Nutritional status of under-5 children during COVID-19: Insights from Anganwadi workers of Kerala, India

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Abstract Investing in nutrition is key to securing a country’s future, as poor nutrition during childhood instigates developmental impairment. In India, the Anganwadi service disruption flared child malnutrition during COVID-19. This study explores how under-5 nutritional status was managed in COVID-19 by Anganwadi workers (AWWs) of the ICDS, Kerala. An in-depth interview was conducted among 30 AWWs. The integrative, cost-effective Anganwadi strategy for maintaining child nutritional status in a developing country during a pandemic is an impressive model. However, the lack of direct interactions of AWWs with beneficiaries leads to lowered intake and improper food timing in children as perceived by AWWs.

Keywords: nutritional status, under-5 children, COVID-19, Anganwadi, ICDS, Kerala

1. Introduction

The COVID-19 pandemic has traumatised the four pillars of India’s food security: availability, access, stability, and utilisation (Raman et al., 2020). Crisis coping up mechanism of purchasing less food and substituting nutritionally compromised food, flared up malnutrition, subsequently, increasing COVID-19 susceptibility (Tsegaye et al., 2018). Community Health Workers (CHWs) are an inevitable component of public healthcare ecosystems worldwide (Singh 2022). The Supplementary Nutrition Programme (SNP) under Anganwadi Services (former Integrated Child Development Services - ICDS) is a programme delivering food privileges to Indian children. In the lockdown, Anganwadi centre services (AWC) were interrupted, and Anganwadis and schools were closed down, which catalysed child malnutrition risk (Ambast et al 2021). The present communication explores AWW’s role in managing under-5 nutritional status during COVID-19 in Kerala.

2. Methodology

As a part of the routine department schedule, an in-depth interview was conducted among 30 AWWs in a rural area of the Thrissur district, Kerala, India, using the interview guide of seven open-ended questions mentioned as follows in the interview guide. Details on under-5 nutritional status before and after COVID-19, initiatives to overcome the pandemic situation for sustaining child nutritional status, and the supporting and inhibiting factors faced in their services were collected.

2.1. In-Depth Interview Guide

1. What are the activities provided by your group for nutritional status maintenance of under-5 children?
2. What was the nutritional status of under-5 children during the pandemic?
3. What were the challenges you faced in maintaining under-5 nutritional status during COVID-19?
4. How could you overcome the challenges?
5. What were the inhibiting factors in maintaining the nutritional status?
6. What were the supporting factors in facing these challenges? (prob: - Kerala government support, Panchayath support)
7. Can you suggest any modifications for the strategy of improving child nutrition?

3. Results
The AWCs used to routinely serve peanut candy/poha with added jaggery and coconut as morning snacks, freshly cooked meal around noon and evening snacks with green gram/broken wheat supplies in the prepandemic period. Pandemic and subsequent lockdown interrupted these services, putting vulnerable beneficiaries at considerable risk.

In-depth interview data were transcribed verbatim, and thematic analysis was performed. In relation to insights from Anganwadi workers, the following themes were derived.

3.1. Under-5 nutritional status during the pandemic

The pandemic and subsequent lockdown hampered Anganwadi services; AWW’s crisis management strategy helped to maintain the under-5 nutritional status. Relevant responses of interviewees:

Respondent 7: “In Anganwadis, we could monitor the quantity and quality of food intake. During the pandemic, as Anganwadis were closed, direct monitoring was not possible. However, during monthly house visit no symptoms of malnutrition were observed.”

Respondent 4: “As there was not much public contact, diseases reduced and health slightly improved.”

3.2. Tackling strategies

AWW’s dispensed food raw materials and THR (Take Home Ration) (Amrutham Nutrimix powder) to children through a home delivery system, provided instructions for food preparation. Through telephonic and online communications with parents of under-5, AWW’s extended necessary support and nutrition advice (Figure 1). Monthly home visits were made to assess nutritional status.

Respondent 1: “We distributed Amrutham powder and raw materials for food preparation through a home delivery system; monthly house visits were conducted to assess the status of child nutrition.”

“We provided food raw materials and Amrutham powder through home delivery system and shared recorded video to convey food preparation instructions to the beneficiaries”; Respondent 5.

Respondent 3: “During monthly home visits, we measured the weight of the children and inquired about the food habits and physical activity”.

3.3. Constraints in service provision

The lack of direct interactions with beneficiaries, which probably caused improper timing and lowered food intake in children, were perceived challenges by AWWs.

Respondent 2: “While in Anganwadi, had tried to achieve the target of 200 gm weight gain monthly, for that we ensured proper quantity of food in proper time. Through telephonic communication it is not possible to assess the food habits.”

Respondent 8: “In Anganwadis, we made each student bring a small number of vegetables, and these collected vegetables were added to the food prepared daily so that the quality of food was assured, which is not possible to monitor through online communication.”

3.4. Government support

They availed government aid in material supply and voluntary work force for home delivery of food items.

Respondent 9: “We were provided with a Rapid Response Team (RRT) from Panchayath for food supply.”

Respondent 6: “Funds were received properly to restock the food materials.”

Improvising food charts by including more nutrient-rich food, such as eggs, milk, and fruits, in existing programs was suggested by AWWs to improve child nutrition. AWWs also supported AYUSH sector participation.

4. Discussion

Tangible risks posed by COVID-19 in children include inadequate nutrition, including overweight and underweight (Clapp et al 2020). Poor nutrition during childhood instigates developmental impairment, and therefore, investing in nutrition
is key to securing a country’s future (Hurley et al. 2016). AWWs facilitate supplementary feeding support for 300 days in a year for children younger than six years, thus having a social impact (Anonymous, 2022).

We explored the role of AWWs whose core activity is growth monitoring and nutrition surveillance during lockdown. In depth interviews, the better accepted qualitative research methodology, which provides concrete information about the experiences of individuals, was used here to obtain the pandemic perspective (Azad et al., 2021; DiCicco-Bloom and Crabtree, 2006).

During the pandemic peril, the AWWs conjoined with frontline health workers to set up a much needed volunteer force (Ramakumar and Eapen, 2021). The pandemic tackling strategy of AWWs included home visits and surveys of pregnant women and children for facilitating service delivery (Nanda et al., 2020). Kerala’s success in averting community blowout for a significant duration through scientific testing plans, intensive contact tracing and cluster management policy further helped AWWs services (Heera and Rajeev, 2020).

5. Final Considerations

The Anganwadi service, catering to the health needs of a vulnerable section of society, has been hampered during pandemics. AWW’s tackling strategy is an interesting learning exercise for further public health crisis management. The need for preparedness at the grass root level along with AYUSH in Anganwadi services, which surfaced during the interview, indicates readiness for effective integration in public health care.

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Ethical considerations

We confirm that we have obtained all consent required by the applicable law to publish any personal details or images of patients, research subjects, or other individuals used. We have retained a written copy of all such consents, and we agree to provide Multidisciplinary Reviews with copies of the consents or evidence that such consents have been obtained if requested.

Conflict of Interest

The authors declare no conflicts of interest.

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References


