

Utilization of Supplementary Nutrition Food Packets by Pregnant and Lactating Mothers in Urban Areas of Valsad, Gujarat

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Abstract:

Introduction : Supplementary Nutrition is provided under Integrated Child Development Scheme (ICDS) to pregnant and lactating mothers. Still the prevalence of malnutrition is high. The study conducted to find out reasons behind it. **Objectives**: 1. To study utilization of supplementary food packets by pregnant and lactating mothers. 2. To study perception of beneficiaries regarding quality of food packets. **Method** : A Cross sectional study was conducted from June 2017 to August 2017 in urban area of Valsad Municipal Corporation. 22 Anganwadi centers were selected from the service area of Urban Health Training Center (UHTC). Total 132 women, 3 pregnant and 3 lactating mothers from each Anganwadi, were selected by Purposive/ Convenient sampling. Verbal consent was taken. Data was entered in Microsoft office excel and were analyzed using Microsoft Office Excel and Epi Info. Ethical approval was taken from the institutional Ethics Committee. **Results**: 86% of beneficiaries utilized the food packets, amongst which 35.2% used it alternate day or twice a week, 24.3% of them used once a week. 14% of them were not supplied/received the food packets. 29.7% of the total participants were using the food packets alone and 70.3% were sharing it with their family members. Majority of the study participants reported the taste of food packet good (56.80%) and 32.4% of them perceived it edible. **Conclusions**: Majority (85.6%) of the study subjects utilized the food packets and perceived it as good in taste and eatable. Food packets were shared by other family members of the beneficiary.

Keywords : ICDS, Pregnant Women, Quality of Food Packets, Supplementary Nutrition

Introduction:

Nutrition during pregnancy and lactation is one of the key for healthy outcome of pregnancy. Research studies in India and elsewhere have shown that if we identify pregnant women having reduction in habitual dietary intake or excess energy expenditure or whose body weight is less than 40 kg and give them adequate continuous food supplementation and antenatal care; there is substantial improvement in outcome of pregnancy, birth weight and neonatal mortality. Encouraged by such data, India has included food supplementation for pregnant and lactating women under the Integrated Child Development Services (ICDS) programme.^[1]

In pregnancy there is additional 350 kcal requirement and in first 6 month of lactation there is additional 600 kcal requirement and in 6-12 month there is 520 kcal extra required.^[2] High calorie diet

during pregnancy is helpful in providing good maternal health and preventing Low Birth Weight (LBW) and prematurity. Supplementary nutrition provided through Anganwadi centers is very helpful to fight against malnutrition and its complication.

The "Supplementary Nutrition" is one of the six services provided under the ICDS Scheme which is primarily designed to bridge the gap between the Recommended Dietary Allowance (RDA) and the Average Daily Intake (ADI). Supplementary Nutrition is given to the children (6 months – 6 years) and pregnant and lactating mothers under the ICDS Scheme.^[3]

The Government of India, on 24.2.2009, has issued revised guidelines on nutritional and feeding norms. States/Union Territories have been requested to provide supplementary nutrition to children below six years of age and pregnant and lactating mothers,

in accordance with the guidelines which have been endorsed by the Hon'ble Supreme Court vide its Order dated 22.4.2009.^[3]

Under ICDS programme supplementary nutrition is being provided, but its utilization has raised questions. With this background in mind, the current study was planned to find out utilization status of supplementary nutrition by pregnant and lactating mothers.

Aim :

To know the utilization status of supplementary nutrition by pregnant and lactating mothers in Valsad Municipal Corporation Area, Gujarat.

Objectives:

1. To study utilization of supplementary food packets by pregnant and lactating mothers.
2. To study perception of beneficiaries regarding quality of food packets.

Method :

It was a cross sectional study conducted at Anganwadi centres under Valsad Municipal Corporation Area, Gujarat during the time period of June 2017 to August 2017. With the permission of Child Development Project Officer (CDPO), 22 Anganwadi Centres (AWC) were visited from the service area of UHTC. From each Anganwadi, 3 pregnant and 3 lactating mothers were selected using the convenience sampling method and thus 132 beneficiaries were interviewed. Informed verbal consent was taken prior to data collection. The beneficiaries were questioned individually by visiting their home. Various information including bio data, registration at AWC, supply of nutritional food packets and frequency of its usage, amount used, side effects if any was taken. Then various aspects of nutritional supplement packets like storage condition, used/unused, hygiene, expiry date etc were observed. Ethical approval was taken from the institutional Ethics Committee. Data entry was done using Microsoft office excels and were analyzed using Microsoft Office Excel and Epi Info.

