CHAPTER: 12

SAFEGUARDING THE CONCEALED DAGGER OF COVID19: A CROSS SECTIONAL STUDY ON CHILD FEEDING PRACTICES

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ABSTRACT

Age-appropriate diets with the right mix of essential macro and micro-nutrients lay the early foundation of optimal physical and cognitive development among children. The objective of the study is to assess the key IYCF practices, anthropometry based nutritional status, and to examine the impact of the COVID-19 pandemics on the IYCF. The tools used in the study were 24-hour recall administered food frequency questionnaire (FFQ) to obtain dietary data from 2160 children, while arthrometric data were collected by measuring the height, and weight, of the children. The finding of the study stated that wasting, stunting, and underweight were prevalent in 16.9%, 58.1%, and 34.2% respectively of the population. Male children were more likely to be malnourished than female children. 64%, and 66% of women began breast feeding within 30 minutes after giving birth of their babies and began supplemental foods before the six-month respectively. Insufficient consumption of seven nutrients: energy, calcium, iron, zinc, thiamin, riboflavin, and vitamin B6 was found in more than 70% of children. To safeguarding the concealed dagger of COVID-19 pointed towards children (6-23 months), there is a pressing need for high-frequency reconnaissance of vulnerable populations and entomb sectoral intermingling areas across health, agriculture, water, sanitation.

Keywords: *IYCF, Feeding practices, Anthropometry, Dietary diversity, Nutrient intake, COVID-19*

INTRODUCTION

A right to sufficient nutrition is a fundamental right for every child. "Children who are fed enough of the right foods in the right amounts, at the right times, have a better chance of surviving, growing, developing, and learning. Even in the face of disease, calamity, or crisis, they are better equipped to thrive " (UNICEF 2020).

Rapid Gender Analysis by CARE Morocco, 2020 also highlighted that "inadequate complementary feeding and care practices, like low dietary diversity and poor-quality foods are major causes of undernutrition. In addition, diseases, poor water, inappropriate sanitation and hygiene practices, and other household and family factors also contribute to the existing malnutrition problem. Complementary feeding practices address the rapidly increasing nutrient gap between six to 23 months that contributes to undernutrition and its consequences" (Care Morocco, 2020).

According to the National Family Health Survey (NFHS 5, 2021), children in the age group of age 6-8 months receiving solid or semi-solid food and breastmilk were 38 % whereas children of 6-23 months who had received adequate diet along with breastfeeding were 8.4 % and non-breast-fed children were only 7.5% respectively. Nutrient deficiencies in Vitamin A, Iron, Iodine, Zinc are also widespread among Indian children (UNICEF, 2016).

According to the NFHS 5 (2019-21) (3) statistics of Rajasthan, only 40.7 per cent of children under the age of three were breastfed within an hour after birth, 70.3 per cent of under-five children were exclusively breastfed, and a meager 8.4 per cent of breastfed children in the age group of 6 to 23 months received adequate complementary diets (IIPS, 2021) (5). In Rajasthan, according to the National Family and Health Survey-5 (2019-21) (3), institutional deliveries, including public and private facilities are as high as 94.9 percent, but around 69.3 percent of children were not breastfed within one hour of birth due to different reasons leaving them under the threat of malnutrition.

While National Family Health Survey (NFHS) shows high rates of childhood undernourishment and micronutrient deficiencies, there are no large-scale sub national surveys that provide information on regional age appropriate IYCF practices and dietary intake of children (6-23 months). Therefore, the research was carried out to assess the key IYCF practice and nutrient gaps among the children (6-23m) in the selected districts of Rajasthan.

The objectives of the study were:

1) To assess the key IYCF practices for children 6-23 months.
2) To find out anthropometry based nutritional status for the enrolled children 6–23 months.
3) To find out the age-appropriate nutrient gap from the dietary intake data of enrolled children.
4) To examine the impact of the COVID-19 epidemic on the IYCF and make recommendations for securing the hidden dagger aimed at them.

