PARTNERING WITH LOCAL WOMEN GROUPS FOR INTEGRATION OF FOOD, NUTRITION, HEALTH AND WASH PRACTICES (FNHW) CONCEPTS IN SELF HELP GROUP MEMBERS UNDER DEENDAYAL ANTYODAYA YOJANA-NATIONAL RURAL LIVELIHOOD MISSION (DAY-NRLM) IN WAGHODIA BLOCK OF VADODARA DISTRICT

APRIL 2025

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(Public Health Nutrition)

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A Dissertation Submitted in Partial Fulfillment of the Requirement for the Degree of Master of Science

(Faculty of Family and Community Sciences)

Foods and Nutrition

(Public Health Nutrition)

BY

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CERTIFICATE

This is to certify that the research work presented in this thesis has been carried out independently by ***Ms. AASTHA BALONI*** *under the guidance of Dr. Hemangini Gandhi in pursuit of Masters of Science (Faculty of Family and Community Sciences) with major in Foods and Nutrition (Public Health Nutrition) and this is her original work.*

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ABBREVIATIONS

AAY	: Antyodaya Anna Yojana
ANC	: Antenatal Care
ANM	: Auxiliary Nurse Midwife
APL	: Above Poverty Line
ASHA	: Accredited Social Health Activist
AWC	: Anganwadi Centre
AWW	: Anganwadi Worker
PM JAY	: Pradhan Mantri Jan Arogya Yojana
BC	: Behavior Change
BCC	: Behavior Change Communication
BMI	: Body Mass Index
BPL	: Below Poverty Line
CAP	: Convergent Action Plan
CBE	: Community Based Events
CC	: Cluster Coordinator
CEO	: Chief Executive Officer
CI	: Confidence Interval
CLF	: Cluster Level Federation
CNNS	: Comprehensive National Nutrition Survey
CRP	: Community Resource Person
CVD	: Chronic Vascular Diseases
DAY-NRLM	: Deendayal Antyodaya Yojana - National Rural Livelihoods Mission
DDS	: Dietary Diversity Score
FANTA	: Food and Nutrition Technical Assistance
FHW	: Female Health Worker
FNHW	: Food, Nutrition, Health, and WASH
GBV	: Gender-Based Violence
GLPC	: Gujarat Livelihood Promotion Company
GLV	: Green Leafy Vegetables
GPDP	: Gram Panchayat Development Plan
HWC	: Health and Wellness Centre
ICDS	: Integrated Child Development Services
IEC	: Information, Education and Communication
IFA	: Iron Folic Acid
IFAS	: Iron & Folic Acid Supplementation
IYCN	: Infant Young Child Nutrition
MDD	: Minimum Dietary Diversity
MDD-W	: Minimum Dietary Diversity Score for Women
MDM	: Mid-Day Meal
MGNREGS	: Mahatma Gandhi National Rural Employment Guarantee Scheme
MHM	: Menstrual Hygiene Management

MUAC	: Mid-Upper Arm Circumference
NCD	: Non-Communicable Diseases
NFHS	: National Family Health Survey
NFSA	: National Food Security Act
NGO	: Non-Governmental Organization
NITI	: National Institution for Transforming India
NRLM	: National Rural Livelihood Mission
NSAP	: National Social Assistance Programme
OBC	: Other Backward Class
OR	: Odds Ratio
PCOS	: Polycystic Ovarian Syndrome
PDS	: Public Distribution System
PM-POSHAN	: Pradhan Mantri Poshan Shakti Nirman
PMAY	: Pradhan Mantri Awas Yojana
PMMVY	: Pradhan Mantri Matru Vandana Yojana
PRI	: Panchayat Raj Institutions
RDA	: Recommended Dietary Allowances
RKSK	: Rashtriya Kishor Swasthya Karyakram
RTI	: Reproductive Tract Infections
SAC	: Social Action Committee
SBCC	: Social and Behavior Change Communication
SBM	: Swachh Bharat Mission
SC	: Schedule Caste
SCF	: Special Convergence Fund
SDG	: Sustainable Development Goals
SERP	: Society for Elimination of Rural Poverty
SHG	: Self-Help Group
SRLM	: State Rural Livelihoods Mission
ST	: Schedule Tribes
THR	: Take Home Ration
TLM	: Taluka Livelihood Manager
UNICEF	: United Nations Children’s Fund
VHSND	: Village Health, Sanitation and Nutrition Days
VO	: Village Organization
VPRP	: Village Poverty Reduction Plan
WASH	: Water, Sanitation, and Hygiene
WHO	: World Health Organization
WRA	: Women of Reproductive Age

GLOSSARY

- **Food, Nutrition, Health and WASH (FNHW):** Under DAY-NRLM, FNHW (Food, Nutrition, Health, and WASH) is a crucial component that focuses on enhancing the health and nutrition status of Self-Help Group (SHG) members through a multi-sectoral approach, emphasizing behaviour change and access to services.

- **Cluster Level Federation (CLF):** In the context of the Deendayal Antyodaya Yojana-National Rural Livelihood Mission (DAY-NRLM), a Cluster Level Federation (CLF) is a secondary level federation of Self- Help Groups (SHGs) representing a cluster of villages, aiming to achieve economies of scale and critical mass for solidarity, and to serve as a platform for greater collective action, increased access to markets, and more organized capacity building.

- **Village Organization (VO):** In the context of the National Rural Livelihoods Mission (NRLM), a VO stands for Village Organization, which is the primary federation of Self-Help Groups (SHGs) at the village/hamlet level, acting as a platform for community participation and addressing poverty and vulnerability.

- **Self Help Group (SHG):** In the context of the Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM), a Self-Help Group (SHG) is the primary building block of the community institutional design, focusing on empowering women from rural poor households through collective savings, credit, and economic activities.

- **Social Action Committee (SAC):** These people directly address women's empowerment by working on Gender-Based Violence (GBV), child marriage, and school dropouts among girls.

- **Underweight:** According to the World Health Organization (WHO), underweight in adults is defined as a Body Mass Index (BMI) less than 18.5 kg/m². In other words, it can be defined as low weight for age.

- **Chronic Energy Deficient (CED):** As per Asia Pacific Classification, BMI <18.5 is considered to be Chronic Energy Deficient.

- **Overweight/Obesity:** According to the World Health Organization (WHO), overweight is defined as a Body Mass Index (BMI) of 25 or more, while obesity is defined as a BMI of 30 or more.

- **Anemia:** A condition characterized by a deficiency in the number of red blood cells or the amount of haemoglobin (a protein in red blood cells that carries oxygen) in the blood, leading to reduced oxygen-carrying capacity.

- **Sustainable Development Goals (SDGs):** The Sustainable Development Goals (SDGs), also known as the Global Goals, are 17 universal goals adopted by the United Nations in 2015 to address global challenges and achieve "peace and prosperity for people and the planet" by 2030.

- **Balanced diet:** According to the World Health Organization (WHO), a balanced diet involves consuming a variety of foods, largely plant-based, to meet energy, protein, vitamin, and mineral needs, while balancing energy intake with expenditure.

- **Unhealthy foods:** The WHO defines unhealthy foods as those high in calories, added sugars, saturated or trans fats, and/or sodium, while being low in essential nutrients, often highly processed and lacking vitamins, minerals, and other nutrients.

- **Dietary diversity:** According to the World Health Organization (WHO), dietary diversity is defined as the number of different food groups or foods consumed over a given reference period, often used as a proxy for nutrient adequacy and a positive indicator of a healthy diet.

- **24 hr dietary recall method:** A method of dietary assessment where individuals are interviewed to recall and describe all food and beverages consumed in the past 24 hours, typically from midnight to midnight, to understand dietary habits.

- **MDD-W:** For women of reproductive age, the Minimum Dietary Diversity for Women (MDD-W) indicator, developed by FAO and partners, recommends consuming food items from at least five out of ten defined food groups in the previous day or night to improve micronutrient adequacy.

- **Adequate dietary diversity:** According to the World Health Organization (WHO), adequate dietary diversity is defined as consuming foods from at least five out of the ten defined food groups within a 24-hour period.

- **Undernutrition:** According to the World Health Organization (WHO), undernutrition encompasses deficiencies, excesses, or imbalances in a person's intake of energy and/or nutrients, including wasting (low weight for height), stunting (low height for age), underweight (low weight for age), and micronutrient deficiencies.

- **Mamta Divas:** Mamta Divas, which translates to "Maternity Day," is a fixed-day, fixed-site initiative focused on providing maternal and child health services at the grassroots level. It's a Gujarat-specific version of the nationally known Village Health and Nutrition Day (VHND).

- **Suposhan Samvad:** Suposhan Samvad" translates to "Nutrition Dialogue" and refers to community-based events, particularly in Anganwadi centers, focused on promoting nutrition and health awareness for pregnant and lactating mothers, and their families, often held on the first Tuesday of the month.

- **Baltula Divas:** A special day focusing on child well-being, often held on the second Tuesday of each month, where children's weight and height are measured.

- **Annaprashan Divas:** Annaprasan Divas, celebrated in Anganwadi centers, marks the introduction of solid food to infants, typically on the third Tuesday of each month, focusing on complementary feeding and promoting healthy eating habits.

- **Purna Divas:** It is a comprehensive initiative designed for adolescent girls aged 15-18 in Gujarat which focuses on improving their nutritional status, health, and life skills while empowering them through education, vocational training, and exposure to public services.

- **Mid-Day Meal (MDM):** A school lunch program, specifically in India, that provides free, cooked meals to children in government and government-aided schools to improve their nutritional status and support their education.

- **Ayushman Bharat-PM JAY:** It is the largest health assurance scheme in the world which aims at providing a health cover of Rs. 5 lakhs per family per year.

- **First 1000 days:** It refers to the period from conception to a child's second birthday, a critical window for establishing the foundations for lifelong health and development, including brain development, immunity, and growth.

- **ANC care:** Antenatal care (ANC), also known as prenatal care, is the healthcare provided to pregnant women and adolescent girls to ensure the best health conditions for both mother and baby during pregnancy, promoting a healthy pregnancy and birth.

ABSTRACT

BACKGROUND: The Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM) has adopted an integrated approach that includes Food, Nutrition, Health, and WASH (Water, Sanitation, and Hygiene) [FNHW] for the holistic development of Self-Help Group (SHG) members and their families. If proper nutrition is taken along with utilization of health services and appropriate sanitation and hygiene, it will have less expenditure on health/diseases which will have increased savings and will lead to good overall wellbeing and improved quality of life.

OBJECTIVE: To partner with local women groups for integration of FNHW concepts in SHG members under DAY-NRLM in Waghodia Block of Vadodara District

METHODOLOGY: Under Vadodara District, there are two blocks that are selected by Gujarat Livelihood Promotion Company (GLPC) i.e., Vadodara Rural and Waghodia. Out of two blocks, Waghodia block was selected purposively and in all 120 members were enrolled for the study. The study was conducted in three phases. In **Phase I**, baseline assessment of VO representatives with a specific focus on assessing the knowledge on selected FNHW components, dietary diversity and services of various national programs under ICDS, PDS, PM-POSHAN and Ayushman Bharat- PM JAY was conducted.

In **Phase II**, based on the knowledge and practices on FNHW components of VO members, topics were identified and training module and relevant handouts were developed and distributed to VOs for further sensitizing of SHG members. All VOs were provided one-day training session on various topics under FNHW concepts using various IEC materials and handouts and action plan was made to encourage SHG groups for FNHW components.

In Phase III, to evaluate the impact of the training and action plan strategy, post data was collected on their knowledge related to selected FNHW components, dietary diversity and services of various national programs under ICDS, PDS, PM-POSHAN and Ayushman Bharat-PM JAY of VOs after 3 months. Monitoring was done for 3 months for all the members of VOs whether they were encouraging discussion of FNHW concepts in SHG meetings regularly through checklist and random monitoring of it was done through researcher and concerned authorities.

FINDINGS: A majority (35%) of members were aged 30-40, with 89% from reserved categories and 36% from BPL households. Nutritional challenges were evident, as 45% were overweight/obese, while 24% suffered from chronic energy deficiency. At baseline, awareness of breastfeeding practices was moderate, with 90% knowing about exclusive breastfeeding, but only 35% aware of continued breastfeeding until two years. While 95% had heard about anemia, most lacked knowledge of its symptoms. Despite 95% consuming a diverse diet, knowledge of food groups was limited. Additionally, 78% owned an Ayushman Card, and 81% availed of PDS rations, but awareness of national services and CBOs remained weak.

All the enrolled 120 VO/SHGs were sensitized to initiate discussion about FNHW concepts in their respective SHG meetings. Intervention was for 3 months to implement the action plan. Training sessions on FNHW concepts improved awareness, with 50% of VO/SHG members understanding its link to livelihoods. All 10 VOs incorporated FNHW topics in their meetings, though SHG meeting participation was low (29%). While VO meetings were conducted regularly (97%), only 42 out of 168 SHG meetings took place during 3 months intervention period. ASHA, AWW, and ANM participation in meetings was limited (13% in VO meetings, 24% in SHG meetings). Counseling efforts for pregnant women, lactating mothers, and adolescent girls were inadequate, covering only 20%, while newly married women received the least attention (10%). Major village issues included poor drainage, irregular water supply, and a lack of awareness about government services, highlighting the need for stronger community engagement and service accessibility.

Post training, significant improvement were seen in knowledge aspects of IYCN practices, anaemia, WASH practices, food groups, balanced diet and nutrients, undernutrition, unhealthy dietary patterns, number of food groups consumed, services of ICDS, Community Based Events (CBEs) and MDM.

CONCLUSION: Sensitization on integrating FNHW with livelihoods improved members' understanding of FNHW. While VO members successfully conducted monthly meetings, only one-third of SHG members could initiate integration of FNHW in their SHG meetings. There is a need for a built-in monitoring system under the State Livelihood Mission to ensure the integration of FNHW in SHG meetings. Strengthening this approach will improve nutrition, service utilization, and overall well-being, contributing to SDG goals 1, 2, and 3.

INTRODUCTION

BACKGROUND

The Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM) has adopted an integrated approach that includes Food, Nutrition, Health, and WASH (Water, Sanitation, and Hygiene) for the holistic development of Self-Help Group (SHG) members and their families. It is promoting the FNHW program through SRLMs and partner organizations to raise awareness among Self-Help Group (SHG) members. The program strives to build the capacities of SHG women, aiming to improve human development indicators and amplify the impact of its interventions. It seeks to create momentum for social and behavior change through the Behavior Change (BC) model, with a strong focus on Health, Nutrition, Sanitation, Education, and Gender Issues. Further, these FNHW interventions are embedded in other key components of the broader program viz., Institution Building, Capacity building, Financial Inclusion, Farm livelihoods, non-Farm livelihoods, Gender, Social Inclusion and Convergence with PRIs.

Lucrative and stable livelihoods are necessary for access to diverse foods; at the same time, good health and nutrition are a condition for inclusive livelihood development. Recognizing this link, 16 states have initiated various activities targeted particularly at women and children who fall into the 1,000-day window of opportunity (from conception to 2 years of age).

Improving nutrition for women and children remains a high public health priority in India. Women's groups are becoming important in delivering health and nutrition interventions while continuing to address gender and livelihood challenges. India’s key poverty alleviation programme Deendayal Antodaya Yojana- National Rural Livelihoods Mission (DAY-NRLM) recognized that members of its women self-help groups (SHGs) were spending their savings on health expenses, due to recurrent illness impacting their income and well-being. In response, the food, nutrition, health, WASH (FNHW) and social development initiatives were integrated within the programme. Under the DAY-NRLM programme, the FNHW interventions led by women’s collectives are focused on behaviour change within communities to adopt practices for better health and nutrition outcomes, demand generation and linkage with services and entitlements. SHGs and their federations play a key role in engaging communities by discussing FNHW topics in their regular meetings and supporting mobilisation for public

nutrition and health services. On similar lines, Swabhimaan (2017-2021) a research pilot was initiated by State Rural Livelihoods Mission under DAY-NRLM in three states; Bihar, Chhattisgarh and Odisha, with an objective to generate operational know-how on how women's collectives can be engaged in FNHW interventions and how DAY-NRLM self-help groups are leading change: - Women's collectives in Odisha are driving health reforms - In Bihar student gardeners improve nutrition and health metrics - Women collectives tackle teen sex, contraception and nutrition Relevant materials on FNHW programming by women's collectives are available in the resources section. **(UNICEF)**

What are Local women groups (SHG members)?

- **Self-Help Groups (SHGs)** are informal associations of people who choose to come together to find ways to improve their living conditions.
- They can be defined as self-governed, peer controlled information group of people with similar socio-economic background and having a desire to collectively perform common purpose.
- Villages face numerous problems related to poverty, illiteracy, lack of skills, lack of formal credit etc. These problems cannot be tackled at an individual level and need collective efforts.
- Thus, SHG can become a vehicle of change for the poor and marginalized. SHG rely on the notion of "Self Help" to encourage self-employment and poverty alleviation.

Their role is to **build the functional capacity** of the poor and the marginalized in the field of employment and income generating activities, **resolves conflicts** through collective leadership and mutual discussion, **work as a collective guarantee system and are** the most effective mechanism for **delivery of microfinance services** to the poor. Institutional structure of SHGs is presented in **Fig. 1.1.**

Fig. 1.1: Institutional structure of SHGs

Source: DAY-NRLM

Role of Social Action Committee (SAC):

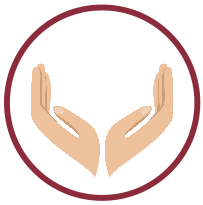
Following the NRLM guidelines, several sub-committees were established at each level with the objective of social inclusion and enabling outreach to the poorest of poor. The formation of Social Action Committees (SAC) within the existing federated structure of SHGs was one such step to directly address women's empowerment by working on Gender-Based Violence (GBV), child marriage, and school dropouts among girls.

ACTIVITIES & FUNCTIONS CONDUCTED BY SAC:

i. Including gender agenda in SHG and VO meetings.
ii. Resolving issues identified in Village Poverty Reduction Plan (VPRP); support women approaching with issues.
iii. Becoming a link for SAC, SHG and VO members to access schemes and entitlements.
iv. Developing VO level gender action plan.
v. Maintaining records.
vi. Monitoring progress of the demands raised at the Gram Panchayat level.
vii. Monitoring the work of gender point person.

Key interventions adopted by DAY-NRLM:

The Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM) has adopted an integrated approach that includes Food, Nutrition, Health, and WASH (Water, Sanitation, and Hygiene) for the holistic development of Self-Help Group (SHG) members and their families.



1. **Food, Nutrition and Health**
    - 1000 Days window - institutional delivery, colostrum feeding, prenatal and antenatal care, exclusive breastfeeding, and complementary feeding
    - Dietary diversification
    - Reducing anemia
    - Menstrual hygiene - working with women and adolescent girls
    - Development of Nutri-enterprises

2. **WASH**
    - Usage of sanitary toilets
    - Hand washing practices especially at 3 critical times
    - Management of waste at home
    - Development of sanitation-related enterprises

Integration of Food, Nutrition, Health and WASH (FNHW) under DAY- NRLM:

The FNHW program under DAY-NRLM is built on the principle that addressing health and nutrition requires a multi-sectoral approach, which involves creating strong linkages with key sectors such as sanitation, agriculture, and livelihoods. This approach is centered on utilizing the established strengths of institutional platforms for the poor, particularly Self-Help Groups (SHGs) and their federations, to drive the implementation of integrated health and nutrition initiatives. By mobilizing these community-based groups, the program aims to enhance access to essential services, promote healthy practices, and improve overall well-being at the grassroots level.

The core of a sustainable livelihoods program involves building social capital and developing community institutions, creating a strong foundation for implementing social development interventions. Similarly, an integrated health and nutrition program operates at multiple levels,

acknowledging that behaviors are influenced not only by individual choices but also by social norms, accessible institutions, and available goods and services. Given its comprehensive scope, the DAY-NRLM serves as an effective platform to address the root causes of poor health, including high malnutrition rates.

In 2006, Andhra Pradesh, under the Society for Elimination of Rural Poverty (SERP), was the first state to incorporate health and nutrition into its livelihood program. The program recognized the complementary roles of health and nutrition service providers and the Self-Help Group (SHG) households they served. To integrate medical and social health, the program employed social mobilization strategies focused on health and nutrition, alongside the development of local social capital. Efforts were made to include health and nutrition topics in regular SHG and federation meetings, aiming to promote positive maternal and child health practices among SHG households. Convergence efforts facilitated access to public health system entitlements, contributing to reduced household health expenditures.

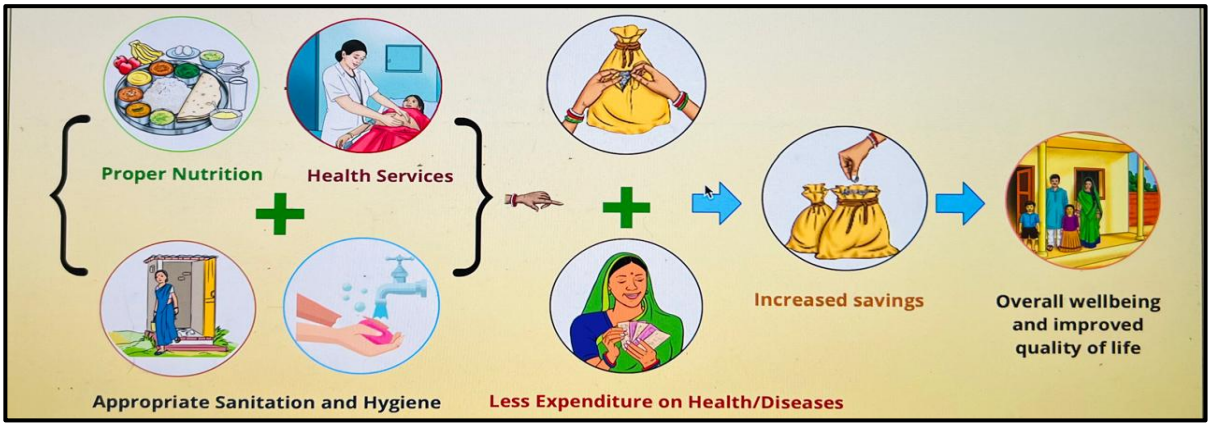
This model was later replicated in Bihar with support from the Bill & Melinda Gates Foundation, which helped implement interventions through the SHG network at the village level. The focus was on deploying Behavior Change Communication (BCC) modules in SHG meetings, conducting home visits for "first 1000 days" target groups, organizing awareness drives, and providing funds for sanitation and health issues.

In 2016, DAY-NRLM established the Special Convergence Fund (SCF) to develop community-centric, community-led convergence models. The SCF aims to engage with line departments to access schemes and entitlements and to create a more responsive system. The SCF's objective is to drive convergent planning and demonstrate sustainable mechanisms for mainstreaming results-based convergence with other government programs, including the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Pradhan Mantri Awas Yojana (PMAY), Swachh Bharat Mission (SBM), and National Social Assistance Programme (NSAP). This initiative has been implemented in nine states: Bihar, Chhattisgarh, Jharkhand, Karnataka, Maharashtra, Rajasthan, Tamil Nadu, Uttar Pradesh, and West Bengal.

Why to Integrate Food, Nutrition, Health and WASH (FNHW) in DAY-NRLM?

If proper nutrition is taken along with utilization of health services and appropriate sanitation and hygiene, it will have less expenditure on health/diseases which will have increased savings and will lead to good overall wellbeing and improved quality of life. This will in return keep one happy and healthy. Relationship between FNHW and quality of live is presented in **Fig. 1.2.**

Fig. 1.2: Relationship between FNHW with overall wellbeing and quality of life

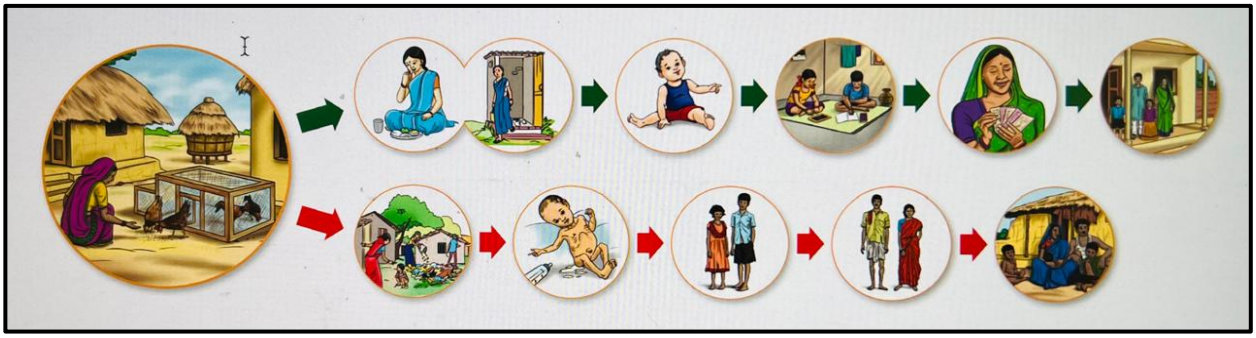


Source: Aajeevika

Linkage of Food, Nutrition, Health and WASH (FNHW) with Livelihood:

Livelihoods/increased income and good health are interdependent to each other **(Fig.1.3)** One will be able to earn better if one is healthy and to remain healthy a person has to pay attention to good food, nutrition, health and WASH practices, not only for oneself but for the entire family. Poor health due to inappropriate nutrition and sanitation may lead to long lasting adverse and poor conditions for the family.

Fig. 1.3: Linkage of FNHW with Livelihood



Source: Aajeevika

Concepts covered under FNHW components:

Linking Health, Nutrition, Hygiene and Sanitation, Education with Livelihood

Balanced Diet and Dietary Diversification

First 1000 Days Approach and ANC care

Child Feeding Practices

Anemia in vulnerable groups and its preventive measures

Nutrition for Adolescent girls

WASH Practices

Services of national programs under ICDS, PDS, PM-POSHAN, Ayushman Bharat- PM JAY

Factors contributing to Nutritional problems:

India has indeed made significant strides in improving household incomes, agricultural productivity, and overall child survival rates over the past two decades. However, the country still faces major challenges related to malnutrition, anemia, stunting, and wasting, particularly among women and children. These nutritional challenges have persisted despite economic growth and poverty reduction, highlighting deeper, structural issues that need addressing. The various factors contributing to these persistent nutrition problems are:

1. **Malnutrition and Anemia:**

- According to the National Family Health Survey (NFHS-5), nearly half (around 52%) of pregnant Indian women aged 15 to 49 are anemic. Anemia in women is often due to a lack of iron and other essential nutrients, which can result from poor dietary intake, high rates of parasitic infections, and limited access to healthcare.
- Over one-third of Indian women in the reproductive age group have a low body mass index (BMI), indicating undernutrition and poor overall health.
- Among children under the age of five, 35.5% are stunted (low height-for-age), indicating chronic malnutrition, while 32.1% are underweight (low weight-for-age), reflecting a combination of both acute and chronic malnutrition.

2. **Food Insecurity and Poor Nutrition:**

Various factors contributing to food insecurity and poor nutrition are:

- **Inadequate Access to Food:** Despite improvements in food production, access to adequate and nutritious food remains unequal. Economic disparities, coupled with the rising costs of nutritious foods like fruits, vegetables, and proteins, make it difficult for many families, especially those in rural and marginalized communities, to afford a balanced diet.

- **Structural Inequalities:** Deep-rooted structural inequalities such as gender discrimination, caste hierarchies, and social exclusion limit access to resources, healthcare, and nutrition for many groups. Women and girls, in particular, often face discrimination that affects their nutrition, as they may eat last or eat less nutritious food than male family members.

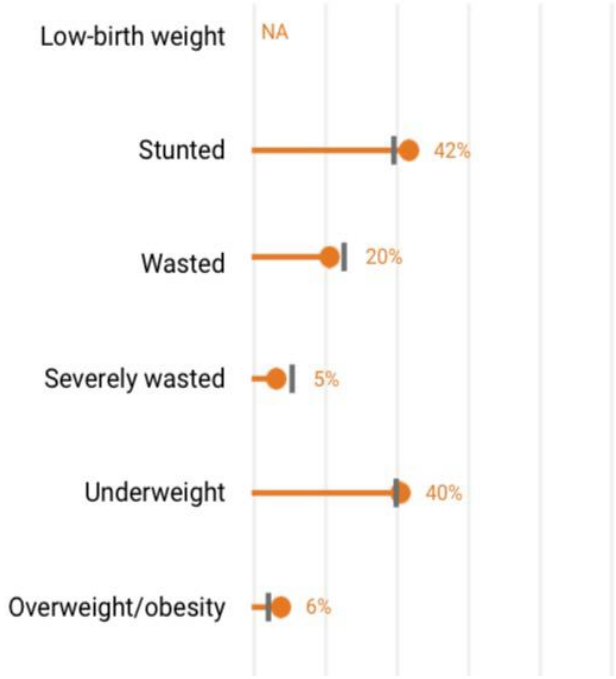
- **Lack of Water and Sanitation:** Poor access to clean water, sanitation, and hygiene significantly contributes to malnutrition. Waterborne diseases, diarrheal infections, and poor hygiene practices can lead to nutrient loss and hinder the absorption of nutrients, exacerbating malnutrition among children and adults alike.

- **Micronutrient Deficiencies:** Many Indians suffer from deficiencies in essential vitamins and minerals such as iron, vitamin A, iodine, and zinc. These deficiencies can lead to severe health problems, including impaired cognitive development, weakened immunity, and higher morbidity and mortality rates.

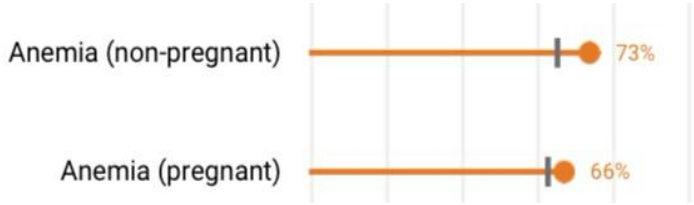
- **Illiteracy and Lack of Nutrition Awareness:** Lack of education and awareness about proper nutrition and dietary practices further compounds the problem. Many people may not be aware of the nutritional value of certain foods or the importance of a balanced diet, leading to poor food choices and feeding practices, especially in rural and underprivileged areas.

