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Abstract. Proper complementary nutrition is critical for child growth. Currently, UPF consumption is common, affecting IYCFP, where many older persons use CCF. Indeed, CCF has a negative impact on children's growth and development. Many factors contribute to this, one of which is a lack of assistance from other health providers, especially midwives. In Indonesia, midwives are the primary health workers that offer direct care to mothers. According to several sources, midwives continue to provide little support in this area due to insufficient experience and expertise. The purpose of this study is to determine the level of awareness of UPF and ICYFP among midwives. The method employed is a hybrid strategy that employs successive explanation strategies. 114 midwives participated in the online study in 2022. The results of this study showed that there are still many midwives who do not know about UPF and ICYFP education and advocacy. There needs to be government support to conduct comprehensive education in the health sector, including midwives.

Keywords: Children, Complementary Feedings, Midwives, UPF

INTRODUCTION

Ultra-processed foods are defined as cheap formula food that contain few whole foods; or also be stated that ultra-processed items contain processed ingredients extracted or refined from whole foods (C A Monteiro et al., 2013; Carlos Augusto Monteiro et al., 2018; Pistrup-Andersen, 2013). Commercial complementary foods (CCF) are wet or dry food items sold for complementary feeding of children under 24 months old, as specified on the product label and directions of usage (Maslin & Venter, 2017). According to the NOVA classification, CCFs are UPFs that contain harmful fats, refined carbohydrates, free sugars, salt, and additives (Theurich et al., 2019). High-income countries rely heavily on UPF, which are also becoming increasingly popular in middle-income countries. Consistent snacking on energy-dense, fatty, sweet, or salty ready-to-consume food replaces regular, freshly cooked meals (C A Monteiro et al., 2013). In poorer and middle-income nations, inadequate supplemental feeding practices, such as introducing inappropriate foods like UPF, contribute significantly to children's poor nutritional status (Gibney, 2019).

It is proven that UPF in Infant and Young Child Feeding Practice (IYCFP) can increase overall energy intake and consequently increase body weight and obesity risk (Hall et al., 2019; Rauber et al., 2020), as well as increased risk of cardiovascular disease (Srour et al., 2019), stroke, and even death (Rico-Campà et al., 2019) in adults. Undernutrition early in life has irreversible negative effects on the brain and neurocognitive development (Leroy et al., 2020).
Many studies found a hurdle to IYCFP in rural locations. Impeding factors for infants and young children's IYCFP include inadequate knowledge of breastfeeding, perceived insufficiency of breast milk, beliefs, mothers' excessive workload, limited partner support and gender roles, food price inflation and shortage, culture, and dowry demands. Lack of health provider support due to their knowledge and practice also influences this issue (especially for breastfeeding and IYCFP advocacy). The economic condition and gender inequities affect this catastrophe resulting mothers' job stress. Then, they can not provide proper complementary feeding (Debessa et al., 2023; Gizaw et al., 2023; Lopes et al., 2020; Nunes et al., 2021).

Midwives are part of health providers. In Indonesia, midwives are the main force who directly meet mothers and the community. Midwives have an important role, especially in the proper IYCFP. However, from previous studies in other countries, it is known that there are still many midwives who do not know about IYCFP including advocacy and breastfeeding (Battersby, 2010). Therefore, this study aims to find out the knowledge of Midwives related to IYCFP and UPF. This is useful as a first step to improving IYCFP in Indonesia.

LITERATURE REVIEW

Supportive and qualified health workers are essential in supporting and providing proper education in IYCFP. In accordance with the previous research literature related to UPF, there are various factors that influence it. Among them are sociodemographic, maternal characteristics, child assistance and care (Lopes et al., 2020). Midwives are in this role, as a health service. Where the quality and service can have an impact on the proper practice of IYCFP. The framework of this theory is described as follows.

**Figure 1.**
A hierarchical model was presented to evaluate the relationship between ultra-processed food intake and family and child characteristics (ages 0-24 months) Adopted from (Lopes et al., 2020)
RESEARCH METHODS

The study used a mixed method. The strategy used is sequential / stage (sequential mixed method) with a specification of a sequential explanatory strategy. The methods used quantitative analysis, qualitative analysis, and joint conclusions. In its implementation, it is also based on congruent triangulation where quantitative and qualitative data are collected together and compared. About 114 midwives were involved in the study. The study was conducted in 2022 online across Indonesia. The data collection and validation using questionnaires interviews, and verification. The quantitative data used a simple descriptive analysis, and an analysis of interview results is performed to strengthen and support the results of quantitative tests. This research has gone through an ethical review by the research ethics committee of the University of Respati Indonesia with Number: 09 / SK. KEPK/UNR/I/2022.

FINDINGS AND DISCUSSION

1. Quantitative Result

![Figure 2](source: Primer Data)

Figure 2 shows that the majority of midwives already know the exact definition of UPF. However, there are still many midwives who do not know the classification of food based on NOVA.

![Figure 3](source: Primer Data)

Figure 3 shows the percentage of IYCFP in midwives.
Figure 3 shows that the majority of midwives (75%) are proper to provide education related to IYCFP.

<table>
<thead>
<tr>
<th>Education</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master Degree</td>
<td>27</td>
<td>24</td>
</tr>
<tr>
<td>Bachelor/ Diploma</td>
<td>87</td>
<td>76</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 1: Participants Demographic Data

<table>
<thead>
<tr>
<th>Age</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;36 yo</td>
<td>78</td>
<td>68</td>
</tr>
<tr>
<td>≥36</td>
<td>36</td>
<td>32</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>110</td>
</tr>
</tbody>
</table>

Source: Primer Data

Table 1 shows that the majority of study participants were midwives with a bachelor's/diploma education and less than 35 years old.

2. Qualitative Result

The interview results showed that there are still many midwives who stutter CCF including formula is not included in the UPF. They still recommend it to clients without indication. "CCF is a good food for babies because it has been measured and mass-produced"; "Formula is also healthy, it can be given after the child is weaned". Other responses related to IYCFP; "Early feeding can be given CCF because the nutrition is measured"

DISCUSSION

Based on the description of the results above, several things can be drawn to a common thread. The first is related to the demographics of participants, where the majority of midwives are still of productive age and have higher education backgrounds. However, there are still many midwives (69%) who do not know the NOVA classification and (25%) still do not carry out / provide proper IYCFP education to the community. This is not in line with previous studies where a person's higher education reflected on his knowledge and practice(Brauer & Ferguson, 2015; Bridges et al., 2011; Neville, 2009).

Reviewed more deeply qualitatively, it turns out that midwives still have inappropriate knowledge and beliefs related to UPF. Where there are still many midwives who consider CCF and formula milk not included in UPF. They find this nutritious and measured. This finding is similar to studies that have been done before, that not only the community but also health workers still do not know about this(Debessa et al., 2023).
This is possible because of the massive exposure to social media and advertising to health workers that affect their practice in the community (Henjum et al., 2017; Piwoz & Huffman, 2015). This can be worse if midwives are not equipped with the right advocacy knowledge.

CONCLUSION AND RECOMMENDATION

Many midwives still do not understand the proper classification of food and IYCF, especially in. Comprehensive education is required in all communities and health, particularly among health personnel, including midwives.

ACKNOWLEDGEMENT

Thank you to the University of Respati Indonesia and the Institute for Research and Community Service University of Respati Indonesia for providing support to the process of running this research.

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