METHODS

a. Study setting

Rajasthan, in all has 33 districts (Census, 2011) were stratified into different Agro-climatic zones. District Udaipur, Bhilwara and Baran district from Sub-Humid, southern plains and from Humid Southeastern plain respectively were selected. For the selection of zones and districts, a random sampling method was used.

b. Study design

Three stage sampling methods were adopted. Three districts were randomly selected from total districts of Rajasthan and from each selected district, four blocks based on systematic random sampling were enrolled for the study in stage 1. For stage 2, for each selected block, ten villages/ urban slums (PSU) were selected. In the third stage, from each PSU 6 children in the age group of 6-11 months and 12 children from the age group of 12-23 months based on systematic random sampling were enrolled for the study. Thus, from every district, a sample of 720 respondents with the total sample size for the study was 2160 for all three selected districts. For anthropometric study, six different age categories were created. Category C1, C2, C3, C4, C5 and C6 included children belonging to the age group of 6–8, 9–11, 12–14, 15–17, 18–20 and C6 21–23 months respectively.

c. Data collection

- **Background information:** Information on the family composition of the household was elicited through pretested semi structured questionnaire. Date of birth of the child was elicited and cross checked with any authentic document like MCP card, Aadhar card, birth certificate etc.
- **Anthropometric measurements:** Anthropometric data were gathered in this study by applying established procedures to measure the length/height and weight of all children aged 6–23 months. Kilogram had been the unit of measurement and values were considered to the nearest value of 0.1 kg. Height was measured in millimeters, and values were recorded to the nearest 0.1 centimeter.
- **Dietary assessment:** Using an interviewer-administered food frequency questionnaire (FFQ) and a multiplier (i.e. two) pass 24-hour recall, dietary data were gathered preferably from the child's mother. All foods reported in the 24-hour recalls were included in the FFQ's list of foods. For the FFQ, interviewers asked mothers about the number of times per week and per day each food has been consumed by their infant in the last 24 hours.
- **Data analysis:** For the anthropometric analysis, WHO Anthro-version 3.2.2 software was used, with the parameters for survey date, cluster, ID, household, sex, date of birth, and anthropometric measures-weight (in kg), height/length (in cm), and age computation (in months). The WHO Child Growth Standards (2006) were considered as a reference.

  Based on the tools a data entry structure was developed using the CsPro 6.1 software. All socioeconomic data, and food frequency data was entered in the CsPro later converted to SPSS and Access. The data for 24-hour recall was standardized to get raw foods used in the recipes consumed by the child which was used in Opti food software. The information on intake quantity and their nutritive values were also saved according to UIDs of the child in MS Access and later converted and merged in data of Opti food software for further analysis.

- **Statistical analysis:** The dietary intake data was analyzed using SPSS statistical software (version 21), firstly, average intakes of thirteen nutrients, namely food energy, protein, fat, calcium, iron, zinc, vitamin C, thiamin, riboflavin, vitamin B6, folate, vitamin B12, and vitamin A RAE were computed, and compared with corresponding RDAs recommended by ICMR (2011 guidelines) (5). The descriptive analysis incorporated proportions (age, gender, and district wise), mean values, and standard deviations for each of the nutrients. Further, one-way analysis of variance (ANOVA) test was conducted to evaluate age group wise variation in the average intake of each of the nutrients separately. Fisher's least significant difference post- hoc test was considered for the multi-group comparison in the ANOVA test with 0.05 significant level.

RESULTS

a. Background information about enrolled children

(i) Religion and Caste

The religion composition of the respondent stated that ninety-two percent of the households in the sampled population were followers of Hinduism. The average family size in the 3 districts was 5.3. The information on the caste/tribe covered in the study revealed that 45 percent of the households were from other backward castes, 11 percent belonged to general category, 16 percent were from the scheduled caste group, while the rest one-third (28 percent) households were found to be from the scheduled tribe group (Table 12.1).