Fig.1.4: Magnitude of Malnutrition (NFHS-5 data) in Vadodara district

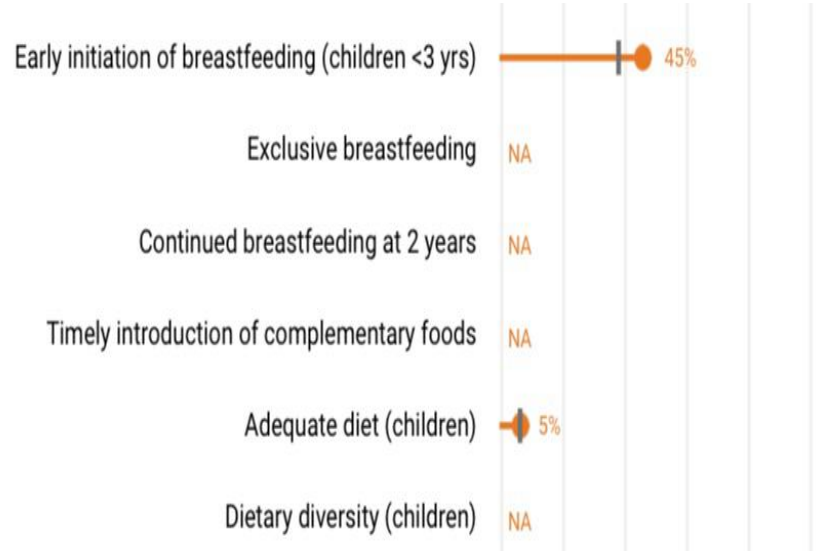
Malnutrition in Children



Anemia in pregnancy

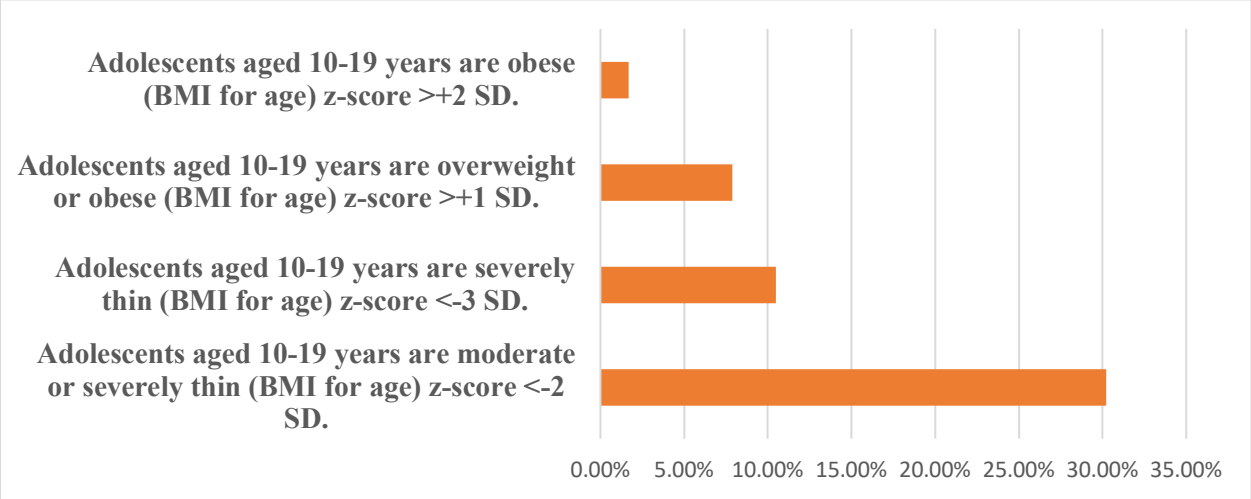


IYCN practices



Nutritional Status of Women of Reproductive Age (WRA) (15-49 years)

Nutritional Status of Adolescents of Gujarat as per CNNS data (2016-18)



ANC Utilization

POSHAN Abhiyan and NITI Aayog also reinforces to improve malnutrition in vulnerable groups to achieve nutrition-related Sustainable Development Goals (SDGs). Integration of FNHW into DAY-NRLM will serve as a powerful tool for achieving some of the indicators of various SDG goals like Goal 2 and Goal 3.

SDG goals:

There are 17 SDG goals. The Sustainable Development Goals (SDGs) were established by the United Nations General Assembly with the aim of achieving them by 2030. SDGs contribution of current research is linked with the following SDG:

SDG 2: Zero Hunger

Goal 2 focuses on ending hunger and malnutrition, ensuring that everyone, especially children, has access to sufficient and nutritious food throughout the year. It also aims to double agricultural productivity and promote sustainable food production systems. The key objectives are to end hunger, achieve food security, improve nutrition, and promote sustainable agriculture.

According to the SDG India Index 2023-24 published by NITI Aayog, Gujarat scored 41 out of 100 on SDG 2 (Zero Hunger) indicators, which is below the national average of 52. However, Gujarat's performance has declined from a score of 49 in the 2018 baseline index, while the national average has increased from 48. This indicates that while the national average is improving, Gujarat's performance on Zero Hunger has deteriorated.

SDG 3: Good Health and Well-being

Goal 3 aims to ensure that people enjoy a level of health that enables them to lead a socially and eco nomically productive life. It aims to end preventable deaths across all ages from communicable and non-communication diseases and illnesses caused by air, water, soil pollution and contamination sensitive and ensure that all learners acquire knowledge and skills needed to promote sustainable development. It also aims to achieve universal health coverage, including financial risk protection, access to quality essential health care services and access to safe, effective, quality and affordable essential medicines.

According to the SDG India Index 2023-24 published by NITI Aayog, Gujarat scored 90 out of 100 on SDG 3 (Good Health and Well-being) indicators, which is above the national average of 77. However, Gujarat's performance has inclined from a score of 52 in the 2018 baseline index, while the national average is same as local ie. 52. This indicates that both national average and Gujarat's performance on Good Health and Well-being is same. These issues persist despite 75% of beneficiaries of rural population and 50% of beneficiaries of urban population in Gujarat being covered under the National Food Security Act (NFSA) 2013, which aims to provide subsidized food grains to two-thirds of the population. India's goal for 2030 is to eliminate hunger and malnutrition by ensuring access to quality food that meets nutritional needs for a healthy life.

Under the National Rural Livelihood Mission (NRLM), the Society for Elimination of Rural Poverty (SERP) uses a Social and Behavior Change Communication (SBCC) program which has a strategic communication to promote positive health outcomes, drawing on proven theories and models of behavior change. This approach aims to address underlying social and behavioral factors contributing to malnutrition, such as poor dietary practices and lack of awareness about nutrition and health. To achieve its 2030 targets, Gujarat needs to strengthen

these initiatives, ensure better implementation, and address the structural issues that contribute to persistent malnutrition and anemia among its population.

Therefore, keeping the following points in mind the pilot study has been planned with the following rationale and broad objective:

Rationale of the Study:

- Gujarat Livelihood Promotion Company (GLPC), Vadodara has identified 2 blocks of Vadodara district for integration of FNHW to curtail malnutrition through SHG members
- There is a scarcity of data on knowledge and practices about FNHW concepts in SHGs Therefore, present study was planned with the **broad objective** of partnering with local women groups for integration of FNHW concepts in SHG members under DAY-NRLM in Waghodia Block of Vadodara District

Specific objectives:

1. To assess the profile of VO representatives.
2. To assess the knowledge and practices of VO representatives on services of national programs under ICDS, PDS, PM-POSHAN, Ayushman Bharat- PM JAY.
3. To assess their knowledge on selected FNHW concepts and dietary practices of VO representatives.
4. To compile various IEC materials from existing resources of DAY-NLRM.
5. To sensitize VO representatives on selected FNHW aspects.
6. To assess knowledge retention and change in dietary practices of VO representatives.
7. To encourage and monitor discussion within SHGs in their regular monthly schedule meetings on various FNHW components.

REVIEW OF LITERATURE (ROL)

The Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM) has adopted an integrated approach that includes Food, Nutrition, Health, and WASH (Water, Sanitation, and Hygiene) for the holistic development of Self-Help Group (SHG) members and their families. **Food, Nutrition and Health** include 1000 Days window - institutional delivery, colostrum feeding, prenatal and antenatal care, exclusive breastfeeding, and complementary feeding, dietary diversification, reducing anemia, menstrual hygiene - for women and adolescent girls and development of nutri-enterprises and **WASH** includes usage of sanitary toilets, hand washing practices, management of waste at home and development of sanitation-related enterprises.

The FNHW program under DAY-NRLM is built on the principle that addressing health and nutrition requires a multi-sectoral approach, which involves creating strong linkages with key sectors such as sanitation, agriculture, and livelihoods. This approach is centered on utilizing the established strengths of institutional platforms for the poor, particularly Self-Help Groups (SHGs) and their federations, to drive the implementation of integrated health and nutrition initiatives. By mobilizing these community-based groups, the program aims to enhance access to essential services, promote healthy practices, and improve overall well-being at the grassroots level.

This chapter describes the available relevant literature in the area of partnering with local women groups for integrating Food, Nutrition, Health and WASH concepts, micro-finance and empowerment among Self-Help Group members. It was planned with the broad objective of **partnering with local women groups for integration of FNHW concepts in SHG members under DAY-NRLM**. Available information is compiled into the following sub heads:

- Self Help Groups (Local women groups) and role of Social Action Committee (SAC)
- Integration of Food, Nutrition, Health and WASH (FNHW) under DAY- NRLM
  - Global Scenario
  - National Scenario
  - Regional Scenario
- Linkage of Food, Nutrition, Health and WASH (FNHW) with Livelihood
- Factors contributing to Nutritional problems in SHGs
- Nutritional Status of Adolescents and Women of Reproductive Age (WRA) in India

Self Help Groups (Local women groups):

Self-Help Groups (SHGs) are the primary building block of the NRLM institutional design. They serve as the purpose of providing women members space for self-help, mutual cooperation and collective action for social and economic development. They are self-governed, peer controlled information group of people with similar socio-economic background and having a desire to collectively perform common purpose and are informal associations of people who choose to come together to find ways to improve their living conditions and are vehicle of change for the poor and marginalized people. Women SHGs under DAY-NRLM consist of 10-20 persons. DAY-NRLM promotes affinity based women Self Help Groups (SHGs).

Their role is to **build the functional capacity** of the poor and the marginalized, **resolves conflicts**, **work as a collective guarantee system** and are the most effective mechanism for **delivery of microfinance services** to the poor.

Integration of Food, Nutrition, Health and WASH (FNHW) under DAY- NRLM

The Food, Nutrition, Health, and WASH (FNHW) concept under the Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM) is built upon the fundamental principle that addressing issues related to health and nutrition requires a multi-sectoral approach. This approach involves establishing strong linkages with key sectors such as sanitation, agriculture, and livelihoods, which play a critical role in shaping health outcomes at the community level. Recognizing that poor health and malnutrition are often linked to social and economic factors, the program leverages the institutional platforms for the poor, particularly Self-Help Groups (SHGs) and their federations, to drive community-led health and nutrition initiatives. These platforms provide an effective mechanism for mobilizing women and communities, facilitating access to essential health and nutrition services, and promoting healthy behaviors. By integrating health and nutrition efforts with livelihood programs, the FNHW initiative ensures that communities are empowered to improve their well-being in a holistic and sustainable manner.

At its core, a sustainable livelihoods program is built on the principles of social capital formation and community institution development. These foundations create a strong platform for implementing various social development interventions, including health and nutrition programs. Unlike stand-alone health initiatives, an integrated health and nutrition program

operates at multiple levels, considering that health behaviors and nutritional choices are influenced by a variety of factors. These factors include individual decision-making, community norms, institutional structures, and the availability of essential goods and services. DAY-NRLM, with its deep community penetration and structured network of SHGs, serves as an effective vehicle to address the root causes of poor health, such as high malnutrition rates, inadequate maternal and child healthcare, poor sanitation, and limited access to health services. By utilizing existing community structures, the program fosters behavioral change and ensures that vulnerable households can access the resources and support they need to improve their overall health and well-being.

Now, let's have a look on the studies carried out in different parts of India ie. global studies, national studies and regional studies.

Global Scenario:

The study conducted by **Kotagal, et al. (2016)** on the impact of quality improvement in healthcare facilities and community mobilization efforts on maternal, neonatal, and perinatal mortality in East Africa. The research specifically focused on interventions implemented through Self-Help Groups, aiming to improve health outcomes for mothers and newborns. The primary outcomes assessed in the study included maternal mortality, neonatal mortality, and perinatal mortality. The results showed variations in neonatal mortality rates over the intervention period, with recorded rates of 34.0, 28.3, 29.9, and 27.0 neonatal deaths per 1,000 live births. Similarly, perinatal mortality rates demonstrated a decline, with figures reported at 56.2, 55.1, 48.0, and 48.4 per 1,000 births. These findings suggest some level of improvement in neonatal and perinatal survival due to the interventions introduced. However, despite these positive trends in neonatal and perinatal mortality, the study did not find any significant effect of the interventions on maternal mortality. This indicates that while the quality improvement measures and community mobilization efforts contributed to better neonatal and perinatal outcomes, they did not have a measurable impact on reducing maternal deaths during the study period.

National Scenario:

A study conducted by **Gomala and Ravichandran (2009)** focused on assessing the impact of Self-Help Groups (SHGs) on women empowerment in Theni District. The research examined various aspects of empowerment, including financial inclusion, leadership development, personality growth, economic status, social recognition, and managerial skills among SHG members before and after their participation in these groups. One of the key findings of the study highlighted that only a small percentage (6.36%) of SHG members had bank accounts, indicating limited financial inclusion at the time. Additionally, 1.22% of the total members did not have any savings, reflecting financial constraints among certain participants. The study also explored leadership empowerment among women, revealing a shift in highly rated leadership qualities before and after SHG participation. During the pre-SHG period, the most valued leadership traits among members were generosity, political awareness, and the ability to listen to others. However, in the post-SHG period, while the ability to listen to others remained important, new key traits emerged, such as the willingness to accept changes and continued political awareness. This shift suggests that SHG participation may have helped members become more adaptable and open to change while maintaining their awareness of political issues. In terms of personality empowerment, the study found that before joining SHGs, members highly valued listening to media, owning media (such as radios or televisions), and participating in social programs.

However, after SHG participation, the most significant personality development factors shifted to participation in social programs, allocating time for entertainment, and adoption (which could imply adopting new skills, behaviors, or innovations). This suggests that SHGs played a role in broadening members' engagement in social and recreational activities. Economic empowerment was another crucial area of the study. The results showed that prior to joining SHGs, the most significant indicators of economic empowerment were the possession of a television and overall family income. Interestingly, even after participating in SHGs, these two factors remained the most valued economic indicators, suggesting that while SHG involvement may have strengthened economic stability, the key markers of economic status remained unchanged. Regarding social empowerment, the study found that before joining SHGs, members considered family recognition and participation in social functions as the most significant factors. Notably, these remained unchanged even after SHG participation, indicating that while SHGs may have reinforced social empowerment, they did not necessarily alter members' perceptions of the most valuable social aspects.

Finally, the study examined managerial empowerment, revealing changes in members' managerial skills due to SHG involvement. Before joining SHGs, the most valued managerial skills were coordinating with others and preparing programs. However, after SHG participation, the highly rated managerial traits shifted to consultation with others and acquiring market knowledge. This shift indicates that SHGs contributed to enhancing members' decision-making abilities and understanding of market dynamics, likely benefiting their financial and entrepreneurial activities. Overall, the study underscores the significant role of SHGs in enhancing various dimensions of women's empowerment. While financial inclusion remained low, there were notable improvements in leadership, personality growth, and managerial capabilities, demonstrating that SHGs serve as an effective platform for fostering women's social and economic development.

Tripathy Prasanta, et al. (2010) examined the impact of a participatory intervention involving women's groups on birth outcomes and maternal depression in the Indian states of Jharkhand and Orissa. The research aimed to assess whether engaging women in structured group discussions and activities could lead to improvements in neonatal survival rates and maternal mental health. A key outcome measured in the study was the neonatal mortality rate (NMR), which represents the number of neonatal deaths per 1,000 live births. The study observed significant improvements in neonatal survival in areas where the intervention was implemented. In the intervention clusters, the NMR declined progressively over the three-year study period, with rates of 55.6 per 1,000 live births in the first year, 37.1 in the second year, and 36.3 in the third year. In contrast, the control clusters, where no intervention was conducted, experienced an increase in neonatal mortality, with rates of 53.4 in the first year, 59.6 in the second year, and 64.3 in the third year. When analysing the overall impact of the intervention, the study found that neonatal mortality was 32% lower in the intervention clusters compared to the control clusters, after adjusting for factors such as clustering, stratification, and baseline differences. The statistical analysis indicated an odds ratio of 0.68 with a 95% confidence interval (CI) of 0.59–0.78, meaning that the likelihood of neonatal death was significantly lower in intervention areas. Furthermore, the impact of the intervention was even more pronounced in the second and third years of the study, where the neonatal mortality rate was found to be 45% lower than in the control clusters, with an odds ratio of 0.55 (95% CI: 0.46–0.66). In addition to neonatal mortality, the study also examined the effect of the intervention on maternal mental health, specifically maternal depression. Although the overall results did not show a statistically significant reduction in maternal depression across all three

years, the study found a notable decrease in moderate maternal depression by the third year of the intervention. The prevalence of moderate depression was reduced by 57%, with an odds ratio of 0.43 (95% CI: 0.23–0.80), indicating a substantial improvement in the mental well-being of mothers in the intervention clusters.

Overall, the findings of the study suggest that participatory interventions involving women's groups can have a significant positive impact on neonatal survival, reducing neonatal mortality rates over time. While the intervention did not have a significant effect on overall maternal depression, it was associated with a marked reduction in moderate maternal depression by the third year. These results highlight the potential of community-based participatory approaches to improve maternal and newborn health outcomes in resource-limited settings.

Rajani Manikonda and Prof. P. Narasimha Rao (2013) carried out a study in Andhra Pradesh explored the impact of Self-Help Groups (SHGs) on the changing socio-economic status of rural women. The research provided valuable insights into the occupational patterns, income distribution, consumption expenditure, asset holdings, and borrowing behaviour of SHG members, shedding light on their financial and social empowerment.

Occupational and Income Distribution

The study found that agricultural wage labour was the predominant occupation among SHG women, accounting for 31.7% of the sample population. This highlights the continued dependence of rural women on agriculture-related employment, emphasizing the need for alternative income-generating opportunities. Regarding household income levels, the study revealed diverse financial conditions among SHG members. A significant proportion (30.3%) of respondents had a monthly family income ranging between ₹5,000 and ₹7,500, while 23% earned between ₹1,500 and ₹5,000 per month. Interestingly, nearly 29.7% of members reported an income exceeding ₹10,000 per month, indicating that some SHG members had managed to achieve higher earnings. Meanwhile, 17% of respondents had a household income between ₹7,500 and ₹10,000 per month. These findings suggest a broad variation in financial stability among SHG households, with a notable proportion achieving higher income levels, potentially due to participation in SHG activities.

Consumption Expenditure Pattern

The study also analysed the expenditure patterns of SHG households, revealing that a significant portion of household income was allocated to essential needs. A substantial 44.9% of total expenditure was spent on food items, emphasizing the priority given to basic sustenance. Non-food expenditures, including clothing, household utilities, and other essentials, accounted for 31% of total spending.

Medical expenses constituted 10.6% of household expenditure, highlighting the financial burden of healthcare in rural areas. Additionally, 9.9% of spending was dedicated to education, reflecting an awareness of the importance of investing in children's schooling. However, a smaller proportion (3.6%) of household expenditure was directed toward liquor and tobacco, indicating that while some resources were spent on non-essential items, they formed a minor portion of overall consumption. The average monthly household consumption expenditure was calculated at ₹5,060, indicating a modest standard of living among SHG members.

Asset Holdings and Financial Status

The study examined the distribution of household assets, revealing that a majority (75.5%) of assets were held in the form of physical assets such as land, houses, and equipment. Liquid assets, such as cash and bank savings, constituted 15.7% of total assets, while durable assets (such as vehicles and household appliances) accounted for 6.3%. Additionally, a small proportion (2.5%) of total assets was held in the form of livestock, indicating that animal husbandry played a minor role in the financial portfolio of these households. The total average value of assets owned by SHG households was estimated at ₹4,60,992, reflecting moderate wealth accumulation among the sample population.

Borrowing Behaviour and Access to Credit

One of the most significant findings of the study was the high dependence of SHG members on non-institutional sources for credit, despite the availability of loans from institutional sources. The total average borrowed amount among respondents was ₹60,756, out of which a significant 66.6% was borrowed from non-institutional sources, such as moneylenders, friends, and informal lenders. Only 33.4% of the borrowed amount came from institutional sources, including banks, cooperatives, and microfinance institutions. This indicates a persistent reliance on informal credit channels, which are often associated with high-interest rates and exploitative lending practices. Despite the financial support provided by SHGs and formal

financial institutions, many rural women continued to seek loans from non-institutional lenders, possibly due to easier accessibility, lack of collateral requirements, or quicker disbursement of funds.

Overall, the study underscores the mixed impact of SHGs on rural women's economic empowerment, suggesting that while progress has been made, significant challenges remain in ensuring financial stability, reducing reliance on informal credit, and promoting sustainable livelihood opportunities.

A study conducted by **Sethi Vani, et al. (2013)** in the states of Chhattisgarh, Jharkhand, and Odisha examined critical health and nutrition indicators among adolescent girls and women, particularly within tribal populations. The research highlighted concerning trends related to undernutrition, anaemia, iron and folic acid (IFA) supplementation, access to maternal health services, and teenage pregnancies, underscoring significant public health challenges in these regions. The study found a high prevalence of thinness (low body mass index for age) among adolescent girls, with Jharkhand reporting the highest proportion at 43.8%, followed by 40% in Chhattisgarh and 38.5% in Odisha. These findings suggest that undernutrition remains a severe issue in these states, affecting a large segment of adolescent girls, which could have long-term implications for their health, growth, and future maternal outcomes. The high prevalence of thinness reflects inadequate dietary intake, poor nutrition awareness, and possibly socio-economic challenges that limit access to nutritious food. Anaemia was found to be alarmingly high across all three states, with Jharkhand recording the highest prevalence (65%) among both adolescent girls and women. The situation was even worse among the tribal population, where anaemia prevalence among women reached 75% in Jharkhand, followed by 63.3% in Odisha and 55.9% in Chhattisgarh. These figures indicate a widespread deficiency of essential micronutrients, particularly iron, which is critical for overall health and maternal well-being. The high prevalence of anaemia increases the risk of complications during pregnancy and childbirth, lowers immunity, and reduces productivity among women.

The study also evaluated the coverage and consumption of iron and folic acid (IFA) supplements among pregnant women. Jharkhand recorded the lowest IFA supplementation coverage, with only 69.4% of pregnant women receiving IFA tablets, whereas both Chhattisgarh and Odisha had over 90% coverage. However, while IFA distribution was relatively high in Chhattisgarh and Odisha, the actual consumption of at least 100 IFA tablets

during pregnancy remained low across all three states. In Jharkhand, only 15% of pregnant women consumed the recommended dosage, while less than 30% in Chhattisgarh and less than 40% in Odisha adhered to the prescribed regimen. This highlights a significant gap between distribution and effective utilization, potentially due to lack of awareness, misconceptions about IFA, side effects, or inadequate follow-up by healthcare providers. The study found that a significant proportion of pregnant women from tribal households were unable to access essential healthcare services during the crucial first trimester of pregnancy. More than 50% of pregnant women in Jharkhand's tribal communities did not receive early maternal healthcare, while 40% in both Chhattisgarh and Odisha faced similar challenges. This lack of early antenatal care increases the risk of maternal and neonatal complications, as timely medical check-ups, nutritional guidance, and supplementation are crucial for a healthy pregnancy. The study suggests that barriers such as geographical inaccessibility, lack of healthcare infrastructure, socio-cultural factors, and economic constraints contribute to this gap in maternal healthcare services. Teenage pregnancy emerged as a significant concern, particularly in Jharkhand, where 11% of adolescent girls were already mothers. Among tribal households in Odisha, the situation was also worrisome, with one out of every ten girls experiencing early motherhood. In contrast, Chhattisgarh had a relatively lower rate of about 5% teenage pregnancies. Early pregnancies pose serious health risks to young mothers, including complications during childbirth, higher rates of maternal and neonatal mortality, and increased vulnerability to malnutrition and anaemia. Teenage motherhood also disrupts education and limits economic opportunities, perpetuating cycles of poverty and poor health outcomes.

The high prevalence of undernutrition and anaemia, coupled with poor adherence to IFA supplementation, limited access to maternal healthcare services, and alarming rates of teenage pregnancy, highlight the urgent need for targeted interventions. Addressing these issues requires a multi-faceted approach, including improving nutrition awareness, strengthening healthcare infrastructure, enhancing IFA supplementation programs, promoting early antenatal care, and implementing measures to prevent teenage pregnancies through education and community-based initiatives.

A study conducted by **Barman R and Dr. Bhui U(2014)** examined the role of Self-Help Groups (SHGs) in improving the economic status of women, particularly those belonging to Below Poverty Level (BPL) families. The research highlighted the enthusiasm of women from

marginalized communities in joining SHGs, their transition from unemployment to income-generating activities, and the broader economic impact of SHG participation on their families.

A remarkable 99.04% of women from BPL families expressed a strong willingness to join SHGs as a means to escape poverty. This overwhelming enthusiasm indicates that women saw SHGs as a viable solution to their financial struggles. Given their socio-economic vulnerabilities, SHG membership provided them with an opportunity to access credit, skill development, and income-generating activities, which were previously beyond their reach. Before joining SHGs, the vast majority of these women had no independent source of income as they were not engaged in any form of income-generating activities. Their financial dependence on male family members limited their decision-making power and economic independence. However, after joining SHGs, a significant 59.38% of women became part of income groups, meaning they started earning through small businesses, handicrafts, agricultural work, or other entrepreneurial activities. This transformation not only improved their financial stability but also contributed to their self-confidence and social empowerment.

The study also revealed that SHG loans were not only benefiting the women members but also their husbands. Many SHG members utilized the credit facilities available to them by taking loans in their names and providing monetary assistance to their husbands for their businesses. This suggests that while SHGs primarily aim to empower women financially, the economic benefits often extend to the entire household. The financial support provided by women to their husbands helped in expanding family businesses, increasing household income, and improving overall economic well-being. However, this also raises the question of whether women had full control over the financial resources or if they were still influenced by traditional gender roles in financial decision-making. The study also found that the majority of SHG members preferred to work independently rather than in groups. Specifically, 81.25% of members chose to work individually, while only 18.75% functioned collectively. This trend indicates that although SHGs encourage group-based financial cooperation, most women preferred running their own businesses or income-generating activities rather than collaborating on joint ventures. The preference for individual work could be due to personal convenience, differences in skills and interests, or challenges in collective decision-making. It may also reflect a desire for autonomy and self-reliance, which SHGs have helped foster among women.

Sethi Vani, et al. (2014) explored the potential of partnering with women's collectives, particularly Self-Help Groups (SHGs), to deliver essential nutrition interventions for women in tribal areas of eastern India, specifically in Chhattisgarh, Jharkhand, and Odisha. The study revealed several critical bottlenecks that hindered the effectiveness of nutrition interventions for women in these tribal areas: Limited Targeting of the Pre-Pregnancy Period – Nutrition programs often focus on pregnant and lactating women but fail to address the nutritional needs of women before conception. Ensuring adequate nutrition during the pre-pregnancy phase is crucial for improving maternal health and birth outcomes, but existing interventions in these districts showed gaps in reaching women before pregnancy, Delays in First Trimester Registration of Pregnant Women – Timely registration during the first trimester is essential for providing early antenatal care, nutritional guidance, and micronutrient supplementation. However, the study found delays in the registration of pregnant women, reducing their access to critical maternal health services and increasing the risk of adverse health outcomes for both mothers and newborns, and Low Micronutrient Supplementation Supply and Awareness – The study also identified a shortage in the supply of micronutrient supplements, such as iron, folic acid, and calcium, which are essential for maternal and foetal health. Additionally, there was low awareness among women regarding the importance of micronutrient intake during pregnancy and lactation. This lack of knowledge and inadequate supply chain management further compounded nutritional deficiencies in these tribal areas.

The study mapped 18 different types of community collectives operating in these districts and found that Self-Help Groups (SHGs) and their federations (tier 2 and tier 3) were the most effective platforms for delivering essential nutrition interventions. The reasons for this include: Vast Network & Extensive Reach, Strong Governance Structure, Bank Linkage & Financial Support and Regular Interface with Women. The study further estimated that nearly 400,000 women (or 20% of women) in the target districts could be reached through the existing network of 31,919 SHGs. This finding underscores the potential of leveraging SHGs as a delivery mechanism for nutrition interventions, particularly in remote tribal areas where traditional healthcare systems face accessibility challenges. The research also assessed the capability of SHGs to handle grants for income generation and community development activities, which are essential for sustaining nutrition interventions. The study found that the organizational readiness of SHGs for receiving and managing grants varied between 41% and 94% across different districts. This variation suggests that while many SHGs were well-prepared to

implement nutrition programs, others required additional capacity-building efforts, such as training in financial management and program implementation.

Another study conducted by **Sethi Vani, et al. (2016)** examined the Water, Sanitation, and Hygiene (WASH) practices and their association with the nutritional status of adolescent girls in poverty-stricken areas of Bihar, Chhattisgarh, and Odisha. The research highlighted the widespread prevalence of poor sanitation and hygiene practices among adolescent girls in these states and established a clear link between inadequate WASH facilities and poor nutritional outcomes.

Widespread Practice of Open Defecation Among Adolescent Girls

The study found that 82% of adolescent girls were still practicing open defecation, indicating a severe lack of access to improved sanitation facilities. Open defecation exposes individuals to various health risks, including frequent diarrheal infections, worm infestations, and increased vulnerability to undernutrition due to repeated episodes of illness. Additionally, the lack of safe sanitation facilities also poses safety and dignity concerns for adolescent girls, often forcing them to defecate in the open during odd hours, which increases their risk of harassment and violence.

Limited Use of Sanitary Napkins for Menstrual Hygiene

The study further revealed that 76% of adolescent girls were not using sanitary napkins, indicating poor menstrual hygiene management. Instead, many relied on unhygienic alternatives such as cloth rags, which, when not washed and dried properly, can lead to reproductive tract infections (RTIs) and other health complications. The lack of awareness, affordability issues, and social taboos surrounding menstruation contribute to this problem, highlighting the need for improved access to menstrual hygiene products and education.

High Prevalence of Malnutrition Among Adolescent Girls

The research also assessed the nutritional status of adolescent girls in these poverty-affected regions and found alarming levels of malnutrition: One-third (approximately 33%) of adolescent girls were stunted, indicating long-term undernutrition and chronic deficiencies in essential nutrients. Stunting is particularly concerning as it affects overall growth, cognitive

development, and future maternal health, 17% of adolescent girls were classified as thin, reflecting acute undernutrition, which makes them more susceptible to infections and illnesses and 20% had a Mid-Upper Arm Circumference (MUAC) of less than 19 cm, a strong indicator of severe malnutrition and inadequate muscle mass development.

The study established a significant correlation between poor WASH practices and the nutritional status of adolescent girls. Several key WASH-related factors were found to contribute to higher rates of malnutrition, including: Lack of Access to Safe Drinking Water – Many households did not have access to clean drinking water within their premises, forcing adolescent girls to fetch water from distant sources. This not only increases their workload but also exposes them to the risk of consuming contaminated water, leading to frequent waterborne diseases like diarrhoea, which contribute to malnutrition, Unimproved Sanitation Facilities – The absence of proper toilet facilities and the continued practice of open defecation result in increased exposure to pathogens and infections, further exacerbating undernutrition. Poor sanitation conditions also contribute to the spread of intestinal parasites such as worms, which deprive the body of essential nutrients, leading to stunting and wasting and Inadequate Handwashing Practices – The study found that many adolescent girls did not use soap after defecation, increasing the risk of bacterial and viral infections. Poor hand hygiene facilitates the transmission of diseases, particularly diarrhoea, which is a major contributor to malnutrition.

By improving WASH facilities and practices, not only can the nutritional and health status of adolescent girls be improved, but their overall well-being, dignity, and quality of life can also be significantly enhanced.

A study conducted by **Sethi Vani, et al. (2016)** focused on the Swabhimaan initiative, an integrated multisectoral strategy aimed at improving the nutritional status of girls and women in Bihar, Chhattisgarh, and Odisha. This initiative targeted women's nutrition at three critical life stages: before conception, during pregnancy, and after childbirth. The study highlighted the role of community-driven interventions in improving health outcomes and emphasized the need for strengthening human resources and institutional mechanisms to ensure effective program implementation.

Furthermore, the study found that UNICEF India played a supportive role in strengthening the implementation of Swabhimaan by providing technical and human resource support at the state and block levels in Bihar and Odisha. However, despite these efforts, there were no dedicated personnel at the Village Organization (VO) level, which posed a significant challenge for last-mile implementation. Village Organizations (VOs) are federations of Self-Help Groups (SHGs) and play a crucial role in delivering health, nutrition, and sanitation interventions at the grassroots level. The absence of trained personnel at the VO level limited the program's ability to reach vulnerable women and girls effectively, highlighting the need for additional human resource investment. Recognizing this gap, the study outlined a plan to advocate for an increased number of human resource positions at the State Rural Livelihoods Missions (SRLMs) by 2020. Strengthening the SRLM workforce was expected to improve the implementation of the Convergent Action Plan (CAP), which aimed to integrate health, nutrition, WASH (Water, Sanitation, and Hygiene), and livelihood programs under a unified framework. By investing in trained personnel at different administrative levels, the initiative sought to enhance service delivery, ensure better coordination, and improve the overall impact of Swabhimaan interventions. A key component of the study's recommendations was the creation of a system for Community Resource Persons (CRPs) to graduate to block-level positions across the three states. CRPs are experienced members of Self-Help Groups (SHGs) who are trained in health, nutrition, and sanitation and serve as peer educators and mobilizers within their communities. By elevating CRPs to block-level roles, the Swabhimaan initiative aimed to: Enhance Local Capacity, Strengthen Last-Mile Service Delivery, and Promote Women's Leadership.