Results :

The mean age of the pregnant/Lactating women included in this study was 25.70 years (Standard Deviation (S.D.) =4.40). Majority of the beneficiaries were educated up to primary level (58.30%) followed by secondary level (23.50%) and higher secondary level (12.12%). However out of 132 study subject, 2 (1.5%) of them were illiterate. The mean of the number of family members in the participant's family was 5.48 (S.D. =2.68). (Table 1)

Table 1: Sociodemographic Profile of Study Participants: (n=132)

Variable	Frequency (%)
Education	
Primary	77 (58.30)
Secondary	31 (23.50)
Higher Secondary	16 (12.12)
Graduate	6 (4.55)
Illiterate	2 (1.51)
Religion	
Hindu	109 (82.58)
Muslim	23 (17.42)
Family members	
≤5	81 (61.36)
6-10	45 (34.09)
>10	6 (4.54)
TOTAL	132 (100)

The mean of registered month of Pregnant/Lactating mothers at Anganwadi centers was 7.77(S.D. =3.12).The mean of total number of packets received till now by participants was 27.02 (S.D. =15.44).The mean of total months of usage of food packets by beneficiaries was 6.65(S.D. =3.87).

The food packets were found with only 100 out of 132 beneficiaries at the time of visit, but it was used by 111 beneficiaries (Table 2). With 88%

participants, the storage condition of food packets was good. With 71.2%, the food packets were used to half of the quantity, while in 12.6% only third or less portion had been used. (Figure 1)

Figure 1: Consumption of portion of food packets by participants (n=111)

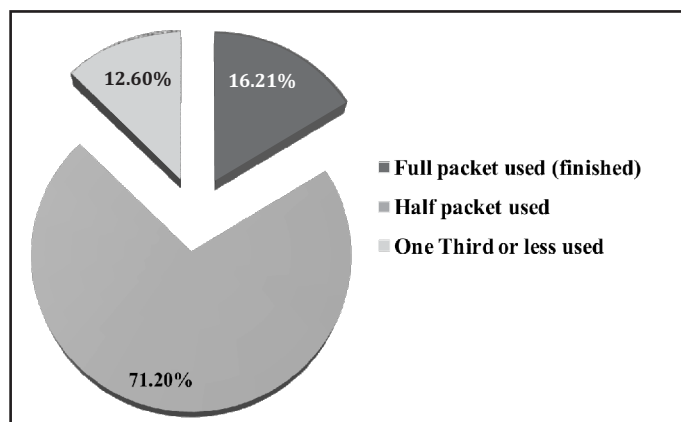
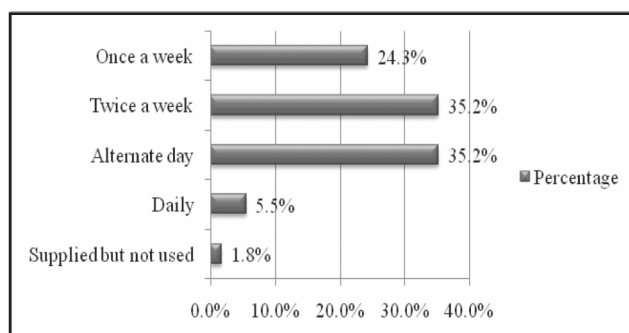


Table 2: Availability and consumption of food packets by study participants(n=132)

Findings	Frequency (%)
Food Packets not supplied	19(14.4)
Packets supplied but not used	2(1.5)
Food packets used	111(84.1)