Table 12.1: Religion and caste of the households of the enrolled children

District	Item	Religion			Caste				TP@	AFS#
		Hindu	Muslim	Other	SC	ST	OBC	Gen		
Bhilwara	**Count**	633	70	17	136	53	430	102	3749	5.2
(n=720)	**%age**	87.8	9.7	2.5	18.9	7.4	59.6	14.1		
Udaipur	**Count**	676	32	12	82	382	177	78	3674	5.1
(n=720	**%age**	94	4.5	1.5	11.4	53.1	24.6	10.8		
Baran	**Count**	684	28	8	132	159	375	55	3975	5.5
(n=720	**%age**	94.9	3.9	1.2	18.3	22.1	52	7.6		
Rajasthan	**Count**	1993	130	37	350	594	195	40	11398	5.3
(N=2160)	**%age**	92.2	6.0	1.8	16.2	27.5	45.4	10.9		

Source: *Based on primary research data*

@TP= Total population; # AFS= Average Family Size; %age= Percentage

(ii) Early initiation of breastmilk and pre-lacteal feeding (IYCF practices)

Little less than two-thirds (64 per cent) of the mothers-began breastfeeding within 30 minutes after childbirth whereas one-third (36 per cent) of the mothers did not breastfeed even 24 hours after the delivery. They gave pre-lacteal feeds within 48 hours. *Janam Ghuti* (5%) Honey (3%) and plain water (2%) were commonly used pre-lacteal whereas 6% of the mother fed their infants with jagghery water.

(iii) Colostrum feeding and its reasons

Colostrum feeding practices and its determinants revealed that around 97 percent of mothers who initiated breast feeding early, gave colostrum to their newborn child. District wise data showed that practice was highest (99 per cent) in Baran followed by Bhilwara and Udaipur which were 96 and 95 per cent, respectively. Further in-depth analysis suggested that the mother feels that it is good for the health of the baby (79 percent) and 20 per cent says it protects the baby from infections (Table 12.2).

Table 12.2: Colostrum feeding and its reasons

Colostrum given		**Yes**	**No**	**Reasons of feeding Colostrum**		
				It is good for the health of the baby	**It protects the baby from infection**	**Not able to explain the reasons**
Bhilwara	**Count**	693	27	530	150	13
	Percentage	96.3	3.7	76.5	21.6	1.9
Udaipur	**Count**	681	38	515	150	16
	Percentage	94.7	5.3	75.6	22	2.3
Baran	**Count**	714	7	599	114	1
	Percentage	99.0	1.0	83.9	16	0.1
Total	**Count**	2088	72	1644	144	30
	Percentage	96.7	3.3	78.7	19.8	1.4

Source: *Based on primary research data*

(iv) Exclusive breastfeeding

Around three-fourths (64 %) of mothers reported exclusive breastfeeding, which was reported highest (73 percent) in Baran district followed by Bhilwara (62 per cent) and Udaipur (57 percent).

(v) Initiation of complementary feeding

A total of 36% of the mothers in the study prematurely started complementary foods i.e., before completion of six months. Most mothers started giving complementary foods to their child by the age of 6-9 months. The majority (92%) of the mothers said that insufficient breast milk was the reason to start supplementary feeding before 6 months. One-fourth (26%) fed diluted cow's milk to their breastfed' s infant less than 6 months, followed by *"ragi sari'*(Porridge) and baby food (19%) of the market (Table 12.3).

Table 12.3: Age of initiation of complementary feeding (in months)

		Age of initiation Age of initiation of complementary feeding (in months)complementary feeding (in months)				
		< 6	**6-9**	**9-12**	**> 12**	**Total**
Bhilwara	**Count**	271	392	37	20	720
	Percentage	37.64	54.45	5.13	2.78	100
Udaipur	**Count**	311	371	33	5	720
	Percentage	43.19	51.53	4.59	0.69	100
Baran	**Count**	196	493	22	9	720
	Percentage	27.22	68.47	3.06	1.25	100
Total	Count	778	1256	92	34	2160

	Age of initiation Age of initiation of complementary feeding (in months)complementary feeding (in months)				
	< 6	**6-9**	**9-12**	**> 12**	**Total**
Percentage	36.02	58.15	4.26	1.57	100

Source: *Based on primary research data*.