The study highlighted that the Swabhimaan initiative in Chhattisgarh was recognized as a best practice by the Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM). This recognition was based on the initiative's successful integration of health, nutrition, and WASH (Water, Sanitation, and Hygiene) interventions within the SHG platform. The Chhattisgarh model demonstrated how women's collectives could effectively drive behavior change, improve access to services, and enhance nutrition outcomes at the community level.

A study by **Shrivastav Monica, et al. (2016)** focused on early lessons from Swabhimaan, a multi-sector integrated health and nutrition program designed to improve women's and girls' health and nutritional outcomes in India. The study assessed key indicators related to food

security, micronutrient supplementation, maternal weight monitoring, and access to health and nutrition services from baseline to midline. While some positive changes were observed, significant challenges remained, particularly in ensuring adequate nutrition and health service utilization among vulnerable groups. One of the key findings of the study was an 8-12% improvement in the proportion of women living in food-secure households from baseline to midline. This indicated that efforts under Swabhimaan, including nutrition-sensitive interventions, access to entitlements, and awareness-building initiatives, were contributing to better food security for women and girls. However, despite these gains, the study highlighted that over 60% of women continued to live in food-insecure households, meaning that they still lacked consistent access to adequate and nutritious food. This persistent food insecurity posed serious risks to maternal and child health, increasing vulnerability to malnutrition, anemia, and other deficiencies. The study emphasized the need for scaling up interventions that address the root causes of food insecurity, such as livelihood support, agricultural interventions, and improved access to public food distribution programs.

Further, the study reported a 5% increase in IFA compliance among pregnant women and mothers, indicating some improvement in the adoption of iron and folic acid supplementation. However, despite this progress, overall consumption levels remained critically low, with only 29.4% of pregnant women and 23.2% of mothers adhering to IFA supplementation guidelines.

To increase IFA compliance, the study recommended improved supply chain management, stronger counselling efforts, and behaviour change communication (BCC) strategies through Anganwadi Centres (AWCs) and Self-Help Groups (SHGs). 66.0% of pregnant women had their weight monitored during their current pregnancy at baseline, which increased to 86.2% at midline. The proportion of mothers who had their weight checked at least four times during their last pregnancy also saw a slight increase from 24.1% at baseline to 29.4% at midline. Mothers consuming calcium tablets in their second trimester increased from 29.7% at baseline to 60.4% at midline. Pregnant women taking calcium supplements in their second trimester saw an improvement from 23.8% at baseline to 55.4% at midline.

The study also found that pregnant women and mothers were increasingly availing Integrated Child Development Services (ICDS) entitlements, which include supplementary nutrition, health checkups, and counselling services. The proportion of pregnant women using ICDS services increased from 34.7% at baseline to 55.8% at midline. The percentage of mothers

utilizing ICDS entitlements increased from 44.5% at baseline to 77.0% at midline. Responses from the study suggested that adolescent girls and pregnant women had adopted improved behaviours related to dietary intake and Water, Sanitation, and Hygiene (WASH) practices. One key indicator of improved health-seeking behavior was the increase in visits to health service points.

Sethi Vani, et al. (2019) examined the key predictors of dietary intake among three critical population groups in rural eastern India—adolescent girls, pregnant women, and mothers with children under the age of two years. The study aimed to assess the diversity and quality of diets consumed by these groups and identify regional disparities in dietary diversity across Bihar, Chhattisgarh, and Odisha. The findings highlighted a lack of dietary diversity, a predominance of cereal-based diets, and regional inequalities in dietary intake, particularly in Bihar.

The study found that there was not much variation in the types of foods consumed daily across the three target groups—adolescent girls, pregnant women, and mothers with young children. Regardless of their life stage, most women and girls in rural eastern India followed a monotonous diet, which was high in cereals and vegetables but lacked diversity in other essential food groups. The key findings included: cereal-based diets dominated daily intake, with 98% of respondents consuming cereals as their staple food, vegetables were the second most commonly consumed food group, with 83% of respondents reporting regular consumption and other critical food groups, such as proteins, dairy, and micronutrient-rich foods, were largely missing from daily diets, indicating a serious gap in nutritional intake. The heavy dependence on cereals and vegetables, with limited consumption of protein sources such as pulses, dairy, eggs, and meats, raises concerns about nutrient deficiencies, particularly in iron, calcium, and essential vitamins.

The study further examined the Dietary Diversity Score (DDS), a widely used indicator to assess the nutritional adequacy of diets. Nearly 30% of mothers had low dietary diversity scores, meaning their diets lacked variety and essential nutrients, 25% of pregnant women were also found to have low dietary diversity, which is concerning as poor maternal diets can lead to adverse pregnancy outcomes, including low birth weight and anaemia and 24% of adolescent girls had low dietary diversity, putting them at risk of nutritional deficiencies that can affect their growth, reproductive health, and overall well-being. This lack of dietary diversity suggests that a significant portion of women and adolescent girls were unable to access or afford a

balanced diet that included proteins, dairy, fruits, and healthy fats, all of which are crucial for maintaining good health and preventing malnutrition.

A critical benchmark for assessing diet quality is the Minimum Dietary Diversity (MDD) score, which requires an individual to consume at least five out of ten food groups daily to meet minimum nutrition standards. The study found that more than half of the respondents in each group failed to meet the MDD requirement. This means that a majority of adolescent girls, pregnant women, and mothers with young children were not consuming a nutritionally adequate diet. The study revealed significant regional disparities in dietary diversity across Bihar, Chhattisgarh, and Odisha. Regardless of background characteristics, the mean dietary diversity scores were found to be lowest in Bihar, compared to Chhattisgarh and Odisha. Possible reasons for lower dietary diversity in Bihar - higher levels of food insecurity, cultural food habits, weaker public health and nutrition programs and lower agricultural diversity.

Overall, the study underscores the urgent need for multi-sectoral interventions that improve access to diverse and nutritious foods, strengthen public health programs, and empower women and adolescent girls to make better dietary choices. Addressing these gaps will be crucial in reducing malnutrition, preventing anemia, and improving the overall health outcomes of women and children in India.

Roy, et al. (2019) conducted a study to assess the dietary diversity among women in different regions of India, specifically comparing the states of Gujarat and Maharashtra. Their findings revealed that 37% of women in Gujarat had a higher Dietary Diversity Score (DDS), indicating that they consumed a more varied and nutritionally balanced diet. In contrast, only 23% of women in Maharashtra were found to have a similarly diverse dietary intake.

This difference suggests that women in Gujarat have greater access to a variety of food groups, which may be influenced by factors such as agricultural practices, availability of locally grown food, socio-economic conditions, and awareness regarding nutrition. On the other hand, the lower percentage in Maharashtra indicates that a significant portion of women in the state may have limited access to a diverse range of foods, potentially leading to nutritional deficiencies.

The study underscores the need for targeted interventions to promote dietary diversity, especially in regions where women's nutritional intake remains inadequate. Improving access

to diverse food sources, enhancing nutritional education, and implementing policies that encourage better food security could help bridge the gap between these states and ensure that more women achieve a balanced diet essential for their overall health and well-being.

Singh Sukwinder, et.al (2020) investigated the associations between crop and income diversity and dietary diversity among men, women, adolescents, and children of farmer households in India. They examined crop, income, and dietary data collected from 1106 farmer households across Gujarat and Haryana, two states that represent different livelihood transition pathways in India. Regression results suggested that crop diversity had a positive association with dietary diversity among adults (both men and women) in both states, and among adolescents and children in Haryana. Higher family education and annual income were the two most important factors associated with higher dietary diversity score (DDS) in Gujarat whereas, higher family education, greater crop diversity, and increased distance travelled to markets were the most important factors associated with higher individual DDS in Haryana. Specifically, for children, crop diversity emerged as one of the most important factors associated with dietary diversity in both states. Interestingly, they found that even in these two relatively prosperous states, the pathways to dietary diversity vary across sites and within households, suggesting that policies to improve dietary diversity should be tailored to a given location and context.

Thakar and Rajpura (2021) conducted a comprehensive review of various research studies that examined the nutritional status of farm women in both India and the state of Gujarat. Their findings indicate that women engaged in agricultural work often do not maintain an adequate nutritional status, which can have significant implications for their health and productivity. The review highlights that the dietary intake of these women consistently falls below the Recommended Dietary Allowances (RDA), suggesting that they are not consuming sufficient nutrients to meet their daily physiological and energy requirements.

One of the key concerns raised in the study is the lack of awareness among farm women regarding the importance of a well-balanced diet, particularly in relation to the physical demands of agricultural labor. Many of these women face physically strenuous conditions, which further increase their need for essential nutrients. However, due to factors such as limited access to nutritious food, socio-economic constraints, and a lack of proper dietary knowledge, their nutritional intake remains inadequate.

Given these findings, they emphasize the need for active intervention by various stakeholders, including government bodies, non-governmental organizations (NGOs), agricultural institutions, and community health organizations. They stress the importance of educating farm women about the necessity of a balanced diet that aligns with their body's requirements and the strenuous nature of their work. By enhancing their nutritional awareness and intake, these women can improve their overall health and energy levels, ultimately increasing their work efficiency and participation in agricultural activities. This, in turn, would contribute to greater economic growth and development, both at the household level and for the agricultural sector as a whole.

A study conducted by **Hazra Avishek, et al. (2022)** titled "Matching Intent With Intensity: Implementation Research on the Intensity of Health and Nutrition Programs With Women's Self-Help Groups in India" aimed to analyse the extent and effectiveness of health and nutrition programs integrated within Self-Help Groups (SHGs). The research examined how program intensity—measured in terms of time spent, reach, and participation levels—impacted the engagement and outcomes of SHG-led health and nutrition initiatives.

The study found that SHG members spent approximately 30 minutes per month discussing health and nutrition-related topics during their group meetings. This limited engagement time suggests that health and nutrition discussions were not a primary focus of SHG activities and were often secondary to financial or livelihood-related discussions. In addition to group discussions, the study highlighted the importance of targeted outreach activities like home visits conducted by SHG members or community resource persons. These home-based interventions reached more than one-third of households where at least one family member was part of an SHG. The study further observed that SHG participation in health and nutrition discussions was higher in pilot programs using the "layering approach" compared to fully scaled-up programs.

A recent article published in India by **Co-founder and CEO Aspirational Bharat Collaboratives (2025)** on "Empowering panchayats: The key to achieving Viksit Bharat 2047 through community actions stated that India's development journey has been significantly shaped by the proactive contributions of its key leaders, including the Prime Minister, Chief Ministers, and District Magistrates. Their efforts have laid the foundation for implementing policies and initiatives that directly impact local communities. To achieve the ambitious goal

of “Viksit Bharat 2047”—a vision of a developed India by 2047—it is essential to focus on empowering panchayats (village councils). These grassroots-level institutions play a pivotal role in addressing the unique needs of local populations and implementing development strategies tailored to their specific challenges. The 73rd Constitutional Amendment marked a turning point in India’s governance structure, granting constitutional status to panchayats and empowering them to take charge of local development initiatives. This amendment devolved significant administrative and financial powers to panchayats, enabling them to function as autonomous bodies responsible for decision-making and implementing welfare programs. However, despite this progress, many panchayats continue to face hurdles, such as inadequate infrastructure, lack of financial resources, and limited technical capacity. These challenges hinder their ability to address critical issues such as undernutrition, education gaps, and insufficient healthcare access.

To overcome these obstacles, it is imperative for panchayats to adopt a community-led approach to development. This involves actively engaging local communities in decision-making and ensuring alignment with Sustainable Development Goals (SDGs). Focusing on areas such as education, healthcare, women’s empowerment, skill-building, and clean energy can pave the way for holistic and inclusive growth at the grassroots level. By addressing these core areas, panchayats can effectively tackle systemic challenges and uplift the socio-economic status of rural communities. One of the key tools driving this transformation is the Gram Panchayat Development Plan (GPDP). This initiative enables panchayats to systematically allocate resources and prioritize village-level needs based on a participatory planning process. The GPDP empowers communities to identify their specific challenges and propose solutions, ensuring that development initiatives are both relevant and impactful. For example, some villages have successfully focused on improving access to quality education, implementing clean energy solutions, and enhancing healthcare services. These efforts highlight the potential of strong local governance in driving sustainable development and improving the quality of life for rural populations.

In conclusion, empowering panchayats is crucial for building self-reliant communities and achieving the vision of “Viksit Bharat 2047.” By strengthening local governance, fostering community participation, and addressing the unique needs of rural areas, panchayats can serve as the foundation for India’s sustainable development. Through collective efforts at all levels of governance, India can create an inclusive and equitable society that benefits all its citizens.

Hazra, et al. (2025) conducted a study that highlighted the significant impact of household kitchen gardens on women's dietary diversity and overall nutritional outcomes. Their findings revealed that women who did not have access to a kitchen garden experienced poor dietary diversity, as reflected in a Dietary Diversity Score (DDS) of less than 5. The study also reported a strong statistical association between the presence of a kitchen garden and improved dietary diversity, with an odds ratio (OR) of 0.163 and a highly significant p-value of 0.001. These findings suggest that the absence of a kitchen garden drastically reduces the likelihood of consuming a diverse range of foods, leading to potential nutritional deficiencies.

The literature reviewed in the study emphasized the role of kitchen gardens in improving dietary diversity and household food security. It discussed two primary approaches to tackling undernutrition: nutrition-specific interventions, also known as Behavior Change Communication (BCC), and nutrition-sensitive interventions, which focus on agricultural strategies. A kitchen garden falls under the latter category, as it directly enhances food availability and accessibility at the household level. By cultivating a variety of vegetables at home, families can secure a consistent supply of nutritious foods at a much lower cost compared to purchasing them from markets. This is particularly beneficial for low-income rural households and marginalized communities, where affordability and availability of fresh produce are often major constraints.

The study also highlighted the critical role of local government support in promoting kitchen gardens. In many regions, government initiatives have facilitated the adoption of scientifically designed kitchen gardens by providing technical guidance, training, and material support. Such interventions have significantly contributed to household food security and the nutritional well-being of women. The government's ongoing focus on improving women's nutritional status aligns well with this strategy, as it ensures not only individual health benefits but also broader community well-being.

Given these advantages, the study suggests that kitchen gardens should be integrated into national policies as a sustainable, cost-effective intervention for addressing malnutrition and food insecurity. With minimal resources, the government can promote large-scale implementation, ensuring that households, particularly in rural areas, benefit from improved dietary diversity. However, the study also identified key challenges in sustaining such initiatives. One major issue is the irregularity in cash payments or financial assistance provided to households, which can hinder long-term participation in kitchen gardening programs.

Ensuring consistent seed kit distribution and financial support is crucial for the success and sustainability of these interventions.

Overall, the research provides strong evidence supporting kitchen gardens as an effective and affordable strategy to improve dietary diversity and nutritional security. Their findings will play a crucial role in shaping future policies aimed at tackling malnutrition, particularly in vulnerable populations. By addressing the identified challenges, such as financial support irregularities, policymakers can strengthen this initiative, making it a long-term, sustainable solution for improving the dietary health of women and families across the country.

Regional Scenario:

Prof. Sirimavo Nair and Tanveer Moizali Umallawala (2018) conducted a study in Songadh, Gujarat, to assess the awareness and knowledge levels among Self-Help Groups (SHGs) regarding critical health issues, particularly undernutrition, anaemia, and preconception care. The study revealed significant gaps in knowledge among SHG members, highlighting the need for enhanced awareness programs in these areas.

The findings indicated that a substantial 41.2% of SHG members were unaware of the term "undernutrition", which suggests that a significant portion of women did not fully understand the concept of inadequate nutrition and its potential consequences on health. Additionally, an even larger proportion, 76.5% of SHG members, were unaware of the term "anaemia", indicating a lack of knowledge about this widespread health issue that disproportionately affects women, particularly in rural areas. The most concerning finding was that 88.2% of SHG members were unaware of the term "preconception", which refers to the crucial period before pregnancy when proper nutrition, healthcare, and lifestyle choices can significantly impact maternal and child health. This lack of awareness suggests that women may not have been receiving adequate education on reproductive health and maternal care. The study also examined the knowledge levels among Accredited Social Health Activists (ASHAs), who play a vital role in rural healthcare. The results showed that there was a significant improvement of 55.6% in ASHAs' knowledge regarding undernutrition and preconception care. This indicates that targeted interventions and training programs had a positive impact on increasing awareness among ASHAs, enabling them to disseminate this information to the community more effectively. However, the study found that the improvement in ASHAs' knowledge about anaemia, its preventive measures, and the consequences of teenage pregnancies was non-

significant. This lack of significant improvement was attributed to multiple responses, suggesting possible inconsistencies in the training methods, varied baseline knowledge levels, or difficulties in retention and application of the information.

Among SHG members, there was a highly significant improvement in knowledge about anaemia, preconception care, and preventive measures against teenage pregnancies. Specifically, the awareness of anaemia saw a dramatic 94.1% improvement, highlighting the success of education and awareness initiatives in this area. Knowledge about preconception care improved by 47.1%, showing a considerable but still moderate level of progress, indicating that more efforts are needed to fully educate women on the importance of preconception health. The improvement in knowledge regarding the preventive measures and consequences of teenage pregnancies was 17.6%, which, while notable, suggests that further interventions are required to raise awareness on this critical issue. Regarding undernutrition, the study found a significant improvement of 70.6% in SHG members' knowledge, demonstrating that training programs had a meaningful impact on educating women about the importance of proper nutrition and its role in maintaining overall health.

In summary, the study highlighted that while there was a notable increase in knowledge about health-related issues among SHG members and ASHAs, gaps still remained, particularly in areas such as teenage pregnancy prevention and anaemia management. The findings emphasized the need for continuous education, targeted interventions, and improved training methodologies to ensure that women in rural communities have the necessary knowledge to make informed health decisions for themselves and their families.

Another study conducted by **Choksi Unnati and Prof. Dr. Nambiyar Sunita (2018)** on Sustainable Development through Micro-Enterprises among Women in Vadodara, which provided crucial insights into the empowerment and awareness levels of women associated with Self-Help Groups (SHGs). Their research highlighted the role of SHGs in enhancing women's knowledge of their legal rights, improving decision-making abilities, and fostering socio-economic development.

The study found that 87% of SHG members were aware of their equal rights to paternal property, demonstrating a growing awareness of women's inheritance rights. Additionally, 94% of members were informed about the right of widows and divorcees to remarry, indicating an increasing acceptance of second marriages and the breaking of social taboos related to

widowhood and divorce. Awareness regarding marriage laws was also significantly high, with 98% of SHG members knowing that the legal marriageable age is 18 for females and 21 for males. However, knowledge regarding social crimes like dowry was relatively lower, as only 69% of the members were aware that giving or accepting dowry is a punishable offense. In terms of reproductive rights, 32% of SHG members knew that abortion requires the consent of the woman, suggesting a need for further awareness in this area. Furthermore, only 26% were aware that the immoral trafficking of women is a legally punishable crime, highlighting the necessity for stronger advocacy and education on women's safety and legal protections. However, a considerable 59% of SHG members were aware of their right to divorce, signifying progress in understanding marital rights. When it came to economic rights, an impressive 93% of SHG members knew about their right to equal wages for equal work, reflecting a strong awareness of workplace equality, while 75% were aware of the right to education for all children, showcasing an understanding of fundamental educational rights. Beyond legal awareness, the study also analysed the decision-making power of women in their households. The findings revealed that a significant 97% of SHG members were able to make independent decisions regarding their family's health, while 85% had the authority to decide on their children's education. Furthermore, 99% of SHG members made decisions related to daily household purchases, indicating a high level of autonomy in managing domestic expenses. Financial empowerment was another key area of impact. Before joining the SHG, 75% of the members did not have a savings bank account, highlighting their previous lack of financial inclusion. However, after joining the SHG, 60% of respondents opened a savings bank account, reflecting the role of SHGs in promoting financial independence and inclusion.

Despite these advancements, the study found that social and political participation remained limited. A striking 97% of SHG members were not part of any social, religious, or political organization or group, suggesting that while financial independence and household decision-making had improved, broader societal engagement was still lacking. Additionally, only four SHG members were involved in a 'community panchayat', indicating minimal political participation at the grassroots level. The study also revealed that 98% of SHG members had received training after joining the SHG, with the primary focus being capacity building. This training played a crucial role in skill development, as many SHG groups ran sewing and tailoring classes, which provided women with opportunities for self-employment and entrepreneurship. Furthermore, the training helped in developing confidence and leadership abilities among SHG members. 63% of participants reported that they had developed the ability

to communicate freely and frankly with authorities, while 59% acquired the skill of teaching and training other members, demonstrating an increase in leadership and knowledge-sharing capabilities.

Overall, the study highlighted the significant impact of SHGs in improving women's awareness of their rights, enhancing their financial independence, strengthening decision-making abilities, and fostering skill development. However, it also pointed out areas that need further improvement, particularly in political participation, social engagement, and awareness of specific legal protections related to women's safety and reproductive rights.

From the reviewed literature, we can say that there is need to implement FNHW concepts in rural areas and knowledge needs to be molded by sensitizing them with proper tools and materials. Now, lets see how FNHW is linked with livelihoods of people.

Linkage of Food, Nutrition, Health and WASH (FNHW) with Livelihood:

The Food, Nutrition, Health, and WASH (FNHW) program under DAY-NRLM plays a transformative role in improving overall well-being and quality of life, particularly for rural communities. By integrating essential components such as food security, nutrition, healthcare, and water, sanitation, and hygiene (WASH), the program directly addresses fundamental determinants of health and human development. The interconnectedness of these factors ensures that improvements in one area lead to positive ripple effects in others, thereby enhancing livelihoods, economic security, and social well-being.

1. **FNHW and Physical Well-Being**
    - **Improved Nutrition:** Access to adequate and nutritious food enhances physical growth, cognitive development, and disease resistance, reducing malnutrition, stunting, and anemia, particularly among women and children.
    - **Better Health Outcomes:** Strengthening community health access and promoting preventive care reduce maternal and child mortality, communicable diseases, and lifestyle-related health issues.
    - **Enhanced WASH Practices**: Improved access to safe drinking water, sanitation, and hygiene facilities lowers the prevalence of waterborne diseases like diarrhoea, cholera, and typhoid, leading to overall better public health.

2. **FNHW and Economic Well-Being**
    - **Reduced Healthcare Costs:** When people have better nutrition and preventive healthcare, they experience fewer illnesses, which translates into lower medical expenses and less financial distress for households.
    - **Increased Productivity & Livelihood Opportunities:** A healthier population contributes to higher workforce productivity, enabling individuals to engage more effectively in agriculture, livelihoods, and income-generating activities.
    - **Enhanced Economic Resilience:** SHG-driven FNHW initiatives empower rural households to access government entitlements, financial support, and community-based health interventions, reducing economic vulnerability.

3. **FNHW and Social Well-Being**
    - **Women's Empowerment:** Through SHGs, women actively participate in health awareness programs, nutrition initiatives, and financial decision-making, leading to greater autonomy and leadership in communities.
    - **Better Child Development:** Adequate nutrition and healthcare in the early years contribute to improved cognitive development, school performance, and long-term economic prospects.
    - **Strengthened Community Networks:** The FNHW program fosters collective responsibility and participatory governance, enhancing social cohesion and mutual support among rural populations.

4. **FNHW and Environmental Well-Being**
    - **Sustainable Agriculture & Food Security:** Promoting nutrient-rich farming practices, organic agriculture, and kitchen gardens ensures long-term food availability while preserving soil and biodiversity.
    - **Safe Sanitation & Waste Management:** Encouraging toilet use, solid waste disposal, and clean water conservation reduces environmental pollution and promotes sustainable living conditions.

5. **FNHW and Quality of Life**

    A well-integrated Food, Nutrition, Health, and WASH system contributes to an overall higher quality of life by ensuring that individuals and families:

- Live longer, healthier, and more productive lives
- Experience lower disease burdens and reduced healthcare expenses
- Have access to safe water, hygiene facilities, and nutritious food
- Benefit from stronger social structures and economic opportunities

Concepts covered under FNHW components are Linking Health, Nutrition, Hygiene and Sanitation, Education with Livelihood, Balanced Diet and Dietary Diversification, First 1000 Days Approach and ANC care, Child Feeding Practices, Anemia in vulnerable groups and its preventive measures, Nutrition for Adolescent girls, WASH Practices and Services of national programs under ICDS, PDS, PM-POSHAN, Ayushman Bharat- PM JAY.

Thus, FNHW framework under DAY-NRLM is not just about healthcare interventions—it is a holistic approach to improving rural life. By addressing multiple determinants of health, FNHW strengthens individual well-being, economic resilience, social equity, and environmental sustainability, ultimately leading to a better quality of life for rural populations.

Factors contributing to Nutritional problems in SHGs:

India has made remarkable progress in several key areas over the past two decades, including household income growth, increased agricultural productivity, and improved child survival rates. These achievements are a testament to the country's sustained economic development and targeted social welfare programs. However, despite these advances, India continues to grapple with significant malnutrition challenges, particularly among women and children. High rates of anemia, stunting, wasting, and undernutrition persist, even in the face of economic growth and poverty reduction. This paradox highlights deep-rooted structural issues that go beyond income levels and food production, requiring a multi-sectoral, community-driven approach to effectively tackle malnutrition.

Several key factors contribute to India's persistent nutrition crisis, ranging from dietary deficiencies and food insecurity to poor sanitation, gender disparities, and a lack of awareness about nutrition. These interconnected issues need comprehensive interventions that address not only food availability but also social determinants of health, education, sanitation, and healthcare access.

1. Malnutrition and Anemia

Widespread Anemia Among Women and Children:

According to the National Family Health Survey (NFHS-5), a staggering 52% of pregnant women aged 15 to 49 in India suffer from anemia. Anemia is primarily caused by iron deficiency, but it can also result from a lack of other essential nutrients like folic acid, vitamin B12, and vitamin C. Several factors contribute to this high anemia prevalence:

- Poor dietary intake of iron-rich foods like green leafy vegetables, lentils, and animal protein.
- High rates of parasitic infections (such as hookworm infestations) that cause chronic blood loss.
- Frequent pregnancies and inadequate maternal nutrition, leading to iron depletion.
- Limited access to quality healthcare services, particularly in rural areas, where iron supplementation programs may not reach all women effectively.

Anemia has serious health implications, especially for pregnant women and young children. It increases the risk of maternal mortality, low birth weight, premature deliveries, and developmental delays in infants.

Undernutrition in Women

A concerning proportion of Indian women of reproductive age (15-49 years) are underweight and have a low Body Mass Index (BMI), which is indicative of chronic undernutrition and poor overall health. This not only affects their own well-being and productivity but also has intergenerational consequences, as undernourished mothers are more likely to give birth to malnourished children, perpetuating a cycle of poor health outcomes.

Malnutrition Among Children

Despite improvements in child survival rates, malnutrition among children under five remains alarmingly high:

- 35.5% of children are stunted (low height-for-age), indicating chronic malnutrition and long-term nutritional deficiencies.

- 32.1% of children are underweight (low weight-for-age), reflecting both acute and chronic malnutrition.

Children who experience early-life malnutrition often suffer from impaired cognitive development, weakened immune systems, and reduced economic productivity in adulthood.

2. Food Insecurity and Poor Nutrition

Inadequate Access to Nutritious Food

Although India has made significant strides in agricultural production, access to nutritious, diverse, and affordable food remains unequal across different regions and socio-economic groups. Economic disparities and rising food prices make it difficult for many families—particularly those in rural, tribal, and marginalized communities—to afford a balanced diet that includes proteins, fruits, vegetables, and micronutrient-rich foods. The dominance of staple grains (rice and wheat) in public food distribution programs has further limited dietary diversity, contributing to widespread micronutrient deficiencies.

Structural Inequalities and Social Barriers

Deep-rooted social inequalities, gender discrimination, and caste-based exclusion further exacerbate nutritional challenges. Women and girls are often the most affected due to cultural norms that prioritize feeding male family members first or allocate them larger food portions. In many households, women eat less nutritious foods or skip meals entirely, making them more vulnerable to malnutrition and anemia. Similarly, marginalized communities (such as Scheduled Castes and Scheduled Tribes) face systemic barriers in accessing healthcare, education, and food security programs, leading to persistently poor nutrition outcomes.

Poor Water, Sanitation, and Hygiene (WASH) Practices

A major but often overlooked factor in malnutrition is the lack of access to clean water, proper sanitation, and hygiene facilities. Poor WASH conditions contribute to:

- Waterborne diseases such as diarrhea, cholera, and typhoid, which cause nutrient loss and dehydration, particularly in young children.

- Intestinal infections and parasitic infestations, which impair nutrient absorption and overall growth.
- Poor menstrual hygiene management, which affects women's health, school attendance, and workforce participation.

Without improved WASH infrastructure, even the best dietary interventions will fail to yield long-term improvements in nutrition.

Micronutrient Deficiencies

Many Indians suffer from hidden hunger—a form of malnutrition caused by deficiencies in essential vitamins and minerals, including:

- **Iron deficiency** → Leads to anemia and fatigue, affecting work capacity and cognitive function.
- **Vitamin A deficiency** → Causes vision impairment, weak immunity, and higher child mortality.
- **Iodine deficiency** → Leads to goiter, thyroid disorders, and developmental issues in children.
- **Zinc deficiency** → Weakens immune response and increases the risk of diarrheal diseases and infections.

Addressing micronutrient malnutrition requires fortification of staple foods, dietary diversification, and large-scale supplementation programs.

Lack of Nutrition Awareness and Education

A significant challenge in tackling malnutrition is the lack of knowledge about proper dietary practices. Many individuals, especially in rural areas, are unaware of the nutritional value of different foods and may prioritize quantity over quality in their diets. Traditional food habits, cultural taboos, and misinformation also play a role in poor maternal and child feeding practices. For example:

- Mothers may delay introducing complementary feeding to infants, leading to early-life malnutrition.
- Many families consume iron-rich foods with tea, which inhibits iron absorption, worsening anemia.
- There is low awareness about fortified foods that could help prevent micronutrient deficiencies.

The Need for a Multi-Sectoral Approach

Since malnutrition is influenced by multiple factors, solutions must go beyond just increasing food availability. India needs an integrated approach that combines:

- **Nutritional interventions** – Promoting dietary diversity, micronutrient supplementation, and food fortification
- **Improved healthcare access** – Strengthening maternal and child healthcare services
- **Water, sanitation, and hygiene (WASH) improvements** – Ensuring clean drinking water and sanitation facilities
- **Economic empowerment** – Enhancing livelihoods and social security programs for vulnerable populations
- **Behavioral change communication (BCC)** – Raising awareness about good nutrition and feeding practices

While India has made commendable progress in economic development, persistent malnutrition, anemia, and stunting reveal the need for more comprehensive and inclusive policies. Addressing these issues requires multi-sectoral coordination, community involvement, and targeted interventions that prioritize the most vulnerable populations. Sustainable solutions must focus on not just food security but also social equity, sanitation, and public health, ensuring a healthier, more productive, and well-nourished population.

Nutritional Status of Adolescent Girls and Women in India: Key Insights from NFHS-5:

The National Family Health Survey (NFHS-5) has highlighted significant nutritional disparities among adolescent girls and women in India. While a large proportion continues to suffer from undernutrition, there is a growing burden of overweight and obesity, signalling a dual burden of malnutrition. These trends underscore the urgent need for comprehensive nutritional interventions that address both underweight and obesity through a balanced approach to diet, healthcare, and lifestyle modifications.