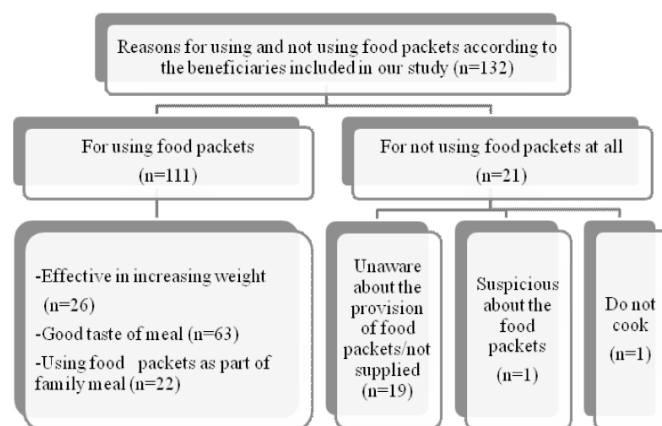
35.2% of the nursing women have preference of using food packets twice and 35.2% alternate in a week. However 24.3% of them preferred once a week usage and 1.8% of them have not used it at all. There are only 6 out of 111 participants who used the food packets daily. (Figure 2)

Figure 2: Frequency of food packets use in a week: (n=111)



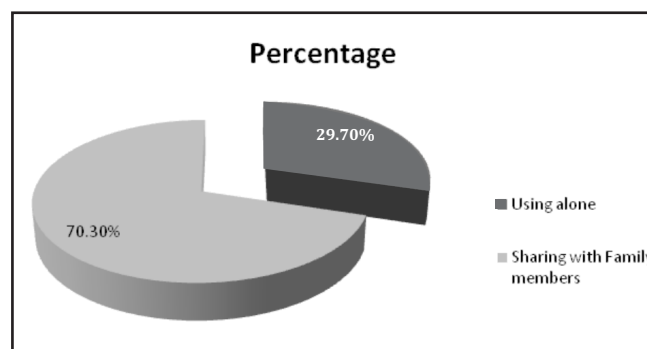
Out of the total participant mothers using the food packet, 23.4% of them perceived that they gained weight. However 14.40% of the total beneficiaries in the study did not received the food packets at all. The reasons for not utilizing the food packets were- not aware about it/Not supplied, feeling it of suspicious quality and not willing to use. (Figure 3)

Figure 3: Reasons for Utilization and Non-utilization of food packets according to the beneficiaries



Food packets provided to pregnant and lactating mothers should be used ideally by them alone. However, it was found that 70.30% of the participants using the food packets were sharing it with their family members and rest used it alone. (Figure 4)

Figure 4: Sharing of food packets by study participants: (n=111)

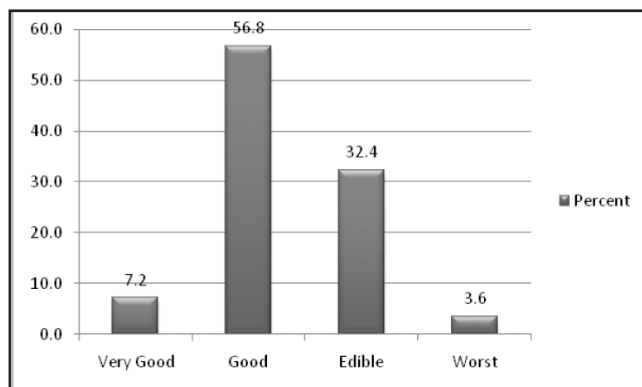


The sharing of food packets with other family members ranges from single family member to more than 8 family members. In 62.5% the food packets were shared with 3 to 5 family members.

Majority of the study participants reported the taste of food packet good (56.8%). 32.4% of them

perceived it edible, while only 3.6% perceived it worst to taste (Figure 4). However 2 of 113 participants have never tasted food packets.

Figure 5: Taste perception of the food packets by the pregnant and lactating mothers using the food packet ever: (n=111)



Discussion:

14.40% of the total participants in this study were not supplied/received food packets by Anganwadi centres. The mean of registered month of Pregnant/Lactating mothers at Anganwadi centers is 7.77. The mean of total number of packets received till now by participants is 27.02.