(vi) Anthropometry based nutritional status of the children

Table 12.4 describes that the overall prevalence of wasting, stunting and underweight was 11.4%, 35.5% and 20.03% respectively. Severe wasting, stunting and underweight among children, was found to be 4.35%, 21.28% and 7.44% respectively. It was discovered that the predominance of malnourished was higher in male child as compared to female child in the studied districts (Sadhu and Gandhi, 2021).

The statistical analysis revealed that gender of the child was substantially linked with wasting, stunting and underweight. The male children were significantly more wasted (OR = 1.30, CI = 1.03–1.64), stunted (OR = 1.41, CI = 1.19–1.689) and underweight (OR = 1.48, CI = 1.23–1.78), as compared to the female children Table 12.4 and 12.5).

Table 12.4: Age-wise and gender-wise prevalence of wasting, stunting, and underweight

Age group	Children (in percentage of N row wise)						
	N	Wasting		Stunting		Underweight	
		< -3SD	< -2SD	< -3SD	< -2SD	< -3SD	< -2SD
<6	**778**	5.70	13.23	18.63	30.46	9.28	22.69
(6-9)	**1256**	4.49	11.88	21.11	35.59	7.02	19.91
(9-12)	**92**	4.88	11.25	19.20	36.23	7.43	21.01
>12	**34**	2.25	9.01	26.16	40.26	5.96	16.36
Total	**2160**	4.35	11.40	21.28	35.51	7.44	20.03

Source: *Based on primary research data*.

Table 12.5: Summary of Insufficient Nutrient Intakes (total and gender-wise percentage prevalence, problem nutrient highlighted)

S. No.	Nutrient	Category	District (percentage of Children)			Rajasthan
			Bhilwara	Udaipur	Baran	
1.	**Food Energy**	**Total**	71.9%	72.2%	74.0%	72.7%
		Girl Child	65.3%	72.8%	70.3%	69.5%
		Boy Child	77.7%	71.7%	77.5%	75.7%
2.	**Protein**	**Total**	48.6%	60.8%	59.4%	56.3%
		Girl Child	41.6%	62.1%	57.4%	54.0%
		Boy Child	54.7%	59.5%	61.3%	58.4%
3.	**Fat**	**Total**	36.5%	41.3%	34.3%	37.4%
		Girl Child	33.2%	43.3%	32.1%	36.4%
		Boy Child	39.4%	39.1%	36.3%	38.3%
4.	**Calcium**	**Total**	89.9%	94.7%	95.6%	93.4%
		Girl Child	89.8%	94.3%	94.5%	92.9%
		Boy Child	89.9%	95.2%	96.6%	93.8%

S. No.	Nutrient	Category	District (percentage of Children)			Rajasthan
			Bhilwara	Udaipur	Baran	
5.	Iron	Total	100.0%	99.7%	99.9%	99.9%
		Girl Child	100.0%	99.7%	100%	99.9%
		Boy Child	100.0%	99.7%	99.7%	99.8%
6.	Zinc	Total	100.0%	99.8%	99.4%	99.7%
		Girl Child	100.0%	100.0%	99.1%	99.7%
		Boy Child	100.0%	99.5%	99.6%	99.7%
7.	Ascorbic Acid	Total	66.8%	65.3%	66.3%	66.1%
		Girl Child	61.7%	66.5%	65%	64.5%
		Boy Child	71.2%	64.0%	67.4%	67.7%
8.	Thiamin	Total	97.4%	98.9%	98.6%	98.3%
		Girl Child	97.6%	98.9%	98.3%	98.3%
		Boy Child	97.2%	98.9%	98.9%	98.3%
9.	Riboflavin	Total	76.3%	80.1%	82.9%	79.8%
		Girl Child	73.4%	83.1%	82.8%	79.9%
		Boy Child	78.8%	77.1%	83.0%	79.7%
10.	Vitamin B6	Total	94.2%	98.9%	97.1%	96.7%
		Girl Child	93.7%	98.9%	96.8%	96.6%
		Boy Child	94.6%	98.9%	97.3%	96.9%
11.	Folate	Total	63.5%	63.8%	63.3%	63.5%
		Girl Child	58.7%	65.9%	61.8%	62.3%
		Boy Child	67.6%	61.5%	64.7%	64.7%
12.	Vitamin A RAE	Total	71.9%	67.2%	70.1%	69.8%
		Girl Child	67.1%	68.7%	67.3%	67.7%
		Boy Child	76.2%	65.7%	72.7%	71.7%
13.	Vitamin B12	Total	64.9%	66.4%	66.5%	65.9%
		Girl Child	59.3%	67.3%	65.9%	64.3%
		Boy Child	69.7%	65.4%	67.1%	67.5%