1. **Nutritional Status of Adolescent Girls**

   Adolescence is a critical period of growth and development, where adequate nutrition plays a vital role in shaping future health outcomes. However, NFHS-5 data reveals widespread nutritional imbalances among adolescent girls in India:

   - 30.2% of adolescent girls (10-19 years) are moderately or severely thin, indicating widespread undernutrition.

- 10.5% of adolescent girls are severely thin, meaning they have a dangerously low Body Mass Index (BMI), which increases the risk of weakened immunity, menstrual irregularities, delayed puberty, and poor cognitive development.
- 7.9% of adolescent girls are overweight or obese, with 1.7% classified as obese, reflecting rising trends of lifestyle-related health issues such as diabetes, hypertension, and cardiovascular diseases.

These figures highlight the double burden of malnutrition in adolescent girls—while a significant proportion is undernourished and at risk of stunted growth, a growing number is experiencing overweight and obesity due to sedentary lifestyles and poor dietary habits.

Implications of Undernutrition in Adolescent Girls

Adolescent girls who are undernourished often experience:

- **Delayed physical growth and puberty** → Leading to weakened bone density, poor muscle development, and increased vulnerability to infections.
- **Anaemia and micronutrient deficiencies**→ Causing fatigue, poor concentration, and low academic performance.
- **Higher risk of complications during pregnancy**→ Undernourished adolescent girls are more likely to have low birth weight babies, premature deliveries, and maternal complications if they become pregnant.

Implications of Overweight and Obesity in Adolescent Girls

While undernutrition remains a major concern, the increasing prevalence of overweight and obesity is equally alarming. Overweight adolescent girls face:

- Higher risk of Type 2 diabetes, hypertension, and early-onset cardiovascular diseases.
- Psychosocial issues such as low self-esteem and mental health challenges, including depression and anxiety.
- Irregular menstrual cycles and polycystic ovarian syndrome (PCOS), which can lead to fertility issues in adulthood.

This nutritional imbalance among adolescent girls highlights the urgent need for targeted interventions, including school-based nutrition programs, access to iron and folic acid supplementation, awareness campaigns on healthy eating, and encouragement of physical activity.

2. **Nutritional Status of Women in India**

Malnutrition among Indian women is a long-standing public health challenge, with NFHS-5 revealing a concerning pattern of both undernutrition and rising obesity rates:

- 21% of Indian women (aged 15-49 years) have a BMI of less than 18.5, classifying them as underweight. This suggests chronic undernutrition, inadequate calorie intake, and micronutrient deficiencies.
- 28% of women are either overweight or obese, indicating a growing shift toward lifestyle-related health risks such as diabetes, cardiovascular diseases, and metabolic disorders.

Implications of Undernutrition in Women

Women with a BMI below 18.5 are at high risk of several health complications, including:

- Weak immune function, making them more susceptible to infectious diseases and frequent illnesses.
- Higher rates of maternal mortality and pregnancy complications, as underweight women often suffer from iron deficiency anemia, leading to low birth weight infants, stillbirths, and increased infant mortality.
- Reduced physical and cognitive performance, affecting their economic productivity, education, and quality of life.

Implications of Overweight and Obesity in Women

The rise in obesity among Indian women is linked to urbanization, sedentary lifestyles, and dietary shifts toward processed foods, sugary beverages, and high-calorie meals. Overweight and obese women are at risk for:

- Gestational diabetes and pregnancy-related complications, increasing the likelihood of C-section deliveries and postpartum health issues.

- Non-communicable diseases (NCDs) such as diabetes, heart disease, and stroke, which are now among the leading causes of death in India.
- Reproductive health problems, including polycystic ovarian syndrome (PCOS) and hormonal imbalances.

3. Addressing the Dual Burden of Malnutrition

Given the simultaneous challenges of undernutrition and obesity, India's approach to women's and adolescent girls' nutrition needs to be multifaceted and community-driven.

Key Strategies to Combat Malnutrition in Adolescent Girls and Women

A. Addressing Undernutrition

- **Promoting Dietary Diversity** → Encouraging protein-rich foods (lentils, dairy, eggs), iron-rich vegetables, and healthy fats in daily meals.
- **Supplementation Programs** → Strengthening the Iron & Folic Acid Supplementation (IFAS) scheme for adolescent girls and women of reproductive age.
- **Strengthening Maternal Nutrition Interventions** → Expanding nutrition counselling services, antenatal care, and conditional cash transfer programs under schemes like POSHAN Abhiyaan and Pradhan Mantri Matru Vandana Yojana (PMMVY).
- **School-Based Nutrition Programs** → Ensuring the Mid-Day Meal Scheme and Rashtriya Kishor Swasthya Karyakram (RKSK) prioritize adolescent girls' nutritional needs.

B. Addressing Overweight and Obesity

- **Raising Awareness About Healthy Diets** → Educating communities about the dangers of processed foods, excessive sugar, and unhealthy fats.
- **Encouraging Physical Activity** → Promoting sports, yoga, and active lifestyles through school programs, community initiatives, and workplace wellness policies.

- **Policy Measures to Regulate Junk Food Consumption** → Strengthening food labelling policies, taxing sugar-sweetened beverages, and restricting junk food marketing to children.
- **Health Screenings & Preventive Care** → Conducting regular BMI screenings and metabolic health check-ups to detect and manage obesity-related diseases early.

The NFHS-5 findings reveal that India faces a complex nutritional landscape, where both undernutrition and obesity pose serious threats to adolescent girls and women. While poverty, food insecurity, and lack of access to healthcare continue to drive undernutrition, urbanization, changing diets, and reduced physical activity contribute to rising obesity rates. To bridge this nutritional gap, a comprehensive, community-led approach is required—combining food security programs, health education, maternal care services, and behaviour change initiatives. Ensuring that adolescent girls and women receive balanced nutrition, regular health screenings, and access to healthcare will be crucial in breaking the intergenerational cycle of malnutrition and improving overall public health outcomes in India.

METHODOLOGY

The **FNHW (Food, Nutrition, Health, and WASH)** concept under **Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM)** is designed to enhance the overall well-being of Self-Help Group (SHG) members and their families by integrating health and nutrition awareness with livelihood programs. The key aspects of FNHW under DAY-NRLM are capacity building for SHG women which include training and awareness programs to enhance knowledge about nutrition, health, sanitation, and hygiene and enabling SHG women to act as change agents in their communities, behaviour change (BC) model for sustainable impact which focuses on social and behavioural changes in Health, Nutrition, Sanitation, Education, and Gender and encourages community-driven solutions to improve human development indicators and integration with other NRLM components which include institution building & capacity building (strengthening SHGs and federations to sustain FNHW efforts), financial inclusion (ensuring access to credit for nutrition and health-related needs), farm & non-farm livelihoods (encouraging nutrition-sensitive agriculture and income diversification), gender & social inclusion (addressing gender disparities in health and nutrition) and convergence with PRIs (Panchayati Raj Institutions) (enhancing coordination with local governance for better service delivery) which has a broad objective to improve the overall human development indicators by ensuring access to better food, nutrition, health services, water, sanitation, and hygiene while empowering SHG women as change-makers.

This chapter covers detail methodology used for the research. The present study was planned with the broad objective of partnering with local women groups for integration of FNHW concepts in SHG members under DAY-NRLM in Waghodia Block of Vadodara District.

The specific objectives of the study were:

- To assess the profile of VO representatives.
- To assess the knowledge and practices of VO representatives on services of national programs under ICDS, PDS, PM-POSHAN, Ayushman Bharat- PM JAY.
- To assess their knowledge on selected FNHW concepts and dietary practices of VO representatives.
- To compile various IEC materials from existing resources of DAY-NLRM.
- To sensitize VO representatives on selected FNHW aspects.

- To assess knowledge retention and change in dietary practices of VO representatives.
- To encourage and monitor discussion within SHGs in their regular monthly schedule meetings on various FNHW components.

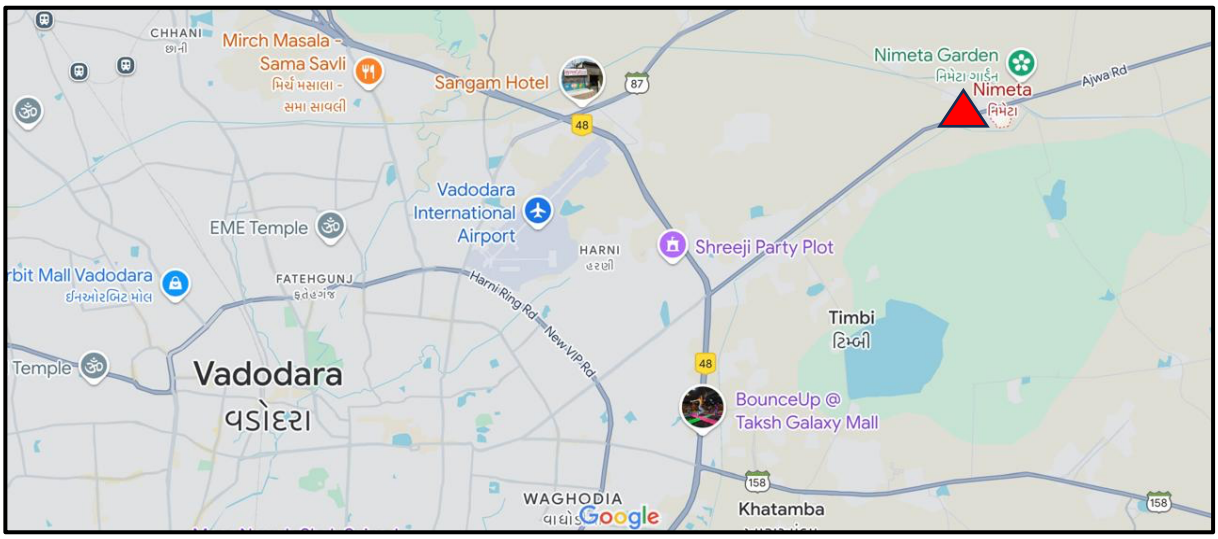
The study was approved under Institutional Medical Ethics Committee (No. IECHR/2024/25), The Maharaja Sayajirao University of Baroda, Vadodara.

Under Vadodara District, there are two blocks that are selected by Gujarat Livelihood Promotion Company (GLPC) i.e., Vadodara Rural and Waghodia. Out of two blocks, Waghodia block was selected purposively, which consist of **7 Cluster Level Federations, 87 Village Organizations and 936 active Self Help Groups** out of which **1 Cluster Level Federation was randomly selected** and **all Village Organization members** were enrolled for the study.

Study Site: Rural Waghodia

Study location is presented in **Fig 3.1**

Fig. 3.1: Study location



Study Design:

The study was divided into 3 phases. Details of experimental design for the research is presented in **Fig. 3.3.**

- **Phase – I** Baseline Assessment
- **Phase – II** Sensitization of VO representatives
- **Phase – III** Impact Evaluation

Phase – I Baseline Assessment

In this phase of the study, baseline assessment of VO representatives with a specific focus on assessing the **knowledge on selected FNHW components, dietary diversity and services of various national programs under ICDS, PDS, PM-POSHAN and Ayushman Bharat- PM JAY** was conducted.

Selection of the respondents

Under Vadodara District, there are two blocks that are selected by Gujarat Livelihood Promotion Company (GLPC) i.e., Vadodara Rural and Waghodia. Out of two blocks, Waghodia block was selected purposively, which consist of **7 Cluster Level Federations, 87 Village Organizations and 936 active Self Help Groups** out of which **1 Cluster Level Federation was randomly selected** and **all Village Organization members** were enrolled for the study. In all 120 members were enrolled. Then from the target group following data was collected:

- VO/SHG members' profile
- Height and Weight of VOs/SHGs
- Knowledge on selected FNHW components
- Dietary practices of VO representatives
- Knowledge and Practice of VOs/SHGs on services of various National Programs (ICDS, PDS, PM-POSHAN and Ayushman Bharat- PM JAY)

Following inclusion and exclusion criteria were for the enrollment of VO members:

Inclusion Criteria:

Active members of VO including members of SAC who were available and were willing to participate during the study period.

Exclusion Criteria:

NIL

VO/SHG members' profile:

Information on the socio-economic background of VO members was collected using a pre-tested questionnaire. Information regarding age, religion, caste, economic category, marital status, qualification, occupation, type of house, health insurance, addiction, Ayushman card, conduction of SHG meetings and trainings was collected. **(Appendix IV)**

Anthropometric measurements:

To assess the prevalence of any kind of nutrition, weight and height were assessed using standard methods. Age of the respondents were collected from Aadhar Card.

Weight Measurement

Weight is a key anthropometric measurement of body mass. It is a sensitive indicator of malnutrition and can be useful for estimating status of the individual.

Methodology

A digital bathroom weighing scale was used to take the weight of the respondents. It is portable and can be conveniently used in the field. The respondents were asked to stand erect on the scale without touching anything with no heavy clothing or footwear and looking straight ahead. The scale was set to zero before each measurement, calibrated periodically and was recorded to the nearest of 0.100 kg. In some cases, the respondents knew their weight so were asked about the same.

Height Measurement

Height is a linear measurement of body made up of the sum of four components: legs, pelvis, spines and skull **(Jelliffe 1966).**

Methodology

Height was measured using flexible non-stretchable tape to an accuracy of 0.1 cms. The tape was fixed vertically on a smooth wall of the house perpendicular to the ground, ensuring that the floor was smooth. The respondents were asked to stand erect with the shoulders, hips and heels touching the wall and with no footwear, heels together and looking straight ahead. The head was held comfortable erect, arms hanging loosely by the sides. A thin smooth scale was held on the top of the respondents' heads in the centre, crushing the hair at the right angles to

the tape and the height of the respondents were read from the lower edge of the ruler to the nearest 0.1 cms.

Knowledge and Practices:

Knowledge and practices were obtained using pre-tested semi-structured questionnaire on following topics: (**Appendix IV)**

- Selected FNHW components (IYCN Practices, Anemia and WASH practices)
- Dietary Practices
- Services of various National Programs (ICDS, PDS, PM-POSHAN and Ayushman Bharat- PMJAY)

Dietary Information:

General dietary pattern

Dietary information regarding type of diet, various food groups, nutrients required in daily diet, unhealthy foods, meal eating patterns, frequency and consumption of breakfast, soft drinks, junk foods and beverages, and dietary diversity were taken using pre-tested semi structured questionnaire. **(Appendix IV)**

24 hour dietary recall

Information on dietary intake was taken by recall of diet of the previous day (24 hour) with ingredients on 120 VO members. **(Appendix IV)**

Minimum Dietary Diversity for Women of Reproductive Age (MDD-W)

MDD-W is a dichotomous indicator of whether or not women 15-49 years of age have consumed at least five out of ten defined food groups the previous day or night. The proportion of women 15-49 years of age who reach this minimum in a population can be used as a proxy indicator for higher micronutrient adequacy, one important dimension of diet quality.

The MDD-W was developed as a proxy indicator to reflect the micronutrient adequacy of women's diets. It is a population-level indicator based on a recall period of a single day and night, so although data are collected from individual women, the indicator cannot be used to describe diet quality for an individual woman. **(USAID, FANTA 2016)**

Methodology

From one day dietary recall, list of food groups consumed by the VO members was prepared and MDD-W was computed. **10 Foods groups** were: Grains, white roots and tubers, and plantains, Pulses, Nuts and seeds, Dairy, Meat, poultry and fish, Eggs, Dark green leafy vegetables, Other vitamin A-rich fruits and vegetables, Other vegetables, and Other fruits. The score was given if the member has consumed the food group then we have given as 1 score and if they had not consumed then we have given them 2 score for each food groups.

Adequate dietary diversity

Out of 10 food groups, at least 5 food groups consumed on previous day will give adequate dietary diversity.

Phase – II Sensitization of VO representatives

Development of IEC materials and handouts on FNHW concepts for VO members:

Based on the knowledge and practices on FNHW components of VO members , topics were identified for orientation to them. A Training module was developed and distributed. **(Appendix VI)**

Handouts were developed and given to VO members for further sensitizing of SHG members. **(Appendix VII)**

Fig. 3.2: Training Module for VO/SHG members

સ્વ સહાય જૂથો માટે ખોરાક, પોષણ, આરોગ્ય અને સ્વચ્છતા (FNHW) પાસાના સંકલન અંગેની માર્ગદર્શિકા

ફુડ્સ એન્ડ ન્યૂટ્રિશન, ફેમિલી એન્ડ કમ્યૂનિટી સાયન્સીસ, **MSU**

તકનિકી નિષ્ણાત: ડૉ. હેમાંગીની ગાંધી (આસિસ્ટન્ટ પ્રોફેસર)

રીસર્ચ સ્ટુડન્ટ: આસ્થા બલોની (Sr. MSC PHN)

December 2024

અનુક્રમણિકા

	• ઉપરી આહાર કેવો હોવો જોઈએ? • ઉમર પ્રમાણે ઉપરી આહાર નું પ્રમાણ • ઉપરી આહાર માટે ધ્યાન માં રાખવાની બાબતો • આંગણવાડી માં થી મળતા બાલશક્તિ ના પેકેટ અંગે સમજ	
૫.	**એનિમિયા (પાંડુરોગ/ લોહીની ફિકાસ)** • એનિમિયા એટલે શું? • એનિમિયા થવાના કારણો • એનિમિયાના લક્ષણો • એનિમિયા આડ અસરો • લોહતત્વ ખોરાક માં ક્યાંથી મળે? • એનિમિયા કેવી રીતે અટકાવી શકાય/નિવારણ પગલા	૨૩
૬.	**કિશોરવયની છોકરીઓ માટે પોષણ** • કુપોષણ એટલે શું? • કિશોરીઓમાં કુપોષણના પરિણામો • કુપોષણ કેવી રીતે અટકાવી શકાય • માય થાળી • ફૂડ પિરામિડ	૨૯
૭.	**સ્વચ્છ જળ, સ્વચ્છતા અને આરોગ્ય નો સંબંધ** • સ્વચ્છતા અને આરોગ્ય નું મહત્વ • દુષિત પાણી થી થતી બીમારીઓ • પાણી ને શુદ્ધ રાખવાના ઘરેલું ઉપાયો • વ્યક્તિગત અને પર્યાવરણ ની સ્વચ્છતા • હાથ ધોવાની સાચી રીત • શોચાલય ના ઉપયોગ નું મહત્વ	૩૩
૮.	**માતા અને બાળકો માટે સરકારી કાર્યક્રમો ની સેવાઓ** • આઈ સી ડી અસ (ICDS) • પીડીએસ (PDS) • પી એમ પોષણ (PM-POSHAN) • આયુષ્માન ભારત- પીએમ જય (Ayushman Bharat- PM JAY)	૩૯

Handouts development:

Relevant handouts for VO/SHG members were developed.

Sensitization of VO members:

All VO representatives that were selected were provided one-day training session on various topics under FNHW concepts using various IEC materials and handouts and action plan was made to encourage SHG groups for FNHW components. Agenda of the training is presented below.

Training Agenda for VO/SHG members

Date: 12 December 2024

Venue: Swaminarayan Mandir, Nimeta

Activities	Time	Resource Person
Refreshment and Registration of VO/SHG members	10:00-10:30pm	
Welcome address	10:30-11:00pm	Dr. Hemangini Gandhi
Prayer		VO/SHG members
Objective of Training		Dr. Hemangini Gandhi
Pre-test		
Need for integration of FNHW in DAY-NRLM		Mrs. Daxa Parekh (TLM, Waghodia)
Tea break	11:00-11:15pm	
Introduction of the team and ice breaking game	11:15-11:45pm	All participants
Distribution of handouts	11:45- 2:00 pm	Aastha Baloni, Tanvi Kotadia

Sensitization on Integration of FNHW concept (Linking Health, Nutrition, Hygiene and Sanitation, Education with Livelihood)		Dr. Hemangini Gandhi
Balanced Diet and Dietary Diversification		Dr. Hemangini Gandhi
First 1000 Days Approach and ANC care		Aastha Baloni
Child Feeding Practices		Aastha Baloni
Lunch break	2:00- 2:30 pm	
Anemia in vulnerable groups and its preventive measures	2:30- 3:30 pm	Tanvi Kotadia
Nutrition for Adolescent girls		Mrs. Durga Vasava (CLF, Nimeta Cluster)
WASH Practices		Mr. Sachin Bhaliya (Cluster Coordinator, Nimeta)
Services of national programs under ICDS, PDS, PM-POSHAN, Ayushman Bharat- PM JAY		Dr. Hemangini Gandhi
Preparation of action plan and monitoring checklist to integrate FNHW in SHG groups	3:30- 4: 00 pm	Dr. Hemangini Gandhi, Aastha Baloni
Post-test	4: 00- 4: 30 pm	
Tea and Departure	4: 30- 5: 00 pm	

Phase – III Impact Evaluation

Phase- III (A): Knowledge Retention

After imparting sensitization sessions to evaluate the impact of the training and action plan strategy, post data was collected on their knowledge related to selected FNHW components, dietary diversity and services of various national programs under ICDS, PDS, PM-POSHAN and Ayushman Bharat- PM JAY of VO representatives after 3 months. **(Appendix IV)**

Phase- III (B): Monitoring of Action Plan

After collecting post data, execution of the action plan was to be done by VOs for 3 months and monitoring of it was done through checklist. Random monitoring of the execution was done by researcher, VO President and concerned authorities.

Monitoring was done for 3 months for all the members of VOs that whether they are encouraging discussion of FNHW concepts in SHG meetings regularly. Also, how many members asked about FNHW concepts in the meeting. Monitoring checklist is presented in **Appendix V.**

Tools and techniques used for the study is presented in **Table 3.1:**

Table 3.1: Tools and techniques used in the study

Parameters	Tools
VO/SHG members profile	Pre-tested semi structured questionnaire
Height and weight	Standard methods
Knowledge on selected FNHW components	Pre-tested semi structured questionnaire
Dietary practices of VO representatives	Pre-tested semi structured questionnaire and 24 hr diet recall method
Knowledge and Practice of VOs on services of various National Programs (ICDS, PDS, PM-POSHAN and Ayushman Bharat- PM JAY)	Pre-tested semi structured questionnaire
Monitoring of initiation of discussion on FNHW components in SHG meetings	Monitoring checklist

Outcome Measures:

Primary and Secondary Outcomes listed are:

Primary Outcomes:

- Assessing the profile of VO representatives,
- Assessing knowledge on selected FNHW concepts and dietary diversity of VO representatives,
- Assessing the knowledge and practices of VO representatives on services of national programs under ICDS, PDS, PM-POSHAN, Ayushman Bharat- PM JAY.

- Compiling various IEC materials from existing resources of DAY-NLRM.
- Sensitizing VO representatives on selected FNHW aspects.
- Assessing knowledge, retention and change in dietary practices.

Secondary Outcomes:

- Encouraging and monitoring discussion within SHGs in their regular monthly schedule meetings on various human development services and FNHW
- Enabling environment and barriers for implementing selected components under FNHW concepts

Quality Measures:

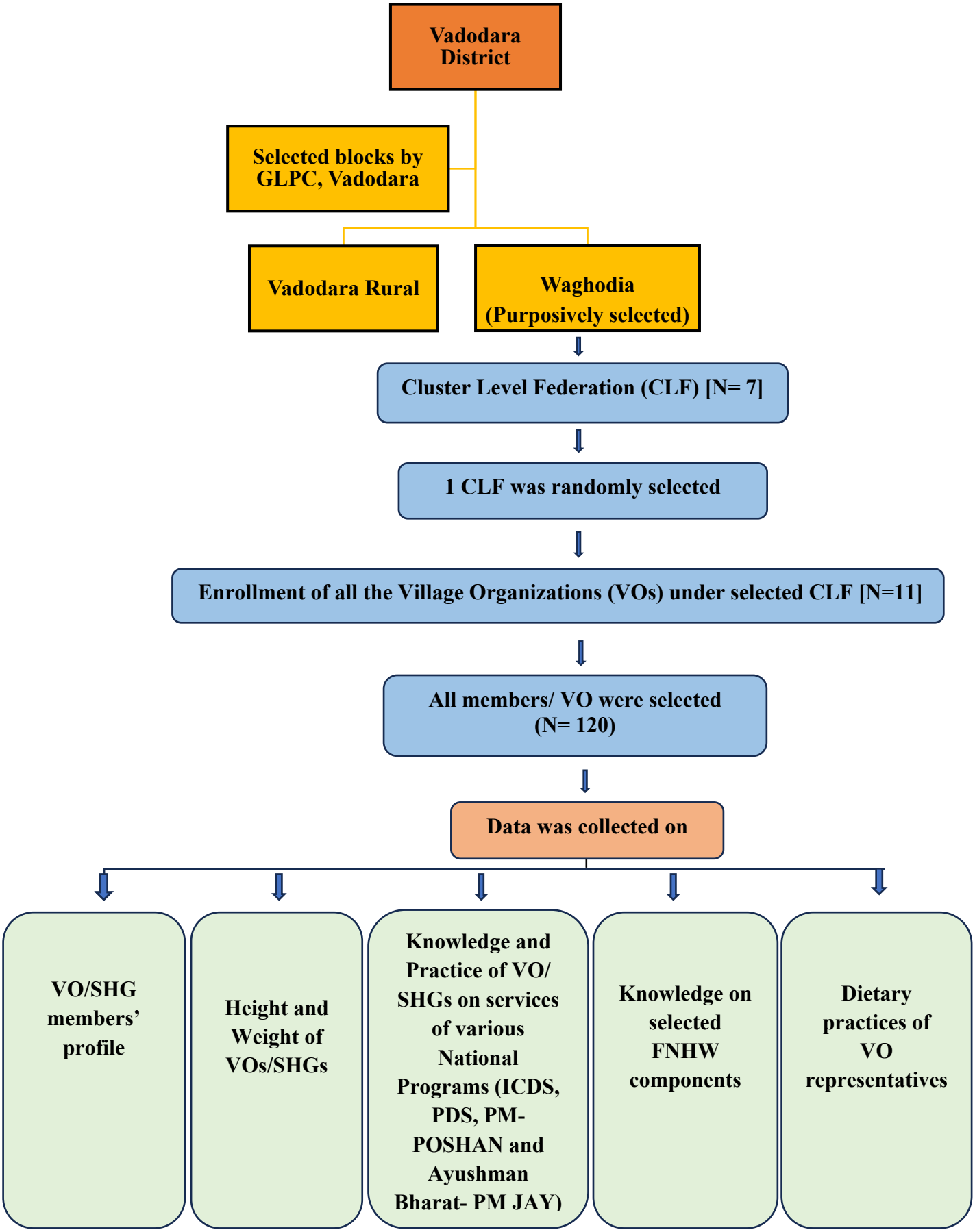
- Anthropometric measurements were done by calibrated instruments by the research student
- One day training session was provided to VO members by the researcher in local language
- Confidentiality of the data was maintained
- Random monitoring of counselling sessions was done by the research student, VO president and concerned Taluka authorities

Data Management:

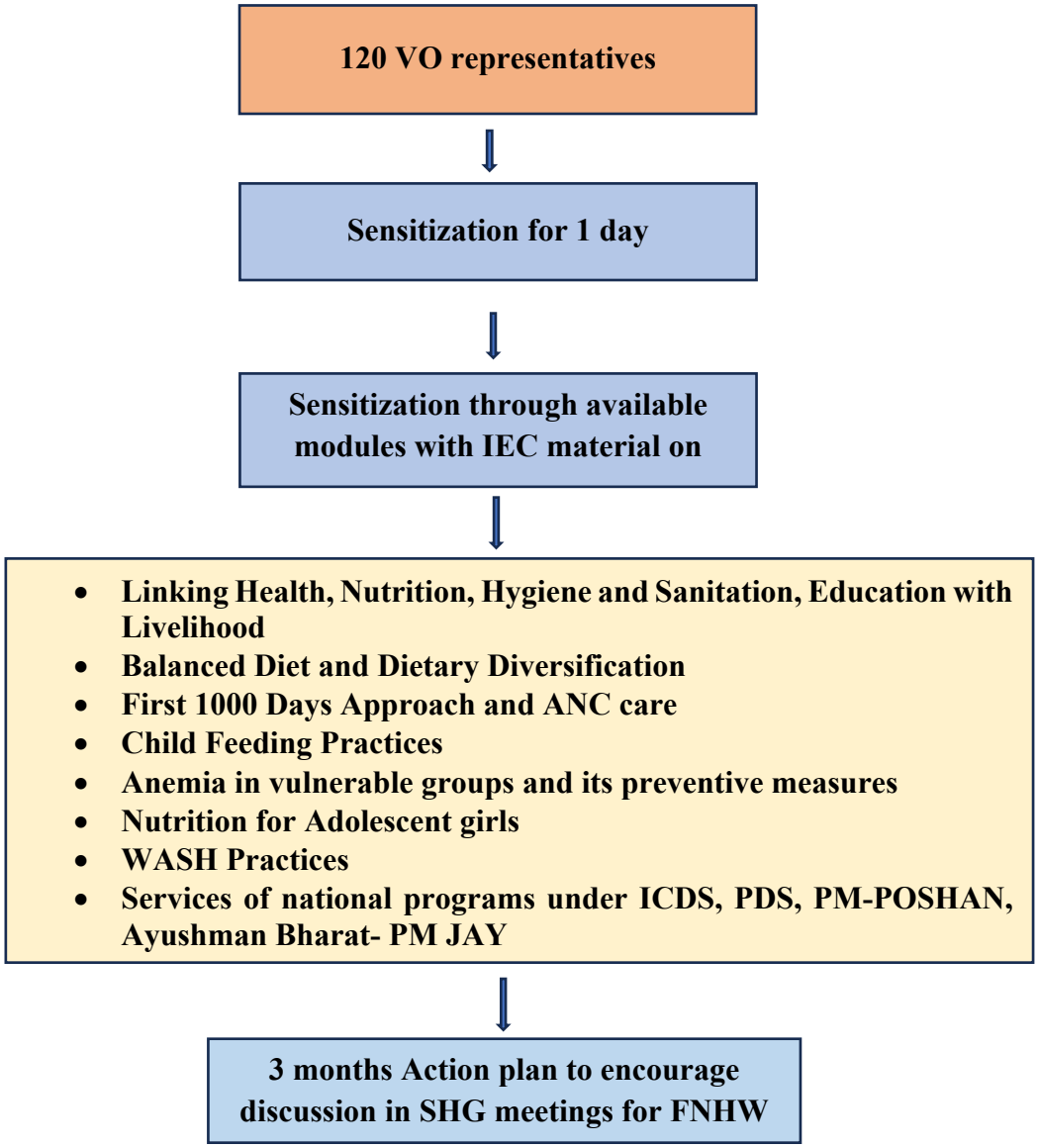
- The data obtained was entered into a personal computer and then was analysed using appropriate software
- Appropriate analysis was done

