breast-milk

substitutes and snack products are commonly marketed and sold in urban centers like Bandung, frequently violating the International Code of Marketing of Breast-milk Substitutes. Alarmingly, many formula products for toddlers contain added sucrose or fructose, contrary to WHO recommendations that such products should not include free sugars (WHO, 2021) . This not only misleads parents but also undermines optimal infant and young child feeding practices.

Midwives, as trusted providers of maternal and child health services, are in a pivotal position to influence parental feeding decisions. However, studies reveal gaps in both knowledge and adherence to international guidelines among health professionals. For example, Srour et al. (2019) showed strong evidence linking UPF intake to cardiovascular diseases, yet health workers often underestimate such risks in the context of early childhood nutrition. Without adequate training and awareness, midwives may inadvertently promote or fail to discourage the use of UPFs, including sweetened formula products, which contradicts their role in preventing malnutrition and stunting.

The improvements seen in this program demonstrate that even short-term educational efforts can shift knowledge levels significantly. Reidy et al. (2017) emphasized the importance of early dietary patterns in shaping long-term health outcomes . By equipping midwives with accurate knowledge about NOVA food classification and WHO recommendations on IYCF , this program supports better-informed counseling to families. This aligns with Ahluwalia et al. (2016), who found that infants' and toddlers' nutrient intakes often deviate from recommendations without appropriate caregiver education

Another strength of this program was the collaboration with professional organizations such as AIMI and Helen Keller Indonesia, as well as expert speakers like pediatricians and breastfeeding advocates. Such partnerships reinforce the credibility of the intervention and bridge gaps between research, policy, and field practice. Importantly, community service initiatives like this can also function as advocacy platforms to push for stronger enforcement of national regulations aligned with the International Code.

Despite these positive outcomes, challenges remain. A single session, while impactful, cannot guarantee sustained behavior change in practice. Long-term monitoring is required to determine whether increased knowledge translates into consistent counseling and practice changes among midwives. Moreover, systemic barriers such as the lack of stringent regulations on UPF marketing in Indonesia continue to pose risks. As Hickey et al. (2018) noted, industry self-regulation is insufficient to protect children from unhealthy food marketing. Stronger government policies and enforcement mechanisms are essential to create an enabling environment where midwives' knowledge and advocacy efforts can be effective.

In conclusion, this program contributes to the evidence that targeted, collaborative educational interventions can significantly improve midwives' capacity to provide accurate feeding guidance. However, scaling such initiatives and embedding them into continuing professional development systems are necessary for sustainable impact. In parallel, advocacy for stronger regulation of UPFs remains critical to protect children's nutrition and support Indonesia's efforts in reducing stunting and malnutrition.

Figur 2. Discussion summary

CONCLUSION

The community service program on education for midwives regarding complementary feeding (MP-ASI) and the risks of ultra-processed food (UPF) has successfully achieved its objectives. The initiative, which initially targeted 100 participants. These findings confirm that structured education, expert-led discussions, and advocacy efforts can significantly enhance midwives' awareness and competencies. Strengthening midwives' roles in maternal and child nutrition is essential to reduce the risks associated with UPF and to support healthier feeding practices. However, the sustainability of this improvement requires continuous professional training, integration of nutrition modules into midwifery education, and stronger policy enforcement against misleading UPF marketing. Collaborative efforts between health institutions, professional organizations, andpolicymakers are critical to ensure long-term impact in combating malnutrition and stunting in Indonesia.

ADVICE

1. **Sustainability:** Regular training modules on child nutrition should be integrated into midwifery professional development programs.
2. **Policy Advocacy:** Stronger enforcement of the International Code on Breastmilk Substitutes is needed to reduce UPF promotion.
3. **Community Engagement:** Midwives should be empowered to lead community-level campaigns promoting safe, diverse, and locally available foods.
4. **Further Research:** Longitudinal studies are needed to assess whether improved knowledge translates into better feeding practices and reduced stunting prevalence.

ACKNOWLEDGEMENT

The authors would like to thank Universitas Respati Indonesia, Dokter Tan & Remanly Institute, and Asosiasi Ibu Menyusui Indonesia (AIMI) for their support and collaboration in this program. Special appreciation is extended to all midwives and participants who actively engaged in the sessions.

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