Source: *Based on primary research data*

(vii) Consumption of various food groups by the children in the age group of 6-23 months

24-hour recall data indicated consumption of various food groups by the children in the age group of 6-23 months. It indicated that the highest consumption was for cereals at 92.6%, Consumption of energy dense foods like oils and ghee and sugar/jaggery was by 86% of the children. As can be seen the consumption of protective food groups like fruits and vegetables was found to be the lowest and not as per recommended allowances by ICMR. Consumption of Green Leafy Vegetables (GLF) was (2.1%), Meat, Fish and Poultry (0.3%). For Pulses, Roots and Tubers, Vegetables other than green leafy vegetables, and Fruits were reported to be consumed by comparatively higher percentage of children at 34.6%, 30.1%, 25.4%, and 16.7% respectively. Among the three study districts the proportion of consumption of all the food groups was reported to be the lowest in Udaipur.

Amongst Cereals and Millets, wheat flour was consumed highest in children at 90.1%, followed by refined flour and rice at 16.9% and 15.4% respectively. Likewise, green gram was most consumed legume. (16.1%), amongst Roots and Tubers maximum were Onions (22%), Tomatoes amongst non-leafy vegetables (16.8%), followed by Banana being maximally consumed fruit (13.6%). Amongst Milk and Milk products, Mother's milk (94.6%) and Cow Milk (83.9%) were consumed maximum by children. Cooking Oil was observed to be the main source of oil for children, with its consumption by 84.5% of the children, followed by Ghee at 12.3%.

(viii) Frequency of consumption of various food items by children 6-23 months

Data on consumption of various foods and their food frequency was assessed. It was revealed that, except staple cereal all other food items were consumed irregularly by almost all children. Dietary diversity was very poor.

NUTRIENT GAP

The *prevalence of insufficient dietary intake* of all the thirteen nutrients assessed was found to be greater than 60% in all the studied districts. Out of the thirteen nutrients assessed for, seven nutrients Food energy, Calcium, Iron, Zinc, Thiamin, Riboflavin, and Vitamin B6) had an insufficient intake prevalence greater than 70% and were identified as problem nutrients. Table 13.5 data revealed that, among macro nutrients and energy, Protein intake was insufficient for 72.7% and 56.3% of the girls and boy's child respectively. It was surprising to note that fat intake was insufficient for only one third of the children. Considering all the three districts together (N=2160), the highest levels of insufficient dietary intake were presented for Iron at 99.9% and Zinc at 99.7%, followed by Thiamin at 98.3%, Vitamin B6 at 96.7% and Calcium at 93.4%.