Fig. 3.3: Phase wise Experimental Design of the Study

Phase I: Baseline Assessment

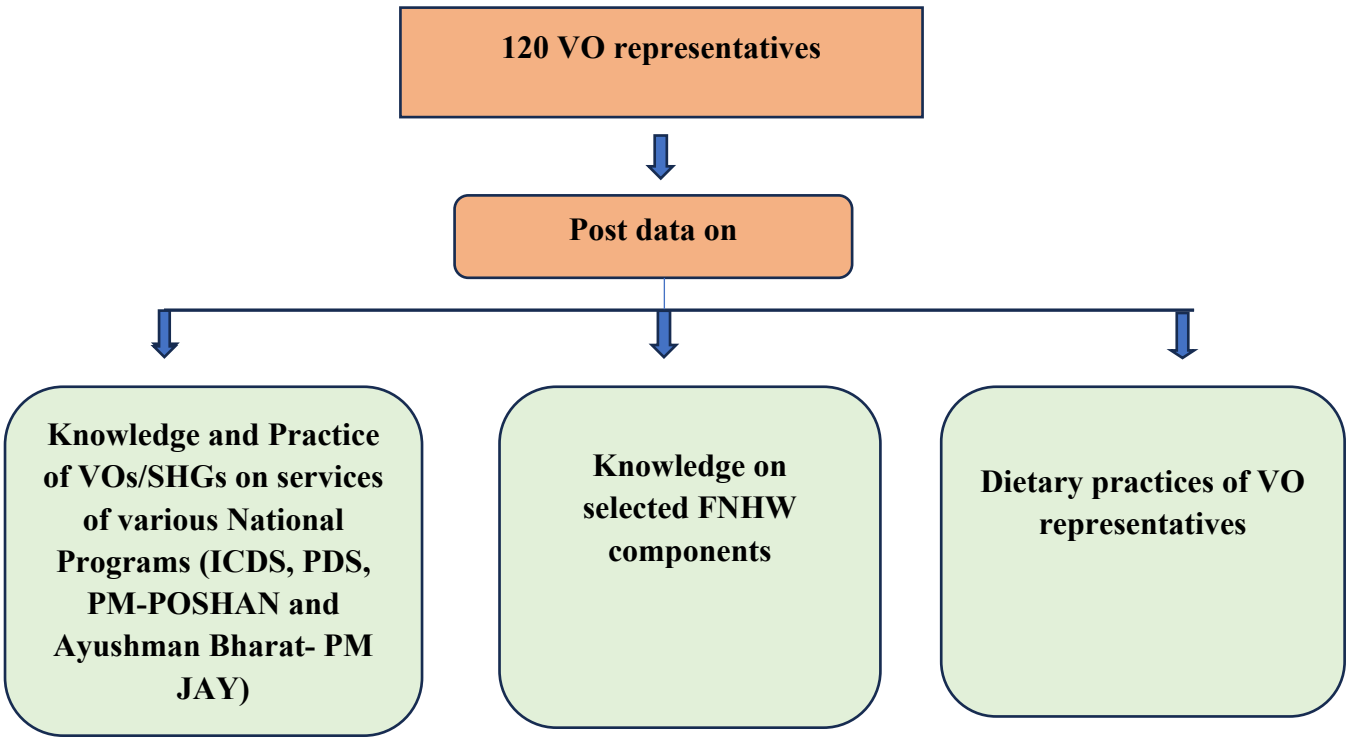


Phase II: Sensitization of VO representatives

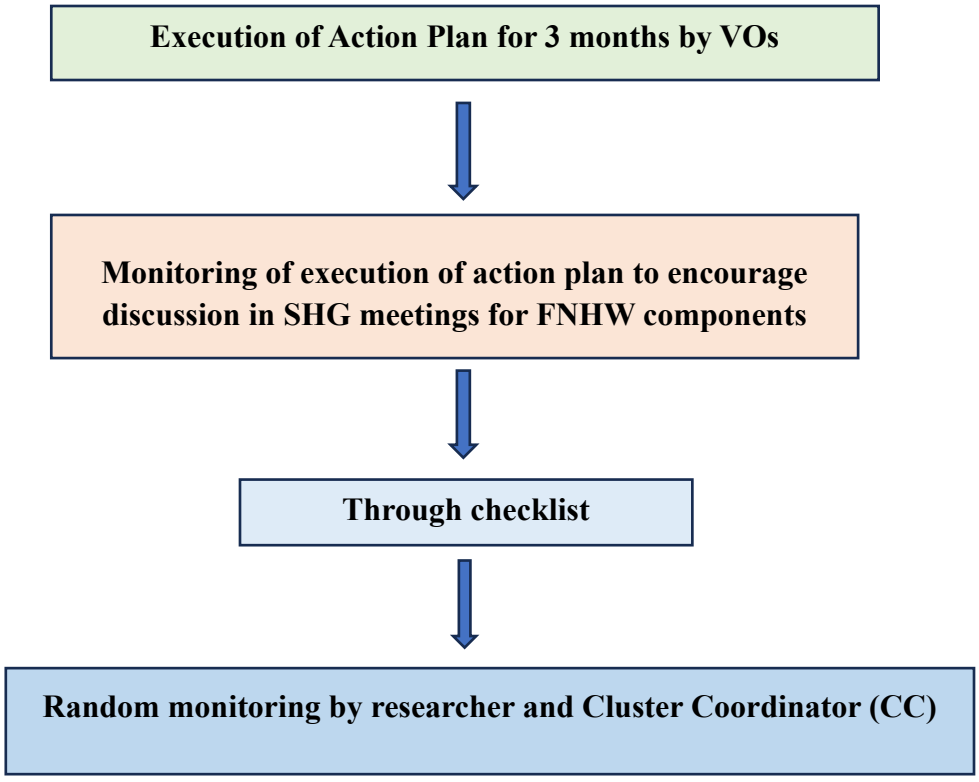


Phase III: Impact Evaluation

IIIA: Knowledge Retention



IIIB: Monitoring of Action plan



RESULTS AND DISCUSSION

Self-Help Groups (SHGs) are informal associations of people who choose to come together to find ways to improve their living conditions. Hence, there is need to strengthen their nutrition and health aspects. The **FNHW (Food, Nutrition, Health, and WASH)** concept under **Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM)** is designed to enhance the overall well-being of Self-Help Group (SHG) members and their families by integrating health and nutrition awareness with livelihood programs. The key aspects of FNHW under DAY-NRLM are capacity building for SHG women which enhances knowledge about nutrition, health, sanitation, and hygiene and has a broad objective to improve the overall human development indicators by ensuring access to better food, nutrition, health services, water, sanitation, and hygiene while empowering them as change-makers. **(DAY-NRLM)**

The present study was planned with the broad objective of partnering with local women groups for integration of FNHW concepts in SHG members under DAY-NRLM in Waghodia Block of Vadodara District.

The specific objectives of the study were:

- To assess the profile of VO representatives.
- To assess the knowledge and practices of VO representatives on services of national programs under ICDS, PDS, PM-POSHAN, Ayushman Bharat- PM JAY.
- To assess their knowledge on selected FNHW concepts and dietary practices of VO representatives.
- To compile various IEC materials from existing resources of DAY-NLRM.
- To sensitize VO representatives on selected FNHW aspects.
- To assess knowledge retention and change in dietary practices of VO representatives.
- To encourage and monitor discussion within SHGs in their regular monthly schedule meetings on various FNHW components.

The findings of the study are presented and discussed as per following sections:

Section I: Baseline Assessment

- Profile of VO/SHG members
- Anthropometry based nutritional status of VOs/SHGs
- Knowledge on selected FNHW components
- Dietary practices of VO representatives
- Knowledge of VOs/SHGs on services of various National Programs (ICDS, PDS, PM-POSHAN and Ayushman Bharat- PM JAY)

Section II: Development of IEC materials and handouts on FNHW concepts and Sensitization of VO/SHG members

- Development of IEC materials and handouts on FNHW concepts for VO members
- Sensitization of VO members on topics of FNHW
- Action plan and monitoring checklist

Section III: Impact Evaluation

- Knowledge retention on selected FNHW components
- Change in dietary practices
- Knowledge retention of VOs/SHGs on services of various National Programs (ICDS, PDS, PM-POSHAN and Ayushman Bharat- PM JAY)
- Monitoring and execution of the action plan by VO/SHG members
    - Monthly VO/SHG meetings conducted and monitored in selected cluster
    - Total number of pregnant women, lactating mothers, adolescent girls and newly married women counselled during FNHW meeting
    - Major issues faced in the villages
- Enabling environment and barriers

Section I: Baseline Assessment

Village Organization (VO)/Self Help Group (SHG) members enrolled for the study

Under Vadodara District, there are two blocks that are selected by GLPC i.e., Vadodara Rural and Waghodia. Out of two blocks, Waghodia block was selected purposively, which consisted of **7 Cluster Level Federations, 87 Village Organizations and 936 active Self Help Groups** out of which **1 Cluster Level Federation was randomly selected**. Selected cluster had 10 VOs. In all **120 members** were enrolled for the study as mentioned in **Table 4.1.**

Table 4.1: Number of Village Organization (VO)/Self Help Group (SHG) members enrolled for the study

Sr. No.	Particulars	VO/SHG members enrolled
1	Village 1	17
2	Village 2	10
3	Village 3	12
4	Village 4	11
5	Village 5	12
6	Village 6	10
7	Village 7	11
8	Village 8	15
9	Village 9	10
10	Village 10	12
	Total	**120**

Profile of the enrolled VO/SHG members

In all 120 VO/SHG members were enrolled for the study. General information like age of VO/SHGs, religion, caste, economic category, marital status, qualification, occupation, type of house, drinking water source and type of diet was elicited from 120 VO/SHG members enrolled for the study. Profile of VO/SHG members is presented in **Table 4.2.**

It was found that 35% of VO/SHG members fall under the age group of 30-40 years, 29% of them fall under the age group of 40-50 years and 19% of them fall under the age group of ≤30 years. All the subjects were Hindu (100%). Eighty-nine per cent of the enrolled VO/SHG members were from reserved category like SC/ST/OBC. Out of which 40% belong to OBC. Thirty-six per cent enrolled members belonged to BPL category and 94% of them were married. It was interesting to find out that 41% of the VO/SHG members were self-employed, 40% of them were skilled worker. They were engaged in sewing, cattle rearing,

pickle/ketchup/tutifruti making, papad making, etc. and 13% were engaged in agriculture. Seventy-eight per cent of the VO/SHG members had studied up to Primary/Secondary level whereas concerning 13% of them were illiterate.

It was also found out that 69% of the members had pucca house which tells that majority of them have good living condition. All the members have tap water inside the house (100%). Ninety-four per cent of them had household toilet whereas 6% still use open defecation. As we can see from the **Fig. 4.1** that majority of them ie. 60% of the members are vegetarians whereas 35% of them are non-vegetarians.

Knowledge about Food, Nutrition, Health and WASH concept under DAY-NRLM

In Waghodia block of Vadodara district, those self-help groups are active but their activities are limited to micro-finance, loan recovery and livelihood generation. DAY-NRLM has introduced FNHW concept in 2018. An attempt was made to find out whether current VO/SHG members are aware about the same or not.

It was found that members were not aware about the concept and how it is linked with livelihood.

Nutritional status assessment of VOs/SHG members

Prevalence of malnutrition was assessed using **WHO Asia Pacific Classification** using BMI for age is presented in **Table 4.3.** It was very surprising to know that 45% of the members were overweight/obese and 24% of the members were underweight due to chronic energy deficiency. This indicates a significant nutritional imbalance within the group, with only 31% maintaining a normal weight. Such disparities suggest that members may be experiencing vastly different dietary and lifestyle patterns, potentially influenced by socioeconomic status, food availability, or cultural habits. The high percentage of overweight and obese individuals could be attributed to excessive calorie intake, sedentary lifestyles, or a shift toward processed and high-fat foods. Meanwhile, the prevalence of underweight individuals indicates inadequate nutrition, possibly due to food insecurity, poor dietary diversity, or underlying health conditions. This dual burden of malnutrition—where both undernutrition and overnutrition coexist—raises concerns about overall health and well-being.

Table 4.2: Profile of enrolled VO/SHG members

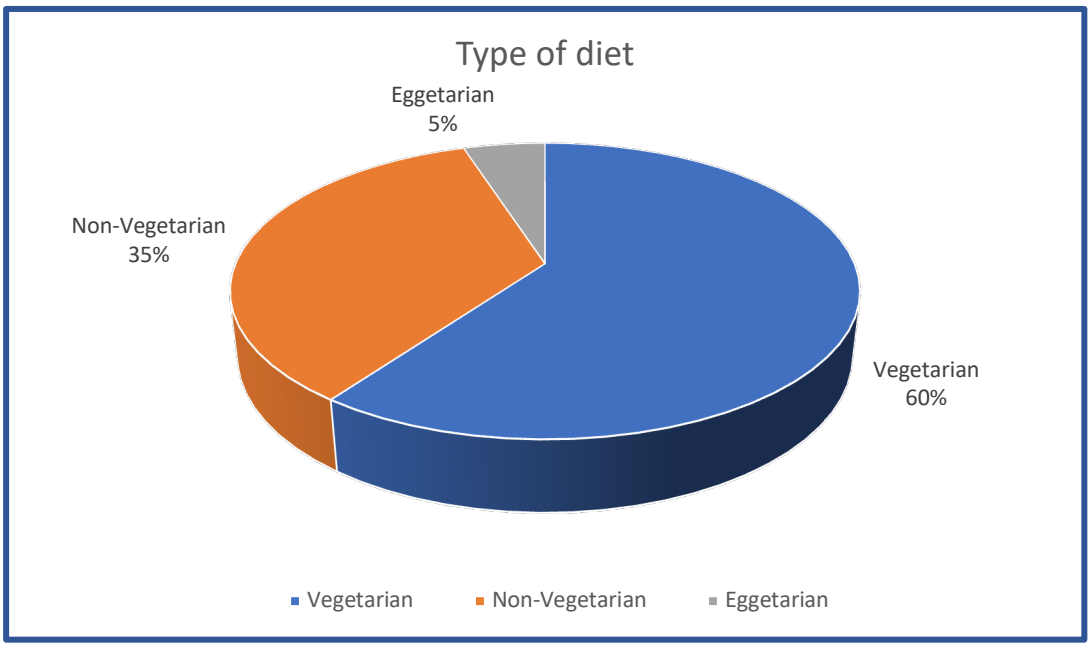
Sr. No.	Particulars	n	%
1	**Age (y)**		
	≤30	23	19
	30-40	42	35
	40-50	35	29
	≥50	20	17
	Total	**120**	**100**
2	**Religion**		
	Hindu	120	100
	Total	**120**	**100**
3	**Caste**		
	SC	32	27
	ST	27	22
	OBC	48	40
	General	13	11
	Total	**120**	**100**
4	**Economic category**		
	APL	77	64
	BPL	43	36
	Total	**120**	**100**
5	**Marital Status**		
	Married	113	94
	Unmarried	3	3
	Widow	4	3
	Total	**120**	**100**
6	**Qualification**		
	Graduate	4	3
	Higher secondary	7	6
	Secondary	36	30
	Primary	58	48
	Illiterate	15	13
	Total	**120**	**100**
7	**Occupation**		
	Business	2	2
	Service	5	4
	Skilled worker	48	40
	Self- employed	49	41
	Agriculture	16	13
	Total	**120**	**100**
8	**Type of house**		
	Katcha	2	2
	Semi-pucca	35	29
	Pucca	83	69
	Total	**120**	**100**

Table 4.3: Nutritional status* of VO/SHG members

Sr. No.	Particulars	n	%
1	**BMI (kg/m^2)**		
	Chronic Energy Deficient (<18.5)	29	24
	Normal (18.5-22.9)	37	31
	Overweight (23-24.9)	20	17
	Obese (≥25)	34	28
	Total	**120**	**100**

***As per Asia Pacific Classification**

Fig. 4.1: Type of diet of VO/SHG members



Conducting VO/SHG meetings on regular basis by VO/SHG members

Information on SHG meetings and topics discussed in the meeting were also asked (**Table 4.4**). It was reported that all the members conducted VO/SHG meetings regularly ie. every month (100%) out of which 97% of the VO/SHG members conducted meeting once a month. The topics discussed in these meetings focus on mostly micro-finance, loan recovery and livelihood generation (99%). The focus on health and nutrition aspects in the meetings was negligible. Hence, this shows the strong need for implementation of these aspects in the meetings because health and nutrition will have improved family health, reduction in malnutrition, better maternal and child health and will also prevent disease.

It was found that nearly 33% of the VO/SHG members got trainings before joining SHG groups which facilitates good economic growth for them. They got training of sewing (36%), cattle rearing (28%), pickle/ketchup/tutifruti/footmat/soap/toran making (20%), packaging/agarbatti packing (18%), WASH/farming/beauty parlour (15%), and vermi compost (3%). These skills suggest a diverse economic base among VO/SHG members, supporting income generation through traditional and modern livelihood activities.

Table 4.4: Information on conducting VO/SHG meetings by VO/SHG members

Sr. No.	Particulars	n	%
1	**Regularly conducts VO/SHG meetings**		
	Yes	120	100
	Total	**120**	**100**
2	**If yes, how frequently it is done?**		
	Once a month	116	97
	2 times a month	4	3
	Total	**120**	**100**
3	**Topics discussed in VO/SHG meeting**		
	Micro-finance	119	99
	Loan recovery	119	99
	Health/Nutrition	1	1
	Livelihood generation	117	98
	Agriculture	1	1
	National/govt. schemes	1	1
4	**Got any training for SHG concepts?**		
	Yes	39	32.5
	No	81	67.5
	Total	**120**	**100**
5	**If yes, which training?**		
	Sewing	14	36
	Cattle rearing	11	28
	Vermi compost	1	3
	Pickle/ketchup/tutifruti making	4	10
	Farming	2	5
	WASH	2	5
	Beauty parlour	2	5
	Footmat/soap/toran making	4	10
	Packaging/Aggarbatti packing	7	18
	NA	81	67.5

Health aspects of VO/SHG members

Data on health aspects of VO/SHG members was also elicited. It is presented in **Table 4.5.** The study revealed that 53% of VO/SHG members had health insurance, indicating that more than half of them have some level of financial protection against medical expenses. Also, 78% of the members owned an Ayushman Card, granting them access to free healthcare services under the Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana (PM-JAY). While this is a positive sign of increasing health security, the fact that 22% of members still lack an Ayushman Card and 47% remain without health insurance highlights the need for greater awareness and accessibility of these schemes.

Seven per cent of the members reported tobacco consumption, which is a cause for concern due to its harmful health effects and financial burden. To address this, SHG meetings could incorporate awareness programs on health insurance benefits and tobacco cessation, ensuring that members are both financially and physically secure.

PDS services and ration availed by VO/SHG members

Table 4.6 provides services of PDS and ration availed by VO/SHG members. It was reported that 81% of the members availed PDS ration from village ration shops. The food items taken from PDS were fortified rice and wheat (81%), followed by dal and salt (67%), and oil and sugar (57%). It was also found out that seasonally jowar, bajri and chana were provided to the members in alteration to fortified wheat and dal.

Expenses of family income of VO/SHG members and their perception of utilisation of government services and nutritional status with livelihood

Information was collected on how family income is spent which is presented in **Table 4.7.** It was found out that majority of the income of VO/SHG members was spent on food (90%), followed by repaying loan (78%), children's education (74%), agriculture (48%) and illness (13%). When asked about whom to care to make family happy, it was found out that majority of them ie. around 96% of the members reported pregnant mothers, young children, lactating mothers, adolescent girls and school children while remaining 4% reported elders, women, husband and all the family members at home. All the members opined that utilizing government services will have good nutritional status and good nutritional status will further have good livelihood. They agreed that utilizing government services plays a crucial role in improving their nutrition, which in turn enhances their overall well-being and work productivity.

Table 4.5: Health related aspects of VO/SHG members

Sr. No.	Particulars	n	%
1	**Health Insurance**		
	Yes	64	53
	No	56	47
	Total	**120**	**100**
2	**If yes, how many members have it?**		
	1	39	60
	2	18	28
	>2	8	12
	NA	56	47
3	**Addiction**		
	Tobacco	8	7
4	**Ayushman Card**		
	Yes	93	77.5
	No	27	22.5
	Total	**120**	**100**

Table 4.6: Services of PDS and ration availed by VO/SHG members

Sr. No.	Particulars	n	%
1	**Availing PDS ration**		
	Yes	97	81
	No	23	19
	Total	**120**	**100**
2	**Food items available in PDS**		
	Fortified rice	97	81
	Fortified wheat	97	81
	Dal	80	67
	Oil	68	57
	Sugar	56	47
	Iodized salt	77	64
	Jowar	43	36
	Bajri	22	18
	Chana	20	17

Table 4.7: Expenses of family income and perception of government services and nutritional status with livelihood of VO/SHG members

Sr. No.	Particulars	n	%
1	**Expenditure of majority of family income**		
	Illness	16	13
	Children's education	89	74
	Agriculture	57	48
	Marriage/any other events	2	2
	To repay loan	94	78
	Food	108	90
2	**Care to take to make family happy**		
	Pregnant mothers	115	96
	Young children	115	96
	Lactating mothers	114	95
	Adolescent girls	117	98
	School children	117	98
	Elders/mother-in-law/father-in-law	2	2
	Women/Husband	2	2
	All family members	6	5

Knowledge of selected FNHW components

Knowledge of VO/SHG members on IYCN practices

Table 4.8 provides knowledge of members about IYCN practices related to early initiation of breastfeeding, exclusive breastfeeding, correct age of complementary feeding was found to be satisfactory as more than 80 % gave correct answers for the same. However, knowledge on avoidance of pre-lacteals and continued breastfeeding up to 2 years was reported by less than 50% of the members.

Knowledge on causes and preventive measures on Anemia

Since anemia is a major public health problem in women, data on awareness about anemia, its causes and preventive measures was elicited and is presented in **Table 4.9.** It was found that 95% of the members had heard about the term anemia at baseline.

It was interesting to find out that 81% of the members suggested the causes of anemia as inadequate consumption of iron rich foods in the diet at baseline.

It was also found that 88% of the members considered consumption of iron rich foods with enhancers and dietary diversity as preventive measure followed by consumption of iron folic acid tablets (77%) at baseline.

Table 4.8: Knowledge of VO/SHG members on IYCN practices

Sr. No.	Particulars	n	%
1	**Early initiation of breastfeeding**		
	Within 1 hr	100	83
	After 1 hr	12	10
	Don't know	8	7
	Total	**120**	**100**
2	**Knowledge about colostrum**		
	Yes	106	88
	No	14	12
	Total	**120**	**100**
3	**If yes, what is its importance?**		
	Fights against antibodies/foreign bodies entering inside the body and makes the system immune	62	58
	Don't know	44	42
	NA	14	12
4	**Should pre-lacteals be given to the child?**		
	Yes	47	39
	No	73	61
	Total	**120**	**100**
5	**Seen anyone giving pre-lacteals to the child?**		
	Yes	65	54
	No	55	46
	Total	**120**	**100**
6	**Exclusive breastfeeding**		
	6 months	108	90
	9 months	4	3
	Don't know	8	7
	Total	**120**	**100**
7	**Initiation of Complementary Feeding**		
	3 months	1	1
	6 months	1	1
	After completion of 6 months	108	90
	Don't know	10	8
	Total	**120**	**100**
8	**Along with complementary feeding, continued breastfeeding**		
	6 months	3	2
	1 year	67	56
	2 years	42	35
	Don't know	8	7
	Total	**120**	**100**

Table 4.9: Knowledge of VO/SHG members on causes and preventive measures on Anemia

Sr. No.	Particulars	n	%
1	**Heard about the term anemia**		
	Yes	114	95
	No	6	5
	Total	**120**	**100**
2	**If yes, then what is anemia?**		
	Low hemoglobin levels in the blood	112	98
	Paleness of eyes, nails, tongue	21	18
	Weakness	7	6
	Low food consumption	1	1
	NA	6	5
3	**Causes of anemia**		
	Inadequate consumption of Iron Rich Foods in the Diet	97	81
	Consumption of Iron Rich Foods with inhibitors like Tea and Coffee	1	1
	Excessive blood loss as in menstruation, delivery,hemorrhage	8	7
	Blood loss during accidents	3	3
	Frequent Episodes of Malaria	3	3
	Don't know	23	19
4	**Signs and symptoms of anemia**		
	Fatigue	85	71
	Weakness	115	96
	Pallor of skin, tongue and nails	2	2
	Shortness of breath	25	21
	Dizziness	97	81
	Brittle and spoon-shaped nails	2	2
	Headaches	86	72
	Fast irregular heartbeat	2	2
	Cold hands and feet	55	46
	Tingling sensations in legs	96	80
	Loss of appetite	2	2
	Fever	2	2
	Don't know	5	4
5	**Preventive measures for Anemia**		
	Consumption of Iron Rich Food with enhancers and dietary diversity	115	88
	Consume Iron Folic Acid Tablets	92	77
	Prevention of Malaria	2	2
	Cleanliness of house inside and outside	3	3
	Consume Albendazole tablets twice a year	1	1
	Eat Purna Shakti packets	1	1
	Don't know	5	4

Knowledge of VO/SHG members on iron rich sources and IFA consumption

Data on iron rich sources and consumption of IFA tablets was also asked and is presented in **Table 4.10.** It was found that members had fairly good knowledge of iron-rich sources of food and to consume with enhancers or inhibitors. Regarding supply of IFA tablet, it was reported that pregnant mothers were provided IFA tablet (82%), followed by adolescent girls (78%) and lactating mothers (52%). It was apparent that lactating mothers (52%) and women in reproductive age group (29%) were not in priority list of AAA functionaries for providing IFA tablets.

Majority of the members reported that IFA tablets are provided by ASHA/AWW. Members had fairly good knowledge that IFA to be consumed after having food.

WASH practices of VO/SHG members

It was reported that all the members wash their hands after using toilet and before cooking. Forty-seven per cent of the members washed their hands after handling the child during baseline. Also, 30% of the members washed their hands after handling cattle at baseline. It was interesting to note that all the members (100%) wash their hands with either soap/ash/handwash during baseline. WASH related practices of VO/SHG members are presented in **Table 4.11.**

Dietary practices of VO representatives

Knowledge of VO/SHG members on food groups, balanced diet and nutrients

Knowledge on food groups and balanced diet of VO/SHG members is presented in **Table 4.12.** It was found that knowledge regarding staple foods ie. grains, pulses and dairy products was reported by all the members. Awareness about other protective food groups was also found to be satisfactory at baseline. All the members could explain correct understanding of balanced diet ie. a diet that includes Cereals, Pulses, Dairy products, Fruits and Vegetables, egg/fish/meat,oil/ghee. Knowledge about basic nutrients was found to be minimal as 88% of the members had never heard about name of the nutrients.

Knowledge on Undernutrition

Members were also asked about familiarity with term undernutrition, its causes and preventive measures. Data is presented in **Table 4.13**. It was found that 83% of the members were familiar with the term undernutrition (*Kuposhan).* More than 90% could explain what is undernutrition (Low weight for age) and causes correctly. 87% of the members opined that consuming balanced diet could prevent undernutrition.

Table 4.10: Knowledge of VO/SHG members on iron rich sources and IFA consumption

Sr. No.	Particulars	n	%
1	**Perception of iron-rich sources of food**		
	Green leafy vegetables	112	93
	Whole cereals and Pulses	104	87
	Dates	83	69
	Beet	110	92
	Jaggery	30	25
	Fruit	14	12
	Milk/Milk products	4	3
	Ghee	1	1
	Don't know	8	7
2	**Foods to be consumed with iron rich foods**		
	Vitamin C-rich foods- Amla/ lemon/ orange/ guava	114	95
	Don't know	6	5
	Total	**120**	**100**
3	**Foods not to be consumed with iron rich foods**		
	Tea or coffee	118	98
	Don't know	2	2
	Total	**120**	**100**
4	**Supply of IFA syrup/tablet in village by ASHA/AWW**		
	Pregnant mothers	98	82
	Lactating mothers	62	52
	Adolescent girls	93	78
	Children <6 years	77	64
	Women of reproductive age (WRA)	35	29
	Don't know	18	15
5	**IFA tablets to the beneficiaries are provided by**		
	ASHA	112	93
	ANM	7	6
	AWW	78	65
6	**Consumption method of IFA tablet**		
	Consuming IFA after having Food	92	77
	Including Citrus fruits like lemon in food	2	2
	Empty stomach	1	1
	Don't know	27	23

Table 4.11: WASH practices of VO/SHG members

Sr. No.	Particulars	n	%
1	**Hand washing**		
	After using toilet	120	100
	Before cooking	120	100
	After handling the child	56	47
	After handling cattle	36	30
2	**Hand cleansing**		
	With soap/ash/handwash	120	100
	Total	**120**	**100**

Table 4.12: Knowledge of VO/SHG members on food groups, balanced diet and nutrients

Sr. No.	Particulars	n	%
1	**Aware of different food groups**		
	Yes	39	32.5
	No	81	67.5
	Total	**120**	**100**
2	**If yes, mention the food groups**		
	Grains, white roots and tubers, and plantains	39	100
	Pulses (beans, peas and lentils)	39	100
	Nuts and Seeds	8	21
	Dairy	39	100
	Meat, Poultry and Fish	10	26
	Eggs	14	58
	Dark GLVs	37	95
	Other vitamin A-rich fruits and vegetables	20	51
	Other Vegetables	34	87
	Other Fruits	27	69
	NA	81	67.5
3	**Perception of a balanced diet or a healthy diet**		
	A diet that includes Cereals, Pulses, Dairy products, Fruits and Vegetables, egg/fish/meat,oil/ghee	120	100
	Total	**120**	**100**
4	**Food groups inclusion to have balanced diet**		
	Grains, white roots and tubers, and plantains	120	100
	Pulses (beans, peas and lentils)	120	100
	Nuts and Seeds	12	10
	Dairy	117	98
	Meat, Poultry and Fish	2	2
	Eggs	6	5
	Dark GLVs	106	88
	Other vitamin A-rich fruits and vegetables	59	49
	Other Vegetables	114	95
	Other Fruits	95	79
5	**Nutrients required in daily diet**		
	Carbohydrates	5	4
	Protein	13	11
	Fats	7	6
	Vitamins and Minerals	10	8
	Don’t know	106	88

Table 4.13: Knowledge of VO/SHG members on Undernutrition

Sr. No.	Particulars	n	%
1	**If, nutrients are not consumed in required quantity what happens**		
	Undernutrition	109	91
	Different nutrient deficiencies (Vitamins and mineral deficiencies)	81	68
	Non-communicable diseases like diabetes,CVD, cancer,etc.	95	79
	Weakness	3	3
	Don't know	8	7
2	**Knowledge of undernutrition**		
	Yes	100	83
	No	20	17
	Total	**120**	**100**
3	**If yes, what is undernutrition?**		
	Low weight for age	97	97
	Can't work properly, Weakness	17	17
	Being unhealthy	4	4
	Frequent illnesses	1	1
	Don't know	20	20
	NA	20	17
4	**Preventive measures for undernutrition**		
	To consume a balanced diet regularly	104	87
	To keep home and village clean	1	1
	Don't know	9	8
	NA	6	5

Knowledge and Practice about Unhealthy Diet

Members were asked about their perception regarding unhealthy food and practices regarding its consumption. Information is presented in **Table 4.14.** Almost all the members could explain the unhealthy foods as high in added sugar, fat and salt. Regarding their practice nearly half of the members reported that once a week they eat outside home. 87% members preferred buying junk foods like packed snacks, fried snacks, sweets and carbonated beverages.

Knowledge about Dietary Diversity

Dietary diversity is very important to achieve daily nutrition for women. Information was asked about whether they are familiar with the term dietary diversity. Information is presented in **Table 4.15.** It was found that all the members were aware that dietary diversity meaning inclusion of variety of diet and food groups.

Table 4.14: Knowledge and Practice of VO/SHG members about Unhealthy Diet

Sr. No.	Particulars	n	%
1	**Perception of Unhealthy foods**		
	Foods that are rich in essential nutrients	4	3
	Foods that contain excessive amounts of added sugars, unhealthy fats, and/or salt	117	98
2	**Can identify Unhealthy foods**		
	Panipuri	86	72
	Chinese/Manchurian	63	53
	Samosa/Kachori/Puff /Bhajiya/Pakoda/Dalvada/Fried foods/Fafda	57	48
	Packets/Gopal/Kurkure	6	5
	Pav bhaji/Vadapav/Dabeli	52	43
	Biscuit/Khari/Chavanu	4	3
	Maggi/Noodles	6	5
	Pizza/Sandwich/Burger/Frankie/Momos	16	13
	Sev usal	6	5
	Cheese	1	1
	Ice cream	1	1
3	**Frequency of eating outside home**		
	Daily	2	1
	3-4 times a week	7	6
	2-3 times a week	13	11
	Once a week	49	41
	Never	49	41
	Total	**120**	**100**
4	**Preference of buying junk foods**		
	Yes	104	87
	No	16	13
	Total	**120**	**100**
5	**Preference of junk foods**		
	Packed snacks (Potato/ banana wafers, Kurkure,Gopal)	89	74
	Fried snacks (samosa, bhajiya, kachori,panipuri)	87	73
	Carbonated drinks ThumsUp,7 Up, Pepsi,Coca-Cola, Limca)	61	51
	Sweets (burfi, laddoo, pastries/ cakes,chocolates, ice cream, biscuits)	91	76
	NA	16	13

Table 4.15: Knowledge of VO/SHG members about Dietary Diversity

Sr. No.	Particulars	n	%
1	**Knowledge of diet diversity**		
	Consuming a wide variety of foods and food groups	120	100
	Total	**120**	**100**
2	**Achieving daily diet diversity**		
	Trying new foods and recipes	120	100
	Total	**120**	**100**

Meal frequency

All the members reported that they have main meals like lunch and dinner every day and 86% reported about daily consumption of breakfast. Information is presented in **Table 4.16.**

Dietary diversity

Food groups consumed and Minimum Dietary Diversity for Women (MDD-W) of VO/SHG members from 24 hr dietary recall

To find out the variety of diet consumed by VO/SHG members, one day 24 hr dietary recall was used to collect data on food consumption. Based on the food groups consumed on previous day, Minimum Dietary Diversity for Women (MDD-W) was calculated using **FANTA USAID (2016)** guideline. Data is presented in **Table 4.17 and 4.18.**

It was observed from the data that all the members ate staple food ie. wheat. Ninety-five per cent of the members reported for pulse consumption. Protective rich foods like Vitamin A rich fruits and vegetables and dairy products were consumed by 88% of the members. Almost all members reported to consume ground nut and sesame seeds for the nuts and seeds food group. However, protective foods like dark green leafy vegetables were reported only by 38%.