Extruded Fortified Blended Premix: Dense Micronutrient Fortified Extruded Blended Take Home Ration (THR) like Sukhdi (1 packet of 1 kg per month), Sheera (3 packets of 500 gm each) and Upma (2 packets of 500 gm each) are provided to pregnant women, lactating mothers and adolescent girls. 7.74 lakhs pregnant and lactating mothers and 11.61 lakhs adolescent girls received THR in 2016 (as per the ICDS MPR).^[4]

The mean of registered month of Pregnant/Lactating mothers at Anganwadi centers is 7.77 (S.D. =3.12). The mean of total months of usage of food packets by beneficiaries is 6.65 (S.D. =3.87). So the average number of beneficiaries in the study is using the food packets since their registration at the Anganwadi. And according to a study the integrated nutrition interventions led to a significant decline in malnutrition among preschool children in the ICDS population compared with the non-ICDS groups that received nutrition, health care and education services through separate programmes.^[5]

One of the established newspapers in India i.e. "The Hindu" (Karnataka Publication) reported in 2010 that "children and pregnant women have been rejecting the food served to them in the Anganwadi centres, and the Anganwadi workers urged the authorities to stop the supply of ready-to-eat food and restore the earlier system of supplying food grains."^[6] The other newspaper, the times of India (Mumbai publication) reported (July 2017) that children have complained about the unpalatability of the food served at Anganwadi centres.

Other newspaper "The Hindustan Times" (Mumbai Publication) reported on July 2017 as follows 'several studies have shown that the ready-to-cook food taste bad, cause indigestion and is mostly fed to cattle and other livestock. They also mentioned about the study conducted by NGO (RachnaKhoj) who concluded that around 98% of the children did not like the taste of the 'Take Home Ration' (THR) supplements. 40% of the families said that it smelled bad and was difficult to cook and some even found worms in the sealed packets.' Unlike the various news, in our study, we found that majority of the study subjects perceived the taste of the food packets as good to eatable. Moreover, all of the participants in our study have the positive view about the quality of the food packets. And its usage which is not matching the ideal guidelines is mainly due to lack of knowledge, unawareness and low financial status of the participants.

One more news which flashed in "The Indian Express Newspaper" (Mumbai Publication) in October 2016 highlighted that "the local Anganwadi gave the breakfast and lunch of "laddo" and "khichdi" that cost Rs 11 for a child, along with 'take home ration' of 1 kg sheera. But the entire family consumes the ration, meant to last a month, in just 10 days." We found the same in our study as 60.60% of the total participants in our study did not use the food packets alone.

Out of the total mothers using the food packet, 32.74% of them perceived that they gained weight. One of the study concluded that a comparison of un-supplemented ICDS group with non-ICDS women showed 44.2% reduction in pre-term births and

23.1% reduction in low birth weights, which were due to other inputs provided under ICDS. Increased weight gain in pregnancy, length of gestation, caloric intake and hemoglobin level were significantly associated with birth weight. Nutrition supplement given to pregnant women in ICDS area improved weight gain of women during pregnancy and birth weight of babies, with reduction in pre-term deliveries and incidence of low birth weight.^[7] The findings of one of the other study showed that complete utilization of all services resulted in significant improvement in nutritional status as assessed through anthropometric indices viz height/age, weight/age, and weight/height. Data on morbidity among children showed that the frequency and duration of illness were significantly lower when the services were utilized fully, than when utilized partially or not utilized at all. Thus major efforts should go into the convergence of services and their full utilization by the community.^[8]

During our informal conversation with the Anganwadi centres worker, we came to know about the loop-holes of the take home ration scheme implemented under ICDS. Anganwadi worker gave us the ideal data on distribution of the food packets and its regularity and also said that all the beneficiaries registered under the Anganwadi centres are made aware and counseled properly according to the guidelines for the use of take-home rations. However during our door to door visit to the beneficiary, we found that the amount of food packets was inadequate and they were lacking the knowledge about the proper use of food packets.

Conclusion :

85.60% of the pregnant and lactating mothers utilized the food packets and most of them have received the last food packets just 1 month ago. None of the study subjects have ever got the food packets which are not edible. Only one out of 20 women used the food packets on daily basis. Most of the participants found the contents of food packets good to average in taste but prefer using it less frequently in a week. Moreover, many of the participants used the food packets as their family meal and share the

food packets with other family members. None of the participants had any side effects by using food packets. On observation all the packets were found within the expiry date.

Recommendation :

Taste of the food packets should be improved at manufacture level. The women should be educated about different nutritious recipes from the food packets to avoid monotonous taste. The supplementary nutrition should be provided in a form which can be used on daily basis.

Limitations :

Because of time constraints, the sample size is small and the study will be expanded in future.

Declaration :

Funding: Nil

Conflict of Interest: Nil

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