The *age-wise multi-comparison* ANOVA test results of nutrient intakes revealed that the "average food energy intake decreased significantly ($p<0.005$) as the age of the child progressed from 6-8 months(C1) to 9-11 months(C2) (Mean Difference C1-C2 = 80.63 Kcal/ day), followed by progression to age group of 12-14 (C3) months (MD C2-C3= 144.51 Kcal/day). However, there is no statistically significant difference ($p>0.05$) among the mean food energy intake was observed for those in the age categories above 14 months. Similarly, fat intake decreased significantly ($p<0.005$) as the age-progressed from 6-8 months to 9-11 months (MD C1-C2 = 6.40 g/ day), followed by progression to an age group of 12-14 months (MD C2-C3= 10.90 g/day), beyond which no significant decrease in fat intake was noted. Notably, the same pattern of variation in intakes was also observed for intakes of calcium, iron, zinc, their intake was observed as the age-progressed from 6- 8 months to 12-14 months, beyond which there was no significant decrease in their respective intakes. However, no considerable differences were observed for intakes of dietary protein, vitamin B 12, and thiamin across any of the age groups.

Children of mothers with no knowledge of nutrition were at 1.263 times higher risk of insufficient food energy intake compared to the children with mothers who knew about nutrition. Similarly, children of mothers with no understanding of nutrition were at 1.237 times higher risk of insufficient fat intake. Mother's knowledge of nutrition (OR=1.440, CI =1.419-1.805) was also statistically significant in children

with inadequate Vitamin C intake. Furthermore, mothers' no knowledge of nutrition was also significantly correlated to insufficient Folate and Vitamin A RAE intake compared to mothers who were knowledgeable about nutrition.

DISCUSSION

The first 1000 days of life cycle provide a crucial window of prospect to preclude the immutable and lifelong devastation due to poor feeding practices. In the present study, the prevalence of insufficient dietary intake of all the thirteen nutrients assessed in this study was found to be greater than 60% in all the study districts. Out of the thirteen nutrients assessed for, seven nutrients Food energy, Calcium, Iron, Zinc, Thiamin, Riboflavin, and Vitamin B6) had an insufficient intake prevalence greater than 70% and were identified as problem nutrients.

The Comprehensive National Nutrition Survey (CNNS) (MoH, 2019) results of 2016-18 also showed that only 6.4 percent of young children get minimum acceptable diet in India. The result of Maharashtra's comprehensive nutrition survey (Aguayo et al., 2016) reported prognosticators of stunting and poor linear development in children under 2 years were birth weight, feeding practices, nutrition of women, and household sanitation. The study also revealed that "low feeding frequency, low consumption of eggs, less intake of dairy products, fruits, and green leafy vegetables were associated with stunting and poor linear growth in children 6–23 months old" (Aguayo et al., 2012).

In a 2016 study by GIZ in Madhya Pradesh also reported similar findings that MDD was low (23%≥4 food groups) in the children of 6-23 months. The predominant sources of protein were dairy products, consumed by 71% of the children, and pulses/lentils consumed by 38% of the children. Only around a quarter of the population consumed vitamin-A-rich fruits and vegetables. Less than 20% of people ate vitamin-A-rich fruits and vegetables. Other Animal Source Foods (ASF) such as flashfloods eggs are consumed infrequently (3%). The Minimum Meal Frequency (MMF) and a Minimum Acceptable Diet (MAD) (6-23m) were served to around 59 percent and 16.2 percent of the children.

Iron, vitamin A, zinc, vitamin B12, folate, and calcium are micronutrients of young children aged 6-23 months in India, according to available evidence. (Brown and colleagues, 1998). Biofortification, fortification, and supplementation can also help fill in the gaps in problem micronutrients, particularly in situations where food insecurity, societal standards, scrumptiousness, and attractiveness preclude appropriate consumption of easily available foods. Dietary patterns are influenced by behavioral variables, which must also be addressed. (GAIN and UNICEF 2020).

In the present study, the overall prevalence of wasting, stunting, and underweight was 16.9%, 58.1 %, and 34.2%, respectively, whereas severe wasting, stunting, and underweight among children was 6.4 per cent, 36.7 per cent, and 12.9 per cent in the studied districts of Rajasthan. In all three areas, the prevalence of undernutrition was found to be greater in male children than female children. Similarly, Reddy et al. (2016) found that the prevalence of stunting, wasting, and underweight was 39 per cent, 22.5 per cent, and 44 per cent in the Surat region. WHO growth standards were used to assess the nutritional condition of children aged 6 to 23 months.