Minimum Dietary Diversity for Women (MDD-W) was found to be adequate for 92% of the members as they reported consumption of 5 or more food groups on the day of data collection.

Table 4.16: Meal frequency of VO/SHG members

Sr. No.	Particulars	n	%
1	**Meal frequency**		
	Breakfast	110	92
	Lunch	120	100
	Supper	53	44
	Dinner	120	100
2	**Consumption of breakfast everyday**		
	Yes	103	86
	No	17	14
	Total	**120**	**100**

Table 4.17: Number of food group consumed by VO/SHG members

Sr. No.	Particulars	n	%
1	**Food groups**		
	Grains, white roots and tubers, and plantains	120	100
	Pulses (beans, peas and lentils)	114	95
	Nuts and Seeds	119	99
	Dairy	105	88
	Meat, Poultry and Fish	1	1
	Eggs	1	1
	Dark GLVs	46	38
	Other vitamin A-rich fruits and vegetables	104	87
	Other Vegetables	68	57
	Other Fruits	3	3

Table 4.18: Minimum Dietary Diversity for Women (MDD-W) of VO/SHG members from 24 hr dietary recall

Sr. No.	Particulars	n	%
1	**Food groups consumed**		
	≥5	111	92.5
	<5	9	7.5
	Total	**120**	**100**

Knowledge of VOs/SHGs on services of various National Programs (ICDS, PDS, PM-POSHAN and Ayushman Bharat- PM JAY)

Knowledge on services of ICDS

Introducing FNHW concept under DAY-NRLM for self-help groups will facilitate them for better awareness regarding services of various government programs for themselves and to become link between community and SHG. It was thought worthwhile to elicit the level of awareness for various programs in the VO/SHG members.

ICDS is National flagship program for improving maternal and child health. Data on awareness regarding different services for different target groups is presented in **Table 4.19.** It was observed that supply of iron-folic acid tablets (IFA) pregnant and adolescent girls was known to around 85% of the members. Around 60% of the members knew that IFA to be supplemented to children below 6 years. Lactating mothers and Women of reproductive age group (WRA) are also target groups for IFA was known to less than 50% of the members.

Similar observations were found for Take Home Ration (THR) supplementation for different target groups.

Regarding awareness about immunization program, awareness was found for pregnant women and children below 6 years. Only 52% of the members knew that Vitamin A syrup to be given to children below 6 years. Awareness regarding counselling services and deworming tablets was reported by only very few members (Around 25%).

Knowledge about Community Based Events (CBEs)

Under ICDS program, various CBEs like Mamta Divas, Suposhan Samvad, Baltula Divas, Annaprashan Divas/Anna vitaran divas (THR distribution) and Purna Divas are celebrated on designated days. Knowledge regarding these CBEs will help members for better utilization of services of ICDS program.

Information was collected about awareness level of members regarding CBEs and is depicted in **Table 4.20.** It was found that 70% of the members were familiar with Mamta Divas activities. Most of the members were not aware about other CBEs.

Table 4.19: Knowledge of VO/SHG members on services of ICDS

Beneficiaries	Services							
	IFA	Deworming	MHM	Vit A	Immuni-zation	Health check-up (weight, height)	THR	Counseling sessions
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Pregnant mothers	106 (88%)	6 (5%)	NA	NA	105 (88%)	102 (85%)	89 (74%)	31 (26%)
Lactating mothers	55 (46%)	0	NA	NA	6 (5%)	23 (19%)	22 (18%)	27 (23%)
Adolescent girls	103 (86%)	31 (26%)	117 (98%)	NA	51 (43%)	94 (78%)	88 (73%)	27 (23%)
Children <6 yrs	76 (63%)	55 (46%)	NA	52 (62%)	112 (93%)	107 (89%)	92 (77%)	22 (18%)
Women of reproductive age (WRA)	42 (35%)	0	NA	NA	2 (2%)	23 (19%)	5 (4%)	21 (18%)

() indicates percentages

Table 4.20: Knowledge of VO/SHG members about Community Based Events (CBEs)

Sr. No.	Particulars	n	%
1	**Awareness of Mamta Divas**		
	Yes	85	71
	No	35	29
	Total	**120**	**100**
2	**If yes, when it is celebrated?**		
	Every Wednesday	57	67
	NA	35	29
	Don't know	28	33
3	**Awareness of Suposhan Samvad**		
	Yes	4	3
	No	116	97
	Total	**120**	**100**
4	**If yes, when it is celebrated?**		
	1st Tuesday	1	25
	NA	116	97
	Don't know	`3	75
5	**Awareness of Baltula Divas**		
	Yes	33	27.5
	No	87	72.5
	Total	**120**	**100**
6	**If yes, when it is celebrated?**		
	2nd Tuesday	4	12
	NA	87	72.5
	Don't know	29`	88
7	**Awareness of Annaprashan Divas**		
	Yes	11	9
	No	109	91
	Total	**120**	**100**
8	**If yes, when it is celebrated?**		
	3rd Tuesday	1	9
	NA	109	91
	Don't know	`10	91
9	**Awareness of Purna Divas**		
	Yes	8	7
	No	112	93
	Total	**120**	**100**
10	**If yes, when it is celebrated?**		
	4th Tuesday	2	25
	NA	112	93
	Don't know	`6	75

Knowledge on services of PM-POSHAN Shakti Nirman (Mid-day Meal-MDM) and Ayushman Bharat PM-JAY

Information on knowledge of services of PM-POSHAN among members was asked and presented in **Table 4.21.** It was found that members have good knowledge about what MDM is and its eligibility. However, it was found that they hardly knew about the importance (around 25%). Regarding, knowledge on Ayushman Bharat PM-JAY it was depicted that members have good knowledge about the scheme and what it is. It was also found that nearly only 50% of the members have ever visited Health and Wellness centers (HWC). Data on it is elicited in **Table 4.22.**

Table 4.21: Knowledge of VO/SHG members on services of MDM

Sr. No.	Particulars	n	%
1	**Knowledge about MDM**		
	Yes	113	94
	No	7	6
	Total	**120**	**100**
2	**Eligibility of MDM**		
	Children studying in Primary and Upper Primary classes	112	93
	NA	7	6
	Don't know	1	1
	Total	**120**	**100**
3	**Importance of MDM**		
	To satisfy hunger of school children	29	24
	To bridge the gap of protein and calorie	35	29
	For Health	16	13
	NA	7	6
	Don't know	33	28

Table 4.22: Knowledge of VO/SHG members on services of Ayushman Bharat- PM JAY

Sr. No.	Particulars	n	%
1	**Knowledge about Ayushman Bharat- PM JAY**		
	Yes	115	96
	No	5	4
	Total	**120**	**100**
2	**If yes, what is it?**		
	It provides a cover of Rs. 5 lakhs per family per year for secondary and tertiary care hospitalization across public and private empanelled hospitals in India	114	99
	NA	5	4
	Don't know	1	1
3	**Ever visited HWC in the village?**		
	Yes	57	47.5
	No	63	52.5
	Total	**120**	**100**

Highlights of Section I

Profile of VO/SHG members

- 35% of VO/SHG members fall under the age group of 30-40 years, 29% of them fall under the age group of 40-50 years and 19% of them fall under the age group of ≤30 years
- 89% of the enrolled VO/SHG members were from reserved category
- 36% enrolled members belonged to BPL category
- 45% of the members were overweight/obese and 24% of the members were underweight due to chronic energy deficiency. The dual burden of malnutrition—where both undernutrition and overnutrition coexist
- 78% of the members owned an Ayushman Card, granting them access to free healthcare services under the Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana (PM-JAY)
- 81% of the members availed PDS ration from village ration shops
- As reported by members, majority of the income was spent on food, followed by repaying loan, children's education, agriculture and illness
- VO/SHG members needs to be made aware about linkage between FNHW concept and livelihood

Existing pattern of VO/SHG meeting

- All the members conducted VO/SHG meetings every month (100%) out of which 97% of the VO/SHG members conducted meeting once a month
- The topics discussed in the meetings mainly focused on micro-finance, loan recovery and livelihood generation (99%). The focus on health and nutrition aspects in the meetings was very less (1%)

Knowledge and Dietary practices of VO/SHG members

- 83% of the members knew about early initiation of breastfeeding within 1 hr, 88% of them had knowledge about colostrum, and 50% of the members had knowledge on importance of colostrum
- 61% of the members knew that pre-lacteals should not be given to the child, and 54% of them had seen people giving pre-lacteals to the newborn such as honey, patasha water, jaggery water, etc

- 90% of the members had knowledge about exclusive breastfeeding till 6 months and initiation of complementary feeding after competition of 6 months
- 35% of the members had knowledge regarding continued breastfeeding till 2 years along with complementary feeding
- 95% of the members had heard about the term anemia
- 7% of members reported tobacco consumption, which is a cause for concern due to its harmful health effects
- On an average, 95% of the members consumed ≥5 food groups from 24 hr dietary recall. This shows members were consuming wide varieties of food groups in a day which indicates good dietary diversity

Section II: Development of IEC materials and handouts on FNHW concepts and Sensitization of VO/SHG members

Development of IEC materials and handouts on FNHW concepts for VO members

Based on the knowledge and practices on FNHW components of VO members , topics were identified for orientation to them. A training module was developed and distributed to all the members shown in **Fig. 4.2**. Handouts were developed and distributed to VO members for further sensitizing of SHG members which is presented in **Fig 4.3**. The topics covered in the module and handouts are as follows:

- Linking Health, Nutrition, Hygiene and Sanitation, Education with Livelihood
- Balanced Diet and Dietary Diversification
- First 1000 Days Approach and ANC care
- Child Feeding Practices
- Anemia in vulnerable groups and its preventive measures
- Nutrition for Adolescent girls
- WASH Practices
- Services of national programs under ICDS, PDS, PM-POSHAN, Ayushman Bharat-PM JAY

Fig. 4.2: Training Module for VO/SHG members

સ્વ સહાય જૂથો માટે ખોરાક, પોષણ, આરોગ્ય અને સ્વચ્છતા (FNHW) પાસાના સંકલન અંગેની માર્ગદર્શિકા

ફુડ્સ એન્ડ ન્યૂટ્રિશન, ફેમિલી એન્ડ કમ્યૂનિટી સાયન્સીસ, **MSU**

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રીસર્ચ સ્ટુડન્ટ: આસ્થા બલોની (Sr. MSC PHN)

December 2024

અનુક્રમણિકા

	• ઉપરી આહાર કેવો હોવો જોઈએ? • ઉમર પ્રમાણે ઉપરી આહાર નું પ્રમાણ • ઉપરી આહાર માટે ધ્યાન માં રાખવાની બાબતો • આંગણવાડી માં થી મળતા બાલશક્તિ ના પેકેટ અંગે સમજ	
૫.	**એનિમિયા (પાંડુરોગ/ લોહીની ફિકાસ)** • એનિમિયા એટલે શું? • એનિમિયા થવાના કારણો • એનિમિયાના લક્ષણો • એનિમિયા આડ અસરો • લોહતત્વ ખોરાક માં ક્યાંથી મળે? • એનિમિયા કેવી રીતે અટકાવી શકાય/નિવારણ પગલા	૨૩
૬.	**કિશોરવયની છોકરીઓ માટે પોષણ** • કુપોષણ એટલે શું? • કિશોરીઓમાં કુપોષણના પરિણામો • કુપોષણ કેવી રીતે અટકાવી શકાય • માય થાળી • ફૂડ પિરામિડ	૨૯
૭.	**સ્વચ્છ જળ, સ્વચ્છતા અને આરોગ્ય નો સંબંધ** • સ્વચ્છતા અને આરોગ્ય નું મહત્વ • દુષિત પાણી થી થતી બીમારીઓ • પાણી ને શુદ્ધ રાખવાના ઘરેલું ઉપાયો • વ્યક્તિગત અને પર્યાવરણ ની સ્વચ્છતા • હાથ ધોવાની સાચી રીત • શોચાલય ના ઉપયોગ નું મહત્વ	૩૩
૮.	**માતા અને બાળકો માટે સરકારી કાર્યક્રમો ની સેવાઓ** • આઈ સી ડી અસ (ICDS) • પીડીએસ (PDS) • પી એમ પોષણ (PM-POSHAN) • આયુષ્માન ભારત- પીએમ જય (Ayushman Bharat- PM JAY)	૩૯

Fig. 4.3: Handout for VO/SHG members

સ્વ સહાય જૂથો માટે ખોરાક, પોષણ, આરોગ્ય અને સ્વચ્છતા (FNHW) પાસાના સંકલન અંગેની માર્ગદર્શિકા

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રીસર્ચ સ્ટુડન્ટ: આસ્થા બલોની (Sr. MSC PHN)

Sensitization of VO members on topics of FNHW

All VO representatives that were selected were provided one-day training session on various topics under FNHW concepts using various IEC materials and handouts and action plan was made to encourage SHG groups for FNHW components. Agenda of the training is presented below.

Training Agenda for VO/SHG members

Date: 12 December 2024

Venue: Swaminarayan Mandir, Nimeta

Activities	Time	Resource Person
Refreshment and Registration of VO/SHG members	10:00-10:30pm	
Welcome address	10:30-11:00pm	Dr. Hemangini Gandhi
Prayer		VO/SHG members
Objective of Training		Dr. Hemangini Gandhi
Pre-test		
Need for integration of FNHW in DAY-NRLM		Mrs. Daxa Parekh (TLM, Waghodia)
Tea break	11:00-11:15pm	
Introduction of the team and ice breaking game	11:15-11:45pm	All participants
Distribution of handouts	11:45-2:00pm	Aastha Baloni, Tanvi Kotadia
Sensitization on Integration of FNHW concept (Linking Health, Nutrition, Hygiene and Sanitation, Education with Livelihood)		Dr. Hemangini Gandhi
Balanced Diet and Dietary Diversification		Dr. Hemangini Gandhi
First 1000 Days Approach and ANC care		Aastha Baloni
Child Feeding Practices		Aastha Baloni
Lunch break	2:00- 2:30 pm	

Anemia in vulnerable groups and its preventive measures	2:30- 3:30 pm	Tanvi Kotadia
Nutrition for Adolescent girls		Mrs. Durga Vasava (CLF, Nimeta Cluster)
WASH Practices		Mr. Sachin Bhaliya (Cluster Coordinator, Nimeta)
Services of national programs under ICDS, PDS, PM-POSHAN, Ayushman Bharat- PM JAY		Dr. Hemangini Gandhi
Preparation of action plan and monitoring checklist to integrate FNHW in SHG groups	3:30- 4: 00 pm	Dr. Hemangini Gandhi, Aastha Baloni
Post-test	4:00- 4:30 pm	
Tea and Departure	4:30- 5:00 pm	

After imparting sensitization sessions, to evaluate the impact of the training and action plan strategy post data was collected on their knowledge related to selected FNHW components, dietary diversity and services of various national programs under ICDS, PDS, PM-POSHAN and Ayushman Bharat- PM JAY of VO representatives after 3 months. Execution of the action plan was done by VOs for 3 months and monitoring checklist was prepared and is presented in **Appendix V**. Random monitoring of the execution was done by researcher and Cluster Coordinator.

Highlights of Section II

- All VO representatives were provided one-day training session on various topics under FNHW concepts using various IEC materials and handouts.
- Action plan was developed by VOs to be done in 3 months.
- Gaps related to knowledge and practices of VO/SHG members were:
    - VO/SHG members were not aware about the term FNHW and how it is linked with livelihood.
    - Knowledge about IYCN practices, WASH practices and dietary practices were fairly satisfactory.
    - VO/SHG members knew about the term anemia, causes and preventive measures but they did not know about its signs and symptoms.
    - There was very less awareness of different food groups to be consumed in a day among members
    - There is need to strengthen knowledge regarding national services and CBOs

Section III: Impact Evaluation

Knowledge retention was assessed after 3 months intervention period. Knowledge regarding selected FNHW components, dietary practices and national services that come under ICDS, PDS, PM-POSHAN, and Ayushman Bharat PM-JAY was assessed from post-questionnaire. To initiate integration of FNHW concepts in DAY-NRLM and for execution of action plan which was to be done in 3 months, monitoring was done by researcher and cluster coordinator.

Knowledge retention on selected FNHW components

Details for knowledge retention of all the aspects ie. pre and post knowledge is presented in **Tables 4.23 to 4.37**.

Analysis showed significant improvement in some of the aspects under the study which is presented below. It can be seen from below table that significant improvement was seen in following knowledge aspects:

- IYCN practices
- Anemia
- WASH Practices
- Food groups, balanced diet and nutrients
- Undernutrition
- Unhealthy dietary patterns
- Number of food groups consumed
- Services of ICDS
- Community based events (CBEs)
- MDM

Post Intervention knowledge retention in selected aspects of FNHW is presented below:

Sr. No.	Particulars	Pre		Post		p-value
		n	%	n	%	
	IYCN practices					
1	**Should pre-lacteals be given to the child?**					
	No	73	61	120	100	1.38E-05*
2	**Seen anyone giving pre-lacteals to the child?**					
	No	55	46	120	100	2.61E-10*
3	**Along with complementary feeding, continued breastfeeding till**					
	2 years	42	35	120	100	2.54E-15*
	Anaemia					
4	**What is anemia?**					
	Paleness of eyes, nails, tongue	21	18	5	4	2.43E-05
5	**Causes of anemia**					
	Inadequate consumption of Iron Rich Foods in the Diet	97	81	120	100	0.0458*
	Excessive blood loss as in menstruation, delivery,hemorrhage	8	7	0	0	0.000183
	Blood loss during accidents	3	3	0	0	0.014306
	Frequent Episodes of Malaria	3	3	0	0	0.014306
6	**Signs and symptoms of anemia**					
	Fatigue	85	71	120	100	0.001711*
	Pallor of skin, tongue and nails	2	2	0	0	0.0455
	Dizziness	97	81	120	100	0.0458*
	Brittle and spoon-shaped nails	2	2	0	0	0.0455
7	**Preventive measures for Anemia**					
	Consume Iron Folic Acid Tablets	92	77	120	100	0.01449*
	Cleanliness of house inside and outside	3	3	0	0	0.014306
8	**Perception of iron-rich sources of food**					
	Dates	83	69	120	100	0.000745*
	Jaggery	30	25	81	68	2.87E-10*
9	**Supply of IFA syrup/tablet in village by ASHA/AWW**					
	Pregnant mothers	98	82	118	98	0.09169*
	Adolescent girls	93	78	113	94	0.084469*
	Children <6 years	77	64	117	98	0.000158*
	Women of reproductive age (WRA)	35	29	72	60	3.37E-06*
10	**IFA tablets to the beneficiaries are provided by**					
	AWW	78	65	1	1	7.93E-29
11	**Consumption method of IFA tablet**					
	Consuming IFA after having Food	92	77	120	100	0.01449*
	Including Citrus fruits like lemon in food	2	2	0	0	0.0455
	WASH practices					
12	**Hand washing**					
	After handling cattle	36	30	66	55	0.000126*

Sr. No.	Particulars	Pre		Post		p-value
		n	%	n	%	
	Food groups, balanced diet and nutrients					
13	**Aware of different food groups**					
	Yes	39	32.5	39	32.5	0.014697
14	**If yes, mention the food groups**					
	Nuts and Seeds	8	21	8	21	6.48E-15
	Meat, Poultry and Fish	10	26	10	26	0.003241
	Eggs	14	58	14	58	3.05E-22
	Other Fruits	27	69	27	69	0.002953
15	**Food groups inclusion to have balanced diet**					
	Nuts and Seeds	12	10	120	100	6.84E-34*
	Meat, Poultry and Fish	2	2	0	0	0.0455
	Eggs	6	5	0	0	0.001565
	Other vitamin A-rich fruits and vegetables	59	49	33	28	0.000713
	Other Fruits	95	79	11	9	4.93E-26
16	**Nutrients required in daily diet**					
	Vitamins and Minerals	10	8	21	18	0.005546*
	Undernutrition					
17	**Nutrients not consumed in required quantity**					
	Different nutrient deficiencies (Vitamins and mineral deficiencies)	81	68	116	97	0.001409*
	Non-communicable diseases like diabetes, CVD, cancer, etc.	95	79	0	0	3.09E-36
	Unhealthy dietary patterns					
18	**Frequency of eating outside home**					
	3-4 times a week	7	6	2	1	0.007526
19	**Preference of junk foods**					
	Packed snacks (Potato/ banana wafers, Kurkure,Gopal)	89	74	111	93	0.037593*
	Fried snacks (samosa, bhajiya, kachori, panipuri)	87	73	114	95	0.016377*
	Number of food groups consumed					
20	**Food groups**					
	Dark GLVs	46	38	81	68	3.78E-05*
	Other Vegetables	68	57	15	13	1.03E-13

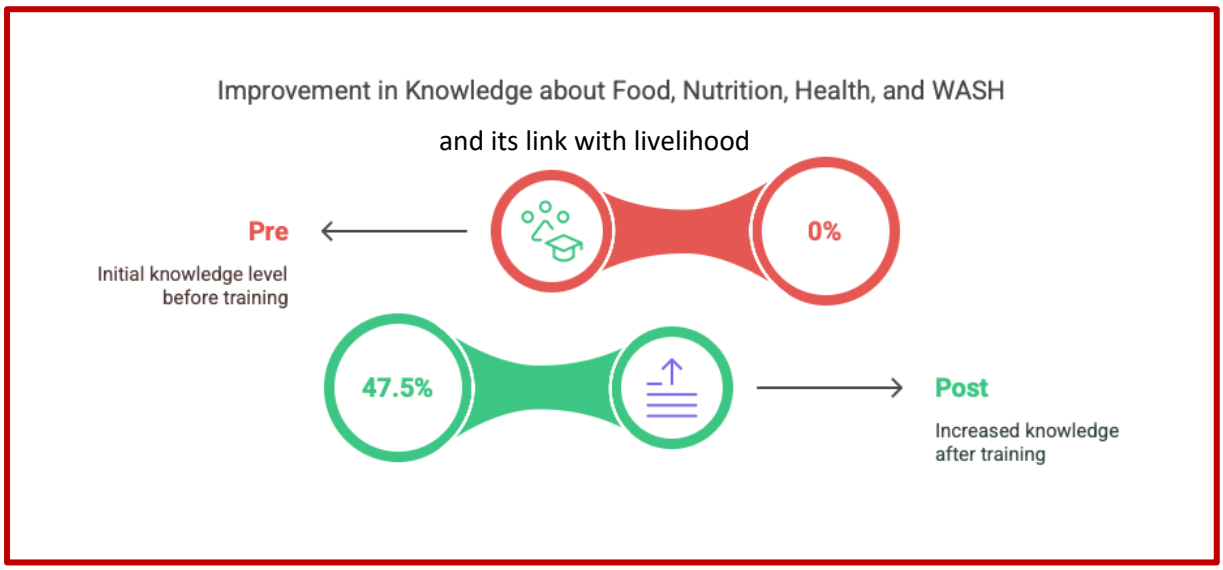
Sr. No.	Particulars	Pre		Post		p-value
		n	%	n	%	
	Services of ICDS					
21	**IFA**					
	Pregnant mothers	106	88	119	99	0.0016*
	Lactating mothers	55	46	76	63	0.0158*
	Adolescent girls	103	86	115	96	0.0135*
	Children <6 yrs	76	63	118	98	4.20E-10*
	Women of reproductive age (WRA)	42	35	77	64	4.11E-05*
	Deworming					
	Adolescent girls	31	26	1	1	2.30E-07
	Children <6 yrs	55	46	21	18	2.19E-05
	Immunization					
	Pregnant mothers	105	88	119	99	0.0016*
	Lactating mothers	6	5	0	0	0.0235
	Adolescent girls	51	43	4	3	1.80E-11
	Children <6 yrs	112	93	120	100	0.0071*
	Health check-up (weight, height)					
	Pregnant mothers	102	85	120	100	5.65E-05*
	Lactating mothers	23	19	0	0	4.61E-06
	Adolescent girls	94	78	120	100	6.63E-07*
	Children <6 yrs	107	89	120	100	0.00065*
	THR					
	Pregnant mothers	89	74	120	100	4.58E-08*
	Lactating mothers	22	18	0	0	8.69E-06
	Adolescent girls	88	73	120	100	2.31E-08*
	Children <6 yrs	92	77	120	100	3.43E-07*
	Community Based Events (CBEs)					
22	**Awareness of Mamta Divas**					
	Yes	85	71	115	96	0.006221*
23	**Awareness of Suposhan Samvad**					
	Yes	4	3	9	7.5	0.049535*
24	**When is Suposhan Samvad celebrated?**					
	1st Tuesday	1	25	8	89	2.31E-17*
24	**When is Baltula Divas celebrated?**					
	2nd Tuesday	4	12	13	41	1.77E-08*
25	**When is Annaprashan Divas celebrated?**					
	3rd Tuesday	1	9	8	62	5.82E-19*
26	**When is Purna Divas celebrated?**					
	4th Tuesday	2	25	11	69	1.38E-10*
	MDM					
27	**Importance of MDM**					
	To satisfy hunger of school children	29	24	113	94	8E-20*
	To bridge the gap of protein and calorie	35	29	4	3	8.03E-11
	For Health	16	13	0	0	3.41E-07

***p<0.05 significant**

Knowledge about Food, Nutrition, Health and WASH concept under DAY-NRLM

An attempt was made before at baseline to find out whether current VO/SHG members are aware about FNHW concept and how it is linked with livelihood. Post training, around 50% of the members have heard about FNHW and how it is linked with livelihood correctly and it is presented in **Fig. 4.4.**

Fig. 4.4: Knowledge about FNHW concept under DAY-NRLM



Knowledge of VO/SHG members on IYCN practices

Table 4.23 provides knowledge of members about IYCN practices related to early initiation of breastfeeding, exclusive breastfeeding, correct age of complementary feeding**.** Post training, it was found that all the members gave correct answers for the same and also knowledge on avoidance of pre-lacteals and continued breastfeeding up to 2 years increased from less than 50 % to 100% **(Fig. 4.5,4.6 and 4.7).**

Knowledge on causes and preventive measures on Anemia

As told earlier in Section I that anemia is a major public health problem in women, data on awareness about anemia, its causes and preventive measures is presented in **Table 4.24.** Majority of the members knew what anemia is at baseline but knowledge on causes and preventive measures increased from around 80% to 100% post training **(Fig. 4.8 and 4.9).**

Knowledge of VO/SHG members on iron rich sources and IFA consumption

Data on iron rich sources and consumption of IFA tablets was also asked and is presented in **Table 4.25.** Post training, all the members had good knowledge of iron-rich sources of food and to consume with enhancers or inhibitors. Regarding supply of IFA tablet, pregnant mothers were provided IFA tablet increased from 82% to 100%, followed by adolescent girls 78% to 94%, lactating mothers from 52% to 60% and women of reproductive age (WRA) from 29% to 60%.

All the members reported that IFA tablets are provided by ASHA/AWW and all the members had good knowledge that IFA to be consumed after having food **(Fig. 4.10 and 4.11).**

WASH practices of VO/SHG members

Post training, the practice of washing hands remained almost same and is presented in **Table 4.26.** It was found that all the members wash their hands after using toilet and before cooking. Hand washing after handling the child increased from 47% to 53%. Also, hand washing after handling cattle increased from 30% to 55%. All the members (100%) wash their hands with either soap/ash/handwash during endline.

Fig. 4.5: Knowledge of VO/SHG members on Early initiation of breastfeeding

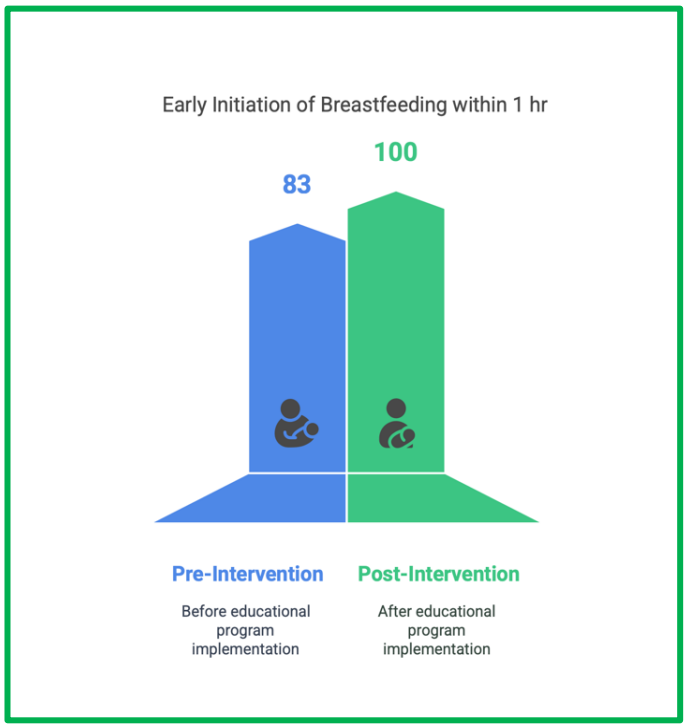


Table 4.23: Knowledge of VO/SHG members on IYCN practices

Sr. No.	Particulars	Pre		Post		p-value
		n	%	n	%	
1	**Early initiation of breastfeeding**					
	Within 1 hr	100	83	120	100	0.075534
	After 1 hr	12	10	0	0	7.74E-06
	Don't know	8	7	0	0	
	Total	**120**	**100**	**120**	**100**	
2	**Knowledge about colostrum**					
	Yes	106	88	120	100	0.215825
	No	14	12	0	0	9.63E-07
	Total	**120**	**100**	**120**	**100**	
3	**If yes, what is its importance?**					
	Fights against antibodies/foreign bodies entering inside the body and makes the system immune	62	58	68	57	0.895082
	Don't know	44	42	52	43	
	NA	14	12	0	0	
4	**Should pre-lacteals be given to the child?**					
	Yes	47	39	0	0	1.03E-18
	No	73	61	120	100	1.38E-05*
	Total	**120**	**100**	**120**	**100**	
5	**Seen anyone giving pre-lacteals to the child?**					
	Yes	65	54	0	0	2.69E-25
	No	55	46	120	100	2.61E-10*
	Total	**120**	**100**	**120**	**100**	
6	**Exclusive breastfeeding**					
	6 months	108	90	120	100	0.304902
	9 months	4	3	0	0	0.014306
	Don't know	8	7	0	0	
	Total	**120**	**100**	**120**	**100**	
7	**Initiation of Complementary Feeding**					
	3 months	1	1	0	0	0.157299
	6 months	1	1	0	0	0.157299
	After completion of 6 months	108	90	120	100	0.304902
	Don't know	10	8	0	0	
	Total	**120**	**100**	**120**	**100**	
8	**Along with complementary feeding, continued breastfeeding**					
	6 months	3	2	0	0	0.0455
	1 year	67	56	0	0	3.57E-26
	2 years	42	35	120	100	2.54E-15*
	Don't know	8	7	0	0	
	Total	**120**	**100**	**120**	**100**	

Fig. 4.6: Knowledge on not to give pre-lacteals to the child

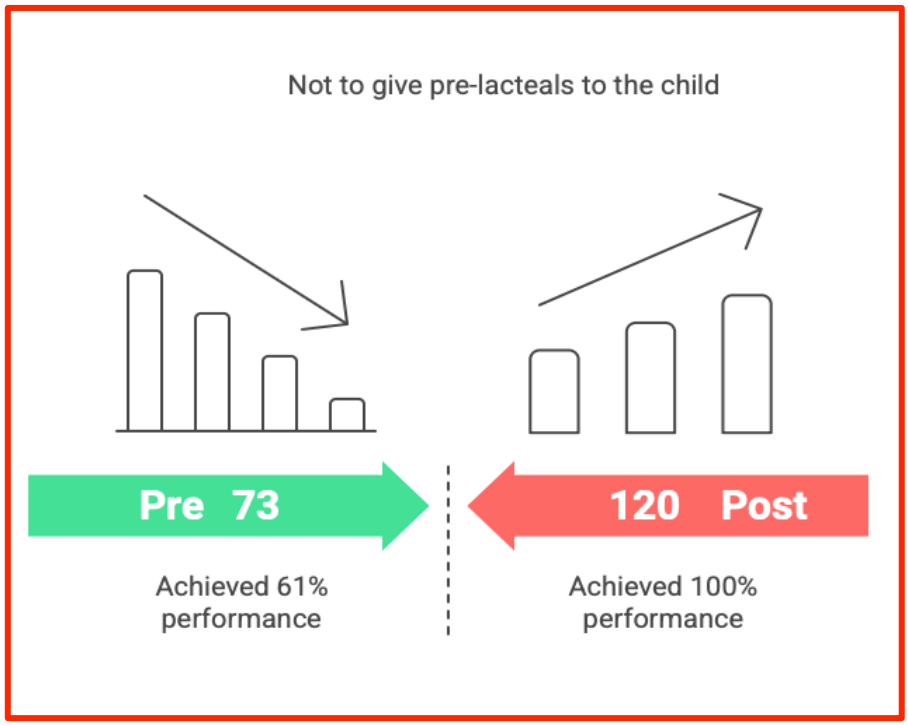


Fig. 4.7: Knowledge on continued breastfeeding along with complementary feeding till 2 years

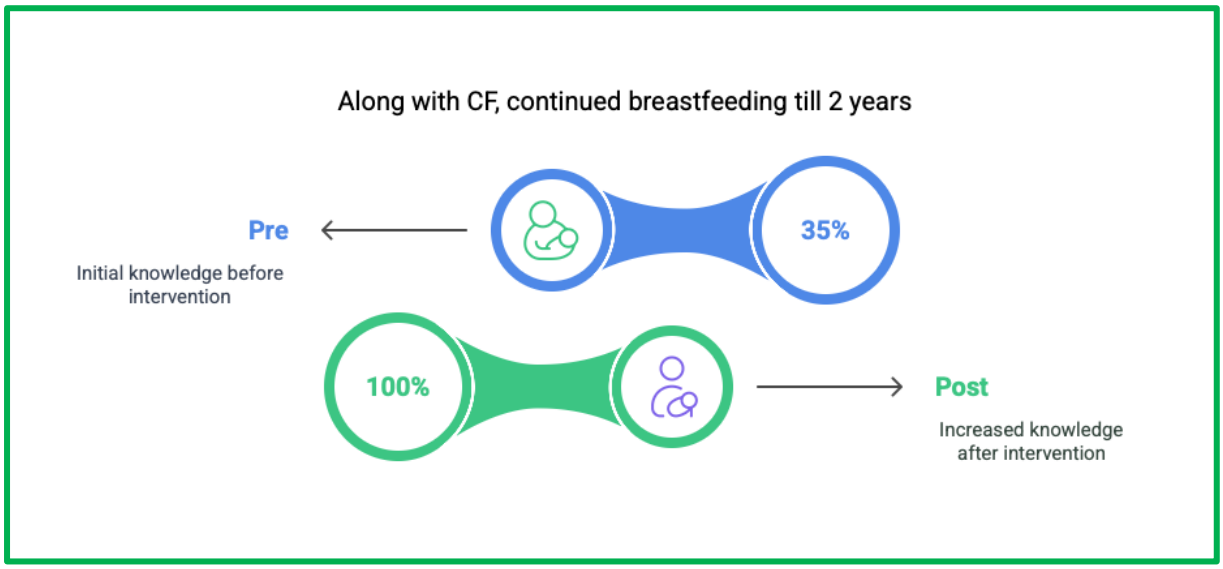


Table 4.24: Knowledge of VO/SHG members on causes and preventive measures on Anemia

Sr. No.	Particulars	Pre		Post		p-value
		n	%	n	%	
1	**Heard about the term anemia**					
	Yes	114	95	120	100	0.612597
	No	6	5	0	0	0.001565
	Total	**120**	**100**	**120**	**100**	
2	**If yes, then what is anemia?**					
	Low hemoglobin levels in the blood	112	98	120	100	0.840693
	Paleness of eyes, nails, tongue	21	18	5	4	2.43E-05
	Weakness	7	6	0	0	0.000532
	Low food consumption	1	1	0	0	0.157299
	NA	6	5	0	0	
3	**Causes of anemia**					
	Inadequate consumption of Iron Rich Foods in the Diet	97	81	120	100	0.0458*
	Consumption of Iron Rich Foods with inhibitors like Tea and Coffee	1	1	2	2	0.414216
	Excessive blood loss as in menstruation, delivery,hemorrhage	8	7	0	0	0.000183
	Blood loss during accidents	3	3	0	0	0.014306
	Frequent Episodes of Malaria	3	3	0	0	0.014306
	Don't know	23	19	0	0	
4	**Signs and symptoms of anemia**					
	Fatigue	85	71	120	100	0.001711*
	Weakness	115	96	120	100	0.686168
	Pallor of skin, tongue and nails	2	2	0	0	0.0455
	Shortness of breath	25	21	0	0	9.13E-11
	Dizziness	97	81	120	100	0.0458*
	Brittle and spoon-shaped nails	2	2	0	0	0.0455
	Headaches	86	72	112	93	0.020776
	Fast irregular heartbeat	2	2	0	0	0.0455
	Cold hands and feet	55	46	120	100	2.61E-10
	Tingling sensations in legs	96	80	119	99	0.044605
	Loss of appetite	2	2	0	0	0.0455
	Fever	2	2	0	0	0.0455
	Don't know	5	4	0	0	
5	**Preventive measures for Anemia**					
	Consumption of Iron Rich Food with enhancers and dietary diversity	115	88	120	100	0.215825
	Consume Iron Folic Acid Tablets	92	77	120	100	0.01449*
	Prevention of Malaria	2	2	0	0	0.0455
	Cleanliness of house inside and outside	3	3	0	0	0.014306
	Consume Albendazole tablets twice a year	1	1	0	0	0.157299
	Eat Purna Shakti packets	1	1	0	0	0.157299

Fig. 4.8: Knowledge on cause of Anemia as Inadequate consumption of Iron rich foods in the diet

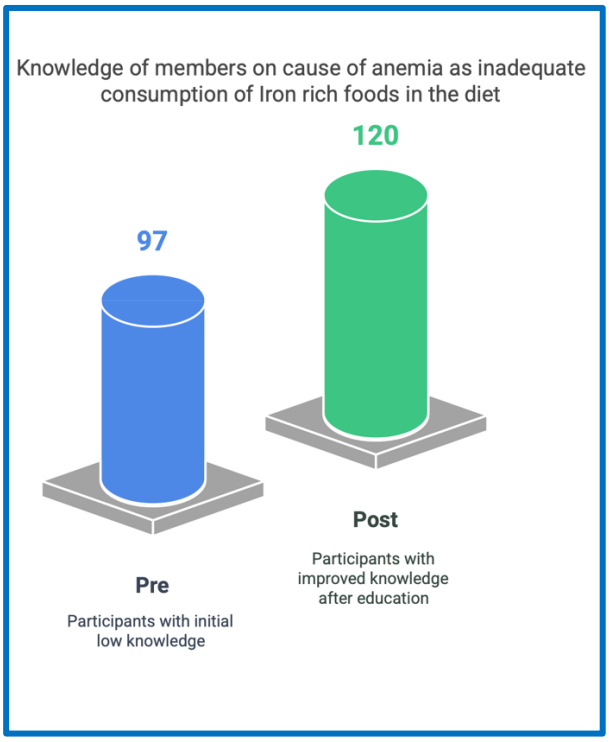


Fig. 4.9: Knowledge on preventive measures for Anemia

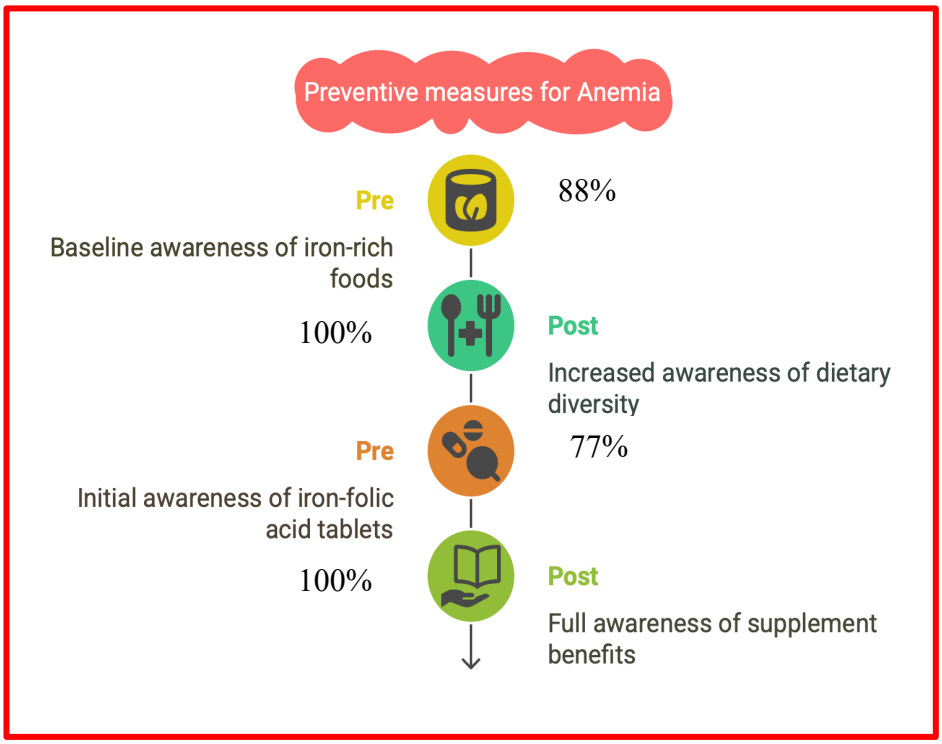


Table 4.25: Knowledge of VO/SHG members on iron rich sources and IFA consumption

Sr. No.	Particulars	Pre		Post		p-value
		n	%	n	%	
1	**Perception of iron-rich sources of food**					
	Green leafy vegetables	112	93	120	100	0.476105
	Whole cereals and Pulses	104	87	120	100	0.17881
	Dates	83	69	120	100	0.000745*
	Beet	110	92	120	100	0.414216
	Jaggery	30	25	81	68	2.87E-10*
	Fruit	14	12	0	0	9.63E-07
	Milk/Milk products	4	3	0	0	0.014306
	Don't know	8	7	0	0	
2	**Foods to be consumed with iron rich foods**					
	Vitamin C-rich foods- Amla/ lemon/ orange/ guava	114	95	120	100	0.612597
	Don't know	6	5	0	0	
	Total	**120**	**100**	**120**	**100**	
3	**Foods not to be consumed with iron rich foods**					
	Tea or coffee	118	98	120	100	0.840693
	Don't know	2	2	0	0	
	Total	**120**	**100**	**120**	**100**	
4	**Supply of IFA syrup/tablet in village by ASHA/AWW**					
	Pregnant mothers	98	82	118	98	0.09169*
	Lactating mothers	62	52	72	60	0.285049
	Adolescent girls	93	78	113	94	0.084469*
	Children <6 years	77	64	117	98	0.000158*
	Women of reproductive age (WRA)	35	29	72	60	3.37E-06*
	Don't know	18	15	2	2	
5	**IFA tablets to the beneficiaries are provided by**					
	ASHA	112	93	120	100	0.476105
	ANM	7	6	9	8	0.449692
	AWW	78	65	1	1	7.93E-29
6	**Consumption method of IFA tablet**					
	Consuming IFA after having Food	92	77	120	100	0.01449*
	Including Citrus fruits like lemon in food	2	2	0	0	0.0455
	Empty stomach	1	1	0	0	0.157299
	Don't know	27	23	0	0	

Table 4.26: WASH practices of VO/SHG members

Sr. No.	Particulars	Pre		Post		p-value
		n	%	n	%	
1	**Hand washing**					
	After using toilet	120	100	120	100	
	Before cooking	120	100	120	100	
	After handling the child	56	47	64	53	0.396144
	After handling cattle	36	30	66	55	0.000126*
2	**Hand cleansing**					
	With soap/ash/handwash	120	100	120	100	
	Total	**120**	**100**	**120**	**100**	

Fig. 4.10: Supply of IFA syrup/tablet in village by ASHA/AWW

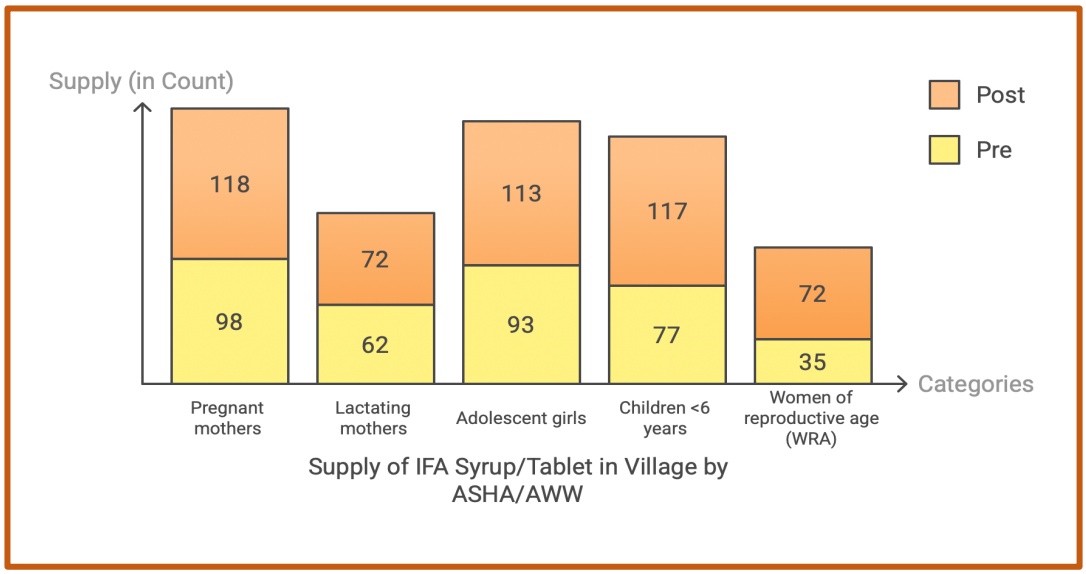
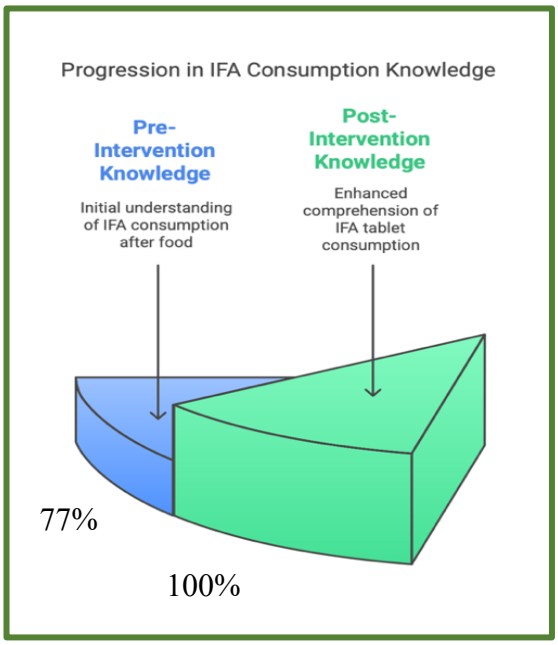


Fig. 4.11: Knowledge on correct method of consumption of IFA tablet



Change in dietary practices

Knowledge of VO/SHG members on food groups, balanced diet and nutrients

Knowledge on food groups and balanced diet of VO/SHG members is presented in **Table 4.27.** Post training the knowledge on food groups and diet remained same. It was found that knowledge regarding staple foods ie. grains, pulses and dairy products was reported by all the members. Awareness about other protective food groups was also found to be satisfactory at endline. All the members could explain correct understanding of balanced diet ie. a diet that includes Cereals, Pulses, Dairy products, Fruits and Vegetables, egg/fish/meat,oil/ghee. There was slight change in the knowledge about basic nutrients. Earlier at baseline, 88% of the members had never heard about name of nutrients but post training 83% to of the members had never heard about name of the nutrients.

Knowledge on Undernutrition

Members were also asked about familiarity with term undernutrition, its causes and preventive measures. Data is presented in **Table 4.28**. Post training, all the members were familiar with the term undernutrition (*Kuposhan)*and also could explain what is undernutrition (Low weight for age) and causes correctly **(Fig. 4.12).** Consuming balanced diet could prevent undernutrition increased from 87% to 99% at endline.

Fig. 4.12: Knowledge of VO/SHG members on Undernutrition and its preventive measures

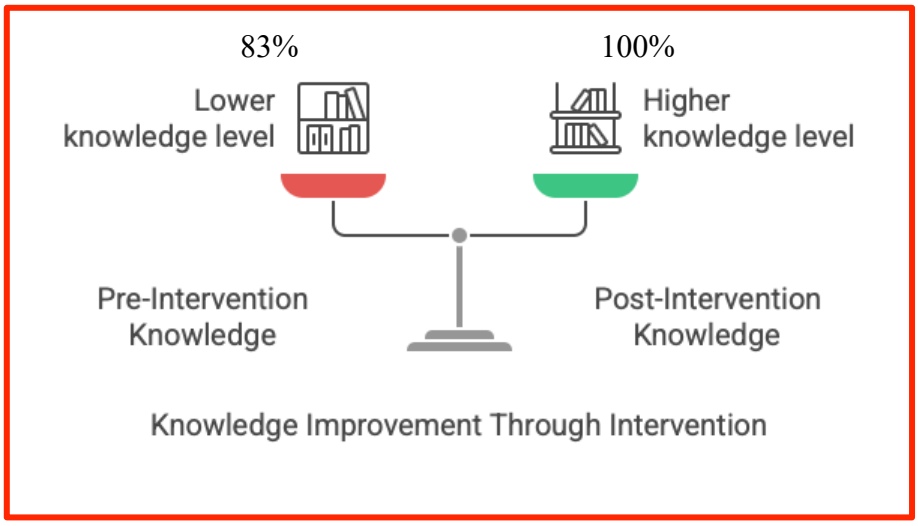


Table 4.27: Knowledge of VO/SHG members on food groups, balanced diet and nutrients

Sr. No.	Particulars	Pre		Post		p-value
		n	%	n	%	
1	**Aware of different food groups**					
	Yes	39	32.5	39	32.5	0.014697
	No	81	67.5	81	67.5	0.145515
	Total	**120**	**100**	**120**	**100**	
2	**If yes, mention the food groups**					
	Grains, white roots and tubers, and plantains	39	100	39	100	
	Pulses (beans, peas and lentils)	39	100	39	100	
	Nuts and Seeds	8	21	8	21	6.48E-15
	Dairy	39	100	39	100	
	Meat, Poultry and Fish	10	26	10	26	0.003241
	Eggs	14	58	14	58	3.05E-22
	Dark GLVs	37	95	37	95	0.612597
	Other vitamin A-rich fruits and vegetables	20	51	20	51	0.037249
	Other Vegetables	34	87	34	87	0.17881
	Other Fruits	27	69	27	69	0.002953
	NA	81	67.5	81	67.5	
3	**Perception of a balanced diet or a healthy diet**					
	A diet that includes Cereals, Pulses, Dairy products, Fruits and Vegetables, egg/fish/meat, oil/ghee	120	100	120	100	
	Total	**120**	**100**	**120**	**100**	
4	**Food groups inclusion to have balanced diet**					
	Grains, white roots and tubers, and plantains	120	100	120	100	
	Pulses (beans, peas and lentils)	120	100	120	100	
	Nuts and Seeds	12	10	120	100	6.84E-34*
	Dairy	117	98	120	100	0.840693
	Meat, Poultry and Fish	2	2	0	0	0.0455
	Eggs	6	5	0	0	0.001565
	Dark GLVs	106	88	120	100	0.215825
	Other vitamin A-rich fruits and vegetables	59	49	33	28	0.000713
	Other Vegetables	114	95	120	100	0.612597
	Other Fruits	95	79	11	9	4.93E-26
5	**Nutrients required in daily diet**					
	Carbohydrates	5	4	7	6	0.371093
	Protein	13	11	15	13	0.563703
	Fats	7	6	8	7	0.694887
	Vitamins and Minerals	10	8	21	18	0.005546*
	Don’t know	106	88	99	83	

Table 4.28: Knowledge of VO/SHG members on Undernutrition

Sr. No.	Particulars	Pre		Post		p-value
		n	%	n	%	
1	**Nutrients not consumed in required quantity**					
	Undernutrition	109	91	120	100	0.357071
	Different nutrient deficiencies (Vitamins and mineral deficiencies)	81	68	116	97	0.001409*
	Non-communicable diseases like diabetes, CVD, cancer, etc.	95	79	0	0	3.09E-36
	Weakness	3	3	0	0	0.014306
	Don't know	8	7	0	0	
2	**Knowledge of undernutrition**					
	Yes	100	83	120	100	0.075534
	No	20	17	0	0	5.51E-09
	Total	**120**	**100**	**120**	**100**	
3	**If yes, what is undernutrition?**					
	Low weight for age	97	97	119	99	0.839893
	Can't work properly, Weakness	17	17	0	0	5.51E-09
	Being unhealthy	4	4	0	0	0.004678
	Frequent illnesses	1	1	0	0	0.157299
	Don't know	20	20	1	1	
	NA	20	17	0	0	
4	**Preventive measures for undernutrition**					
	To consume a balanced diet regularly	104	87	119	99	0.213374
	To keep home and village clean	1	1	0	0	0.157299
	Don't know	9	8	1	1	
	NA	6	5	0	0	

Knowledge and Practice about Unhealthy Diet

Members were asked about their perception regarding unhealthy food and practices regarding its consumption. Information is presented in **Table 4.29.** Post training, all the members could explain the unhealthy foods as high in added sugar, fat and salt. Regarding their practice half of the members reported that once a week they eat outside home **(Fig. 4.13).** Preference of buying junk foods like packed snacks, fried snacks, sweets and carbonated beverages increased from 87% to around 90% at endline **(Fig. 4.14).**

Knowledge about Dietary Diversity

As told in Section I, dietary diversity is very important to achieve daily nutrition for women. Information was asked about whether they are familiar with the term dietary diversity. Information is presented in **Table 4.30.** The knowledge regarding awareness that dietary diversity meaning inclusion of variety of diet and food groups was found to be same as baseline.

Table 4.29: Knowledge and Practice of VO/SHG members about Unhealthy Dietary Patterns

Sr. No.	Particulars	Pre		Post		p-value
		n	%	n	%	
1	**Perception of Unhealthy foods**					
	Foods that are rich in essential nutrients	4	3	0	0	0.014306
	Foods that contain excessive amounts of added sugars, unhealthy fats, and/or sodium	117	98	120	100	0.840693
2	**Can identify Unhealthy foods**					
	Panipuri	86	72	74	62	0.221823
	Chinese/Manchurian	63	53	49	41	0.080053
	Samosa/Kachori/Puff /Bhajiya/Pakoda/Dalvada/Fried foods/Fafda	57	48	91	76	0.000377
	Packets/Gopal/Kurkure	6	5	5	4	0.637352
	Pav bhaji/Vadapav/Dabeli	52	43	71	59	0.025062
	Biscuit/Khari/Chavanu	4	3	0	0	0.014306
	Maggi/Noodles	6	5	0	0	0.001565
	Pizza/Sandwich/Burger/Frankie/Momos	16	13	6	5	0.007661
	Sev usal	6	5	0	0	0.001565
	Cheese	1	1	0	0	0.157299
	Ice cream	1	1	0	0	0.157299
	Dal pulav	0	0	1	1	0.157299
3	**Frequency of eating outside home**					
	Daily	2	1	0	0	0.157299
	3-4 times a week	7	6	2	1	0.007526
	2-3 times a week	13	11	8	7	0.182422
	Once a week	49	41	62	52	0.106719
	Never	49	41	48	40	0.875139
	Total	**120**	**100**	**120**	**100**	
4	**Preference of buying junk foods**					
	Yes	104	87	116	97	0.297147
	No	16	13	4	3	0.000407
	Total	**120**	**100**	**120**	**100**	
5	**Preference of junk foods**					
	Packed snacks (Potato/ banana wafers, Kurkure, Gopal)	89	74	111	93	0.037593*
	Fried snacks (samosa, bhajiya, kachori,panipuri)	87	73	114	95	0.016377*
	Carbonated drinks ThumsUp,7 Up, Pepsi,Coca-Cola, Limca)	61	51	61	51	
	Sweets (burfi, laddoo, pastries/ cakes, chocolates, ice cream, biscuits)	91	76	97	81	0.572528
	NA	16	13	4	3	

Table 4.30: Knowledge of VO/SHG members about Dietary Diversity

Sr. No.	Particulars	Pre		Post	
		n	%	n	%
1	**Knowledge of diet diversity**				
	Consuming a wide variety of foods and food groups	120	100	120	100
	Total	**120**	**100**	**120**	**100**
2	**Achieving daily diet diversity**				
	Trying new foods and recipes	120	100	120	100
	Total	**120**	**100**	**120**	**100**

Fig. 4.13: Frequency of the members eating outside home

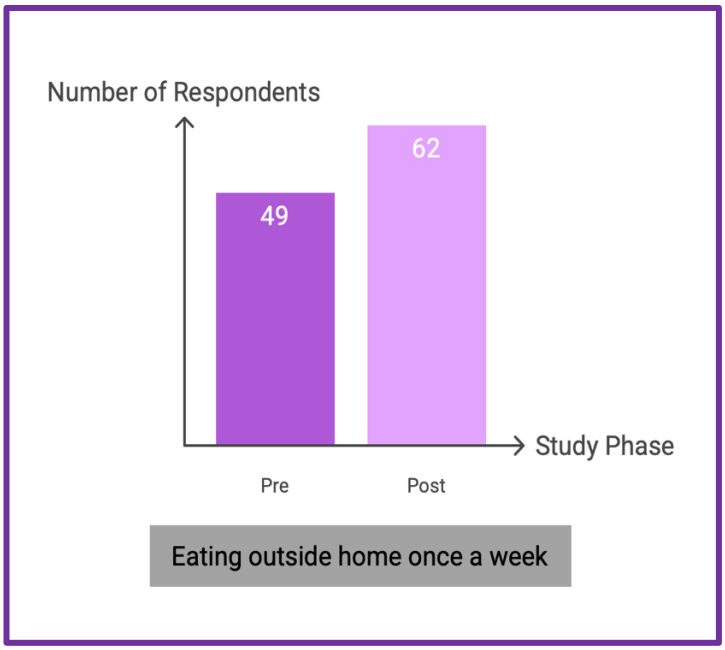
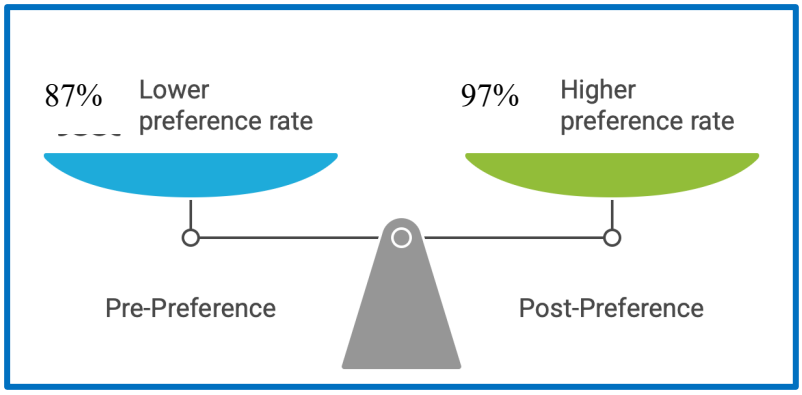


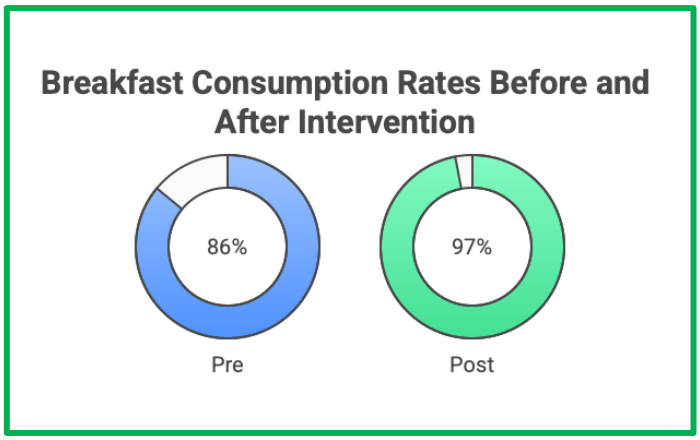
Fig. 4.14: Preference of buying junk foods



Meal frequency

All the members reported that they have main meals like lunch and dinner every day. Daily consumption of breakfast increased from 86% to 97% post training. Information is presented in **Table 4.31 and Fig. 4.15.**

Fig. 4.15: Consumption of breakfast everyday



Dietary diversity

Food groups consumed and Minimum Dietary Diversity for Women (MDD-W) of VO/SHG members from 24 hr dietary recall

Post training to find out the variety of diet consumed by VO/SHG members, one day 24 hr dietary recall was used to collect data on food consumption again. Based on the food groups consumed on previous day, Minimum Dietary Diversity for Women (MDD-W) was calculated using **FANTA USAID (2016)** guideline. Data is presented in **Table 4.32 and 4.33.**

It was observed from the data that all the members ate staple food ie. wheat and pulse. Protective rich foods like Vitamin A rich fruits and vegetables and dairy products consumption increased from 88% to 98% post training. All members reported to consume ground nut and sesame seeds for the nuts and seeds food group. Protective foods like dark green leafy vegetables consumption increased from 38% to 68% at endline **(Fig. 4.16).** Minimum Dietary Diversity for Women (MDD-W) also improved and was increased from 92% to 97% of the members post training as they reported consumption of 5 or more food groups on the day of data collection **(Fig. 4.17).**

Table 4.31: Meal frequency of VO/SHG members

Sr. No.	Particulars	Pre		Post		p-value
		n	%	n	%	
1	**Meal frequency**					
	Breakfast	110	92	118	98	0.538167
	Lunch	120	100	120	100	
	Supper	53	44	32	27	0.004328
	Dinner	120	100	120	100	
2	**Consumption of breakfast everyday**					
	Yes	103	86	116	97	0.250161
	No	17	14	4	3	0.000161
	Total	**120**	**100**	**120**	**100**	