The COVID-19 pandemic triggered an unforeseen global and economic disaster, jeopardizing the nutritional status and lives of young infants in low- and middle-income countries (LMICs). It is predicted that due to significant decline in household incomes, low availability, and affordability and of nutrition food, there will be rise in child malnutrition, especially wasting, this is even more exacerbated when health, nutrition, and social protection service are disrupted (Akseer et al., 2020). One out of every ten deaths among children under five years of age in LMICs is attributed to severe wasting, as this group is more prone to infectious illness mortality (Black et al., 2013).

The prolonged COVID-19 pandemic continues to disrupt the worldwide supply chain, causing economic, food, and health system disruptions, and exacerbating all forms of malnutrition. According to the International Food Policy Research Institute, the epidemic will cause an extra 140 million people to fall into poverty, with a daily income of less than USD 1.9 (Laborde et al., 2020). According to a World Food Programme estimate, the number of people in LMICs facing acute food insecurity will quadruple to 265 million by the end of the year (World Food Programme, 2020).

In earlier outbreak of Ebola during 2014-16, evidence shows that there was a sharp decline in health and nutrition services access in sub-Saharan Africa (Barden et al., 2015). During the early months of COVID-19, UNICEF estimated a 30% drop in critical nutrition service coverage, which may grow to 75-100 per cent in lockdown situations, including countries with ongoing humanitarian crises (Situation Tracking, 2020).

MIRAGRODEP first forecasts indicated that, even relatively short lockdown measure can result in loss in GNI per capita in most LMICs on an average level of 79% (SD 24%) compared to the pre-COVID-19 period, this includes the significant mobility disruptions and disruptions in comparably moderate food systems. Second Forecasts indicate a huge increase in child wasting due caused due to the drop in GNI per capita, based on the micro economic models. Finally, combining each country's waste growth it's predicted of average drop of 25% in health and nutrition service coverage. The range also accounts for 15% to 50% disruption in Vitamin A promotion of improved infant nutrition, provision of providing pregnant women with micronutrient supplements and severe wasting (Headey et al. 2020).

CONCLUSION

In the studied districts of Rajasthan Dietary diversity was very poor on a daily basis as it was revealed that, except staple cereal all other food items were consumed irregularly by most of the children. Highest levels of insufficient dietary intake were Iron and Zinc, followed by Thiamin, Vitamin B6 and Calcium needs immediate action. Furthermore, mothers having no knowledge of nutrition were also significantly correlated to insufficient Folate and Vitamin A RAE intake compared to mothers who were knowledgeable about nutrition. In Rajasthan, the nourishing status of children in the age group (6–23 months), including wasting, stunting and underweight is a reason for concern which may get aggravated because of the current pandemic of COVID-19 and Omicron.

In India, nutrition is a legal entitlement for Anganwadi beneficiaries, according to the National Food Security Act 2013. IYCF practices were supported under Integrated Child Development Services

Scheme (ICDS). This pandemic has put our nutrition and health services to the test. Though many states Government including Rajasthan (studied state) have taken steps to ensure that take-home rations are delivered to homes. However, only time will tell if this technique is feasible and beneficial. Those states that had well-functioning public health care and Anganwadi facilities prior to the outbreak will undoubtedly have an advantage over others. This emphasizes the significance of health service monitoring and analysis on a regular basis.

To safeguard against the concealed dagger of COVID-19 pointed towards children (6-23 months), the most vulnerable and powerless groups particularly infants and young children, from this nutritional disaster, there is a dire need for frequent reconnaissance of these groups and include sectoral overlaps and changes such as agronomy, health, water and sanitation, community protection, and family livelihood beside creating awareness among the caretakers of the infants and children. Efforts to prevent backsliding by highlighting the importance of adequate nutrition for the first two years after birth should be made which would ensure that child malnutrition and mortality are under control. Often the effects of intake deficiencies and poor feeding practices earlier on in life are long lasting and can be difficult to recover from even later in life.

Conflict of interest: None

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