Table 4.32: Number of food group consumed by VO/SHG members

Sr. No.	Particulars	Pre		Post		p-value
		n	%	n	%	
1	**Food groups**					
	Grains, white roots and tubers, and plantains	120	100	120	100	
	Pulses (beans, peas and lentils)	114	95	120	100	0.612597
	Nuts and Seeds	119	99	120	100	0.920145
	Dairy	105	88	118	98	0.299758
	Meat, Poultry and Fish	1	1	0	0	0.157299
	Eggs	1	1	0	0	0.157299
	Dark GLVs	46	38	81	68	3.78E-05*
	Other vitamin A-rich fruits and vegetables	104	87	95	79	0.379882
	Other Vegetables	68	57	15	13	1.03E-13
	Other Fruits	3	3	2	2	0.527089

Table 4.33: Minimum Dietary Diversity for Women (MDD-W) of VO/SHG members from 24 hr dietary recall

Sr. No.	Particulars	Pre		Post		p-value
		n	%	n	%	
1	**Food groups consumed**					
	≥5	111	92.5	116	97	0.643867
	<5	9	7.5	4	3	0.049535
	Total	**120**	**100**	**120**	**100**	

Fig. 4.16: Number of food groups consumed from 24 hr dietary recall

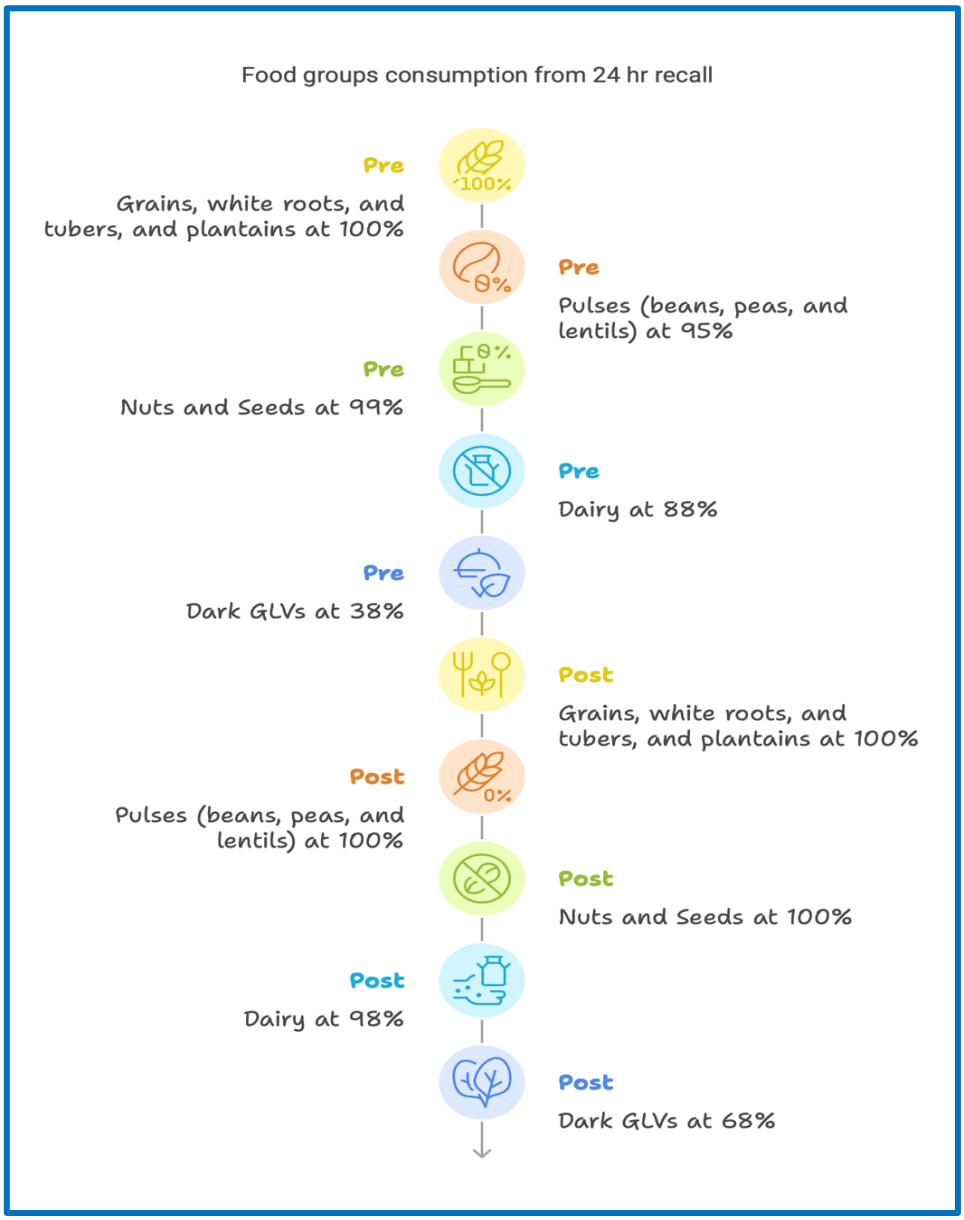
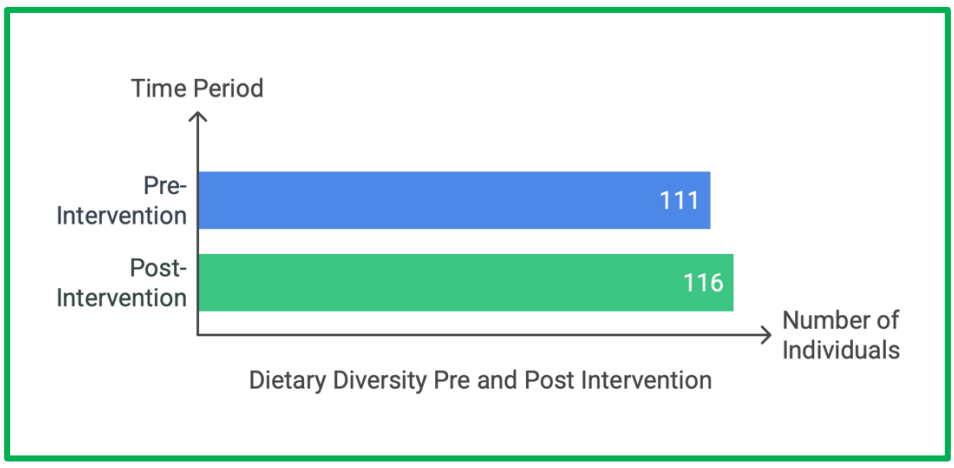


Fig. 4.17: MDD-W of VO/SHG members from 24 hr dietary recall



Knowledge of VOs/SHGs on services of various National Programs (ICDS, PDS, PM-POSHAN and Ayushman Bharat- PM JAY)

Knowledge on services of ICDS

As told earlier in Section I, ICDS is National flagship program for improving maternal and child health. Data on awareness regarding different services for different target groups is presented in **Table 4.34.** It was observed that supply of iron-folic acid tablets (IFA) pregnant and adolescent girls increased from 85% to 95% of the members. Also, knowledge about IFA to be supplemented to children below 6 years increased from 60% to 98% of the members post training. Lactating mothers and Women of reproductive age group (WRA) are also target groups for IFA was increased from less than 50% to 60% of the members **(Fig. 4.18).**

All the members knew about Take Home Ration (THR) supplementation for different target groups ie. pregnant women, adolescent girls and children below 6 years but they did not know about lactating women who are the beneficiaries for THR too.

Post training regarding awareness about immunization program, awareness was found for pregnant women and children below 6 years but only 52% of the members knew that Vitamin A syrup to be given to children below 6 years. Awareness regarding counselling services and deworming tablets was reported by only very few members (Around 25%).

Knowledge about Community Based Events (CBEs)

As told earlier in Section I under ICDS program, various CBEs like Mamta Divas, Suposhan Samvad, Baltula Divas, Annaprashan Divas/Anna vitaran divas (THR distribution) and Purna Divas are celebrated on designated days. Knowledge regarding these CBEs will help members for better utilization of services of ICDS program.

Information was collected about awareness level of members regarding CBEs and is depicted in **Table 4.35.** Familiarity with Mamta Divas activities increased from 70% to 95% post training **(Fig. 4.19).** Most of the members were not aware about other CBEs.

Table 4.34: Knowledge of VO/SHG members on services of ICDS

Beneficiaries	Services							
	IFA	Deworming	MHM	Vit A	Immunization	Health check-up (weight, height)	THR	Counseling sessions
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Pregnant mothers	106 (88%)	6 (5%)	NA	NA	105 (88%)	102 (85%)	89 (74%)	31 (26%)
Lactating mothers	55 (46%)	0	NA	NA	6 (5%)	23 (19%)	22 (18%)	27 (23%)
Adolescent girls	103 (86%)	31 (26%)	117 (98%)	NA	51 (43%)	94 (78%)	88 (73%)	27 (23%)
Children <6 yrs	76 (63%)	55 (46%)	NA	52 (62%)	112 (93%)	107 (89%)	92 (77%)	22 (18%)
Women of reproductive age (WRA)	42 (35%)	0	NA	NA	2 (2%)	23 (19%)	5 (4%)	21 (18%)

Beneficiaries	Post Services							
	IFA	Deworming	MHM	Vit A	Immunization	Health check-up (weight, height)	THR	Counseling sessions
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Pregnant mothers	119 (99%)	1 (1%)	NA	NA	119 (99%)	120 (100%)	120 (100%)	22 (18%)
Lactating mothers	76 (63%)	0	NA	NA	0	0	0	22 (23%)
Adolescent girls	115 (96%)	1 (1%)	120 (100%)	NA	4 (3%)	120 (100%)	120 (100%)	22 (23%)
Children <6 yrs	118 (98%)	21 (18%)	NA	62 (52%)	120 (100%)	120 (100%)	120 (100%)	22 (18%)
Women of reproductive age (WRA)	77 (64%)	0	NA	NA	0	0	0	22 (18%)

() indicates percentages

Services	Beneficiaries	Pre (%)	Post (%)	p-value
	Pregnant mothers	88	99	0.0016*
	Lactating mothers	46	63	0.0158*
	Adolescent girls	86	96	0.0135*
	Children <6 yrs	63	98	4.20E-10*
IFA	Women of reproductive age (WRA)	35	64	4.11E-05*
	Pregnant mothers	5	1	0.0973
	Adolescent girls	26	1	2.30E-07
	Children <6 yrs	46	18	2.19E-05
Deworming	Adolescent girls	98	100	0.1552
Vit-A	Children <6 yrs	52	52	
	Pregnant mothers	88	99	0.0016*
	Lactating mothers	5	0	0.0235
	Adolescent girls	43	3	1.80E-11
	Children <6 yrs	93	100	0.0071*
Immunization	Women of reproductive age (WRA)	2	0	0.1552
	Pregnant mothers	85	100	5.65E-05*
	Lactating mothers	19	0	4.61E-06
	Adolescent girls	78	100	6.63E-07*
Health check-up (weight, height)	Children <6 yrs	89	100	0.00065*
	Women of reproductive age (WRA)	19	0	4.61E-06
	Pregnant mothers	74	100	4.58E-08*
	Lactating mothers	18	0	8.69E-06
	Adolescent girls	73	100	2.31E-08*
	Children <6 yrs	77	100	3.43E-07*
THR	Women of reproductive age (WRA)	4	0	0.0434
	Pregnant mothers	26	18	0.1721
	Lactating mothers	23	23	
	Adolescent girls	23	23	
	Children <6 yrs	18	18	
Counseling sessions	Women of reproductive age (WRA)	18	18	

Table 4.35: Knowledge of VO/SHG members about Community Based Events (CBEs)

Sr. No.	Particulars	Pre		Post		p-value
		n	%	n	%	
1	**Awareness of Mamta Divas**					
	Yes	85	71	115	96	0.006221*
	No	35	29	5	4	7.53E-10
	Total	**120**	**100**	**120**	**100**	
2	**If yes, when it is celebrated?**					
	Every Wednesday	57	67	86	75	0.342404
	NA	35	29	5	4	
	Don't know	28	33	29	25	
3	**Awareness of Suposhan Samvad**					
	Yes	4	3	9	7.5	0.049535*
	No	116	97	111	92.5	0.643867
	Total	**120**	**100**	**120**	**100**	
4	**If yes, when it is celebrated?**					
	1st Tuesday	1	25	8	89	2.31E-17*
	NA	116	97	111	92.5	
	Don't know	`3	75	1	11	
5	**Awareness of Baltula Divas**					
	Yes	33	27.5	32	27	0.923693
	No	87	72.5	88	73	0.953254
	Total	**120**	**100**	**120**	**100**	
6	**If yes, when it is celebrated?**					
	2nd Tuesday	4	12	13	41	1.77E-08*
	NA	87	72.5	88	73	
	Don't know	29`	88	19	59	
7	**Awareness of Annaprashan Divas**					
	Yes	11	9	13	11	0.527089
	No	109	91	107	89	0.833029
	Total	**120**	**100**	**120**	**100**	
8	**If yes, when it is celebrated?**					
	3rd Tuesday	1	9	8	62	5.82E-19*
	NA	109	91	107	89	
	Don't know	`10	91	5	38	
9	**Awareness of Purna Divas**					
	Yes	8	7	16	13	0.05778
	No	112	93	104	87	0.527089
	Total	**120**	**100**	**120**	**100**	
10	**If yes, when it is celebrated?**					
	4th Tuesday	2	25	11	69	1.38E-10*
	NA	112	93	104	87	
	Don't know	`6	75	5	31	

Fig. 4.18: Knowledge of VO/SHG members of supply of IFA to the beneficiaries

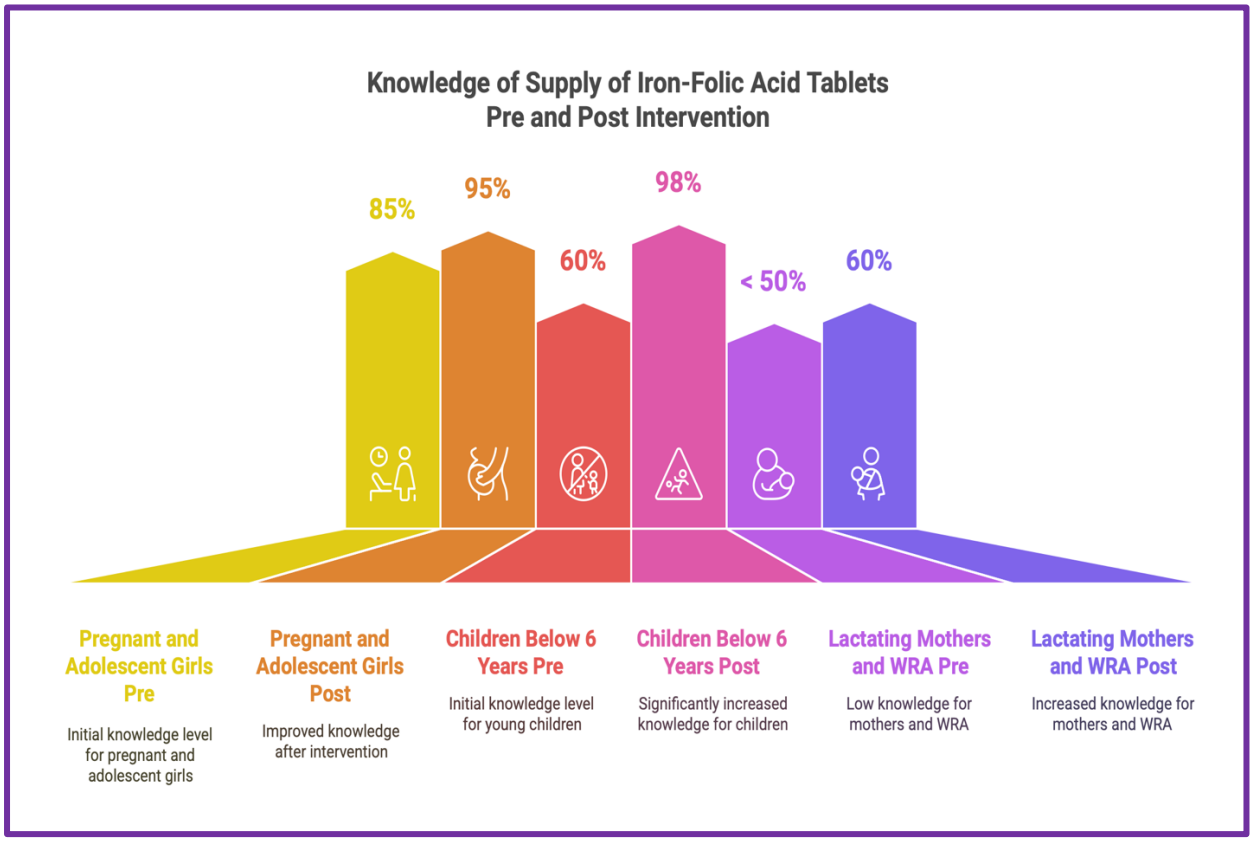
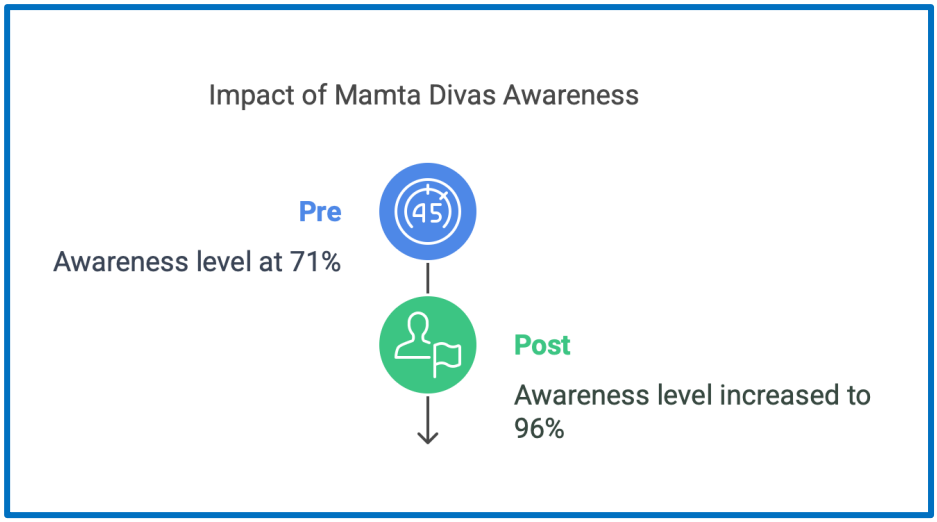


Fig. 4.19: Awareness of Mamta Divas



Knowledge on services of PM-POSHAN Shakti Nirman (Mid-day Meal-MDM) and Ayushman Bharat PM-JAY

Post training, it was found that members have good knowledge about what MDM is and its eligibility as in baseline. There was increase in the importance from around 25% to 94% at endline. Similarly, knowledge on Ayushman Bharat PM-JAY members had fair knowledge as in baseline. Information on knowledge of services of PM-POSHAN among members and Ayushman Bharat PM-JAY is presented in **Table 4.36** and **Table 4.37.**

Table 4.36: Knowledge of VO/SHG members on services of MDM

Sr. No.	Particulars	Pre		Post		p-value
		n	%	n	%	
1	**Knowledge about MDM**					
	Yes	113	94	120	100	0.542387
	No	7	6	0	0	0.000532
	Total	**120**	**100**	**120**	**100**	
2	**Eligibility of MDM**					
	Children studying in Primary and Upper Primary classes	112	93	120	100	0.476105
	NA	7	6	0	0	
	Don't know	1	1	0	0	
	Total	**120**	**100**	**120**	**100**	
3	**Importance of MDM**					
	To satisfy hunger of school children	29	24	113	94	8E-20*
	To bridge the gap of protein and calorie	35	29	4	3	8.03E-11
	For Health	16	13	0	0	3.41E-07
	NA	7	6	0	0	
	Don't know	33	28	1	1	

Table 4.37: Knowledge of VO/SHG members on services of Ayushman Bharat- PM JAY

Sr. No.	Particulars	Pre		Post		p-value
		n	%	n	%	
1	**Knowledge about Ayushman Bharat- PM JAY**					
	Yes	115	96	120	100	0.84
	No	5	4	0	0	0.84
	Total	**120**	**100**	**120**	**100**	
2	**If yes, what is it?**					
	It provides a cover of Rs. 5 lakhs per family per year for secondary and tertiary care hospitalization across public and private empanelled hospitals in India	114	99	120	100	0.92
	NA	5	4	0	0	0.84
	Don't know	1	1	0	0	0.78
3	**Ever visited HWC in the village?**					
	Yes	57	47.5	57	47.5	
	No	63	52.5	63	52.5	
	Total	**120**	**100**	**120**	**100**	

Monitoring and execution of the action plan by VO/SHG members

Monthly VO/SHG meetings conducted

Monitoring of the VO/SHG meetings was done on regular basis during 3 months. It was found out that all the VOs were doing their VO meetings on regular basis (100%) ie. once a month where all VO members gather and discuss about loan repayment, micro-finance and livelihood generation. It was interesting to report that they did not discuss anything regarding health and nutrition aspects before but post training, all incorporated health and nutrition aspects in their meetings. During 3 months intervention period, 9 VOs conducted their meetings every month ie. 97% (29 meetings conducted out of 30 meetings) out of 10 VOs. Only 1 VO could not do meeting in the month of January due to genuine reason.

Similarly, during 3 months intervention period 168 SHG meetings were to be done. Out of 168 SHG meetings, only 42 meetings were done (29%). There were 56 SHG groups in selected cluster. Out of 56 SHG groups, only 23 SHG groups did SHG meeting at least once (41%), 11 SHG groups did SHG meeting twice (20%) and only 4 SHG groups did meeting three times (7%). Information on monthly VO/SHG meetings conducted in the selected cluster is presented in **Table 4.38.**

Monthly monitoring of implementation of FNHW in VO/SHG meetings

It was found that all VO members discussed about loan recovery, health and nutrition, microfinance and livelihood generation in all the meetings. All 10 VOs incorporated FNHW components in their meetings in all the monthly meetings.

Total 42 SHG meetings were conducted in 3 months intervention period (23 SHG groups) post training and monitoring for the same was done by the researcher and Cluster Coordinator. It was interesting to find that most part of the discussion happening was on loan recovery (98%), followed by health and nutrition (95%), micro-finance (50%) and livelihood generation (31%) **(Fig. 4.20).** Post training, it is good to report that all who conducted SHG meetings integrated FNHW components in their meetings and all the topics were covered by them during this 3 month period **(Fig. 4.21).** Also, ASHA/AWW/ANM were comparatively less ie. 13% in VO meetings and 24% in SHG meetings respectively. There is need to involve them as they are the frontline health workers who work with the vulnerable groups of the community. Monthly monitoring of implementation of FNHW in VO/SHG meetings is presented in **Table 4.39.**

It was also found that some SHG members (30%) asked questions on FNHW in the meetings which included questions like: From where the government schemes are obtained?, From where we can get IFA tablets?, During menstruation what care should be taken?, What items can be made from Purnashakti packets?, How is livelihood linked with nutrition? and What is food and nutrition? All the questions asked were related to health and nutrition aspects.

There were positive feedbacks given by the members after the implementation of FNHW which included good explanatory informative material provided by the researcher, they also came to know about various government services and activities provided and about health, cleanliness, education, nutrition and livelihood.

Table 4.38: Monthly VO/SHG meetings conducted in selected cluster

Sr. No.	VO wise SHG groups	December	January	February	March
1	**Rawal VO**		√	√	√
	Aarti		√	√	√
	Aastha		√	√	
	Aradhana				
	Anand				
	Aakruti				
	Ujala				
	Sairam				
	Rawal VO			√	√
	Maa Shakti		√	√	
	Jai Mataji				
	Jai Meldi		√	√	
	Jai Ramapir		√	√	
	Jai Khodiyar				
2	**Jesingpura VO**		√	√	√
	Jai Lakshmi		√	√	√
	Ambika		√	√	
	Shiv Shakti		√	√	√
	Shubh		√	√	
	Shri Hari				
	Dhanlakshmi				
3	**Madhavnagar VO**		√	√	√
	Gurukrupa	√	√	√	
	Jai Yogeshwar				
	Chamunda				
	Jhulelal				
	Krishna				
	Ranchodji				
	Satya				

4	**Hanumanpura VO**		√	√	√
	Umang		√	√	
	Shiv Shakti		√	√	
	Jai Mataji		√	√	
	Jai Meldi Maa		√	√	
	Jai Khodiyar		√	√	
5	**Nimeta VO**				
	Pragati				
	Jai Mataji				
	Jai Swaminarayan				
6	**Devaliya VO**	√	√	√	
	Durga	√			
	Pragna	√			
	Shiv Shakti	√			
	Kanku	√			
	Shiv	√			
7	**Khandha VO**	√	√	√	
	Safar			√	
	Rahi				
	Jai Sainath				
	Jai Ambe				
	Jai Mataji				
	Vikas				
8	**Ghanshyampura VO**		√	√	√
	Ghanshyampura				
	Jai Ambe				
	Tulsi				
9	**Intoli VO**		√	√	√
	Deep				
	Surya				
	Nayan				
	Krishna				
10	**Maninagar VO**	√	√	√	
	Krupa				√
	Naseeb			√	
	Srushti				
	Kriti				
	Krishna				

Table 4.39: Monthly monitoring of implementation of FNHW in VO/SHG meetings

Sr. No.	Particulars	VOs		SHGs	
		n	%	n	%
1	**Topics discussed in the meeting**				
	Micro-finance	30	100	21	50
	Loan recovery	30	100	41	98
	Health/Nutrition	30	100	40	95
	Livelihood generation	30	100	13	31
2	**Topics discussed in the conducted meetings of VOs/SHGs on FNHW**				
	Yes	30	100	42	100
	Total	**30**	**100**	**42**	**100**
3	**If yes, in particular which topics were discussed?**				
	Linking Health, Nutrition, Hygiene and Sanitation, Education with Livelihood	29	100	22	52
	Balanced Diet and Dietary Diversification	29	100	12	29
	First 1000 Days Approach and ANC care	29	100	13	31
	Child Feeding Practices	29	100	15	36
	Anemia	29	100	15	36
	Nutrition for Adolescent girls	29	100	14	33
	WASH Practices	29	100	17	40
	Services of national programs under ICDS, PDS, PM-POSHAN, Ayushman Bharat- PM JAY	29	100	14	33
4	**AWW/ASHA/ANM present in the meeting**				
	Yes	4	13	10	24
	No	26	87	32	76
	Total	**30**	**100**	**42**	**100**
5	**If yes, who was present?**				
	AWW	3	75	6	60
	ASHA	1	25	4	40
6	**Questions asked by other members related to FNHW**				
	Yes	0	0	12	29
	No	30	100	30	71
	Total	**30**	**100**	**42**	**100**

Fig. 4.20: Topics discussed in SHG meetings

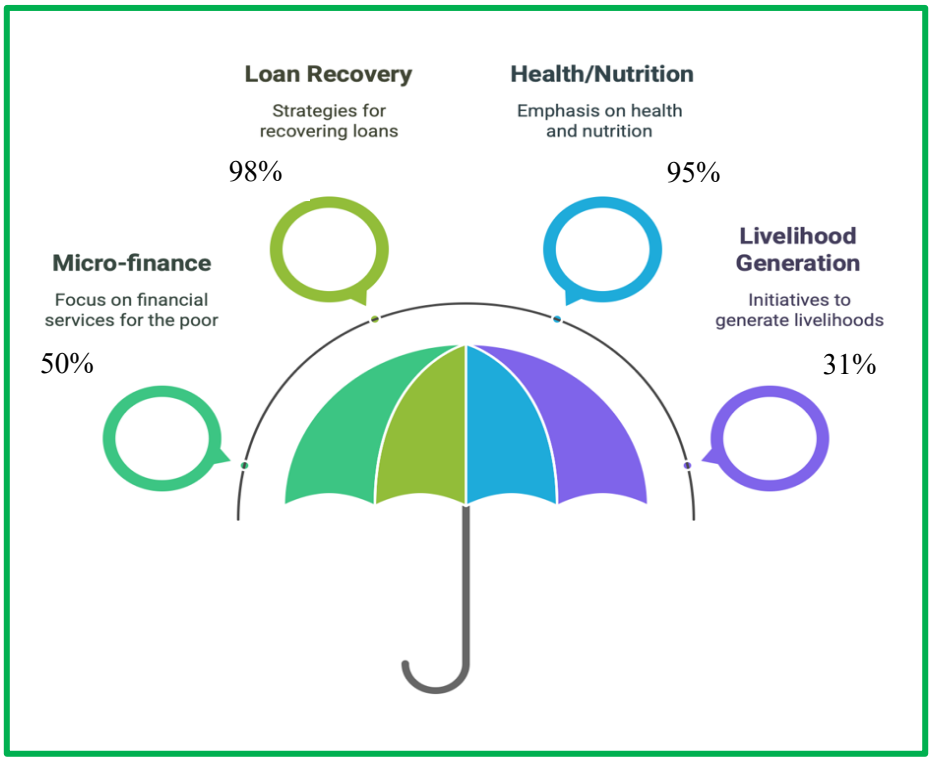
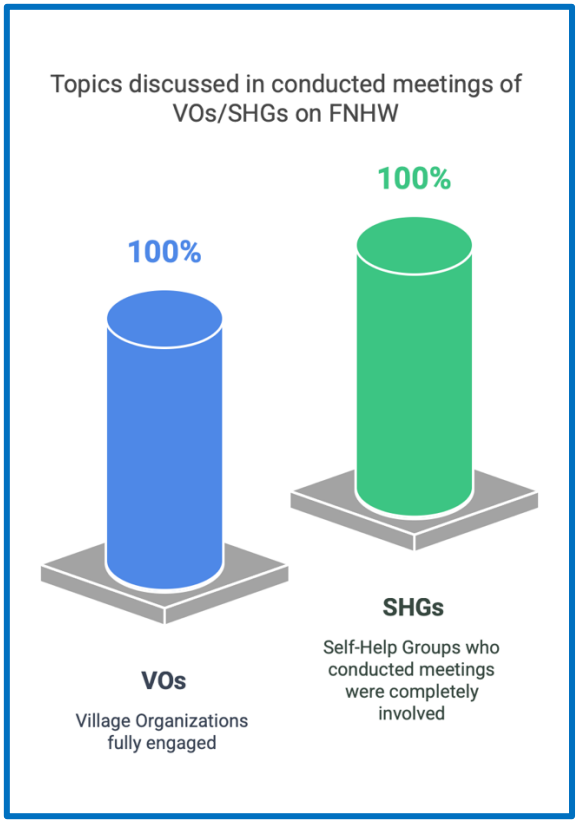


Fig. 4.21: Topics discussed in the conducted meetings of VOs/SHGs on FNHW



Number of pregnant women, lactating mothers, adolescent girls and newly married women counselled during FNHW meeting

Out of 10 VOs, only 2 VOs counselled pregnant women, lactating mothers and adolescent girls and only 1 VO counselled newly married women during FNHW meeting. This means only 20% of the pregnant women, lactating mothers and adolescent girls were counselled during FNHW meetings, and only 10% of the newly married women were counselled during FNHW meetings. There is a strong need to aware these beneficiaries on the topics of FNHW as they are the most vulnerable groups of the community.

Major issues in the villages told by VO/SHG members

Major issues in villages revealed that drainage problems were the most significant concern, affecting 75% of the population. Poor or blocked drainage lines led to sanitation and hygiene issues, impacting daily life and health conditions. Another major issue was the irregular water supply, with 50% of villagers facing uncertainty about when they would receive water, making it difficult to manage household needs efficiently.

Additionally, 25% of villagers reported other concerns, including sewage water entering from neighbouring villages, the need to clean the lake, the absence of drainage lids, and a lack of awareness about government services.

Enabling Environment and Barriers

Enabling Environment

- Where members were committed and SHG groups where loan related work was more, there members could conduct the meetings regularly and had opportunity to integrate FNHW concepts.

Barriers

- As it was harvesting time, people were not interested to come for any kind of data collection and meetings
- Many of the members were daily workers or do jobs so they are paid accordingly so they were reluctant to attend meetings

- Also, because of marriage season and festivities many members were not in their villages
- Those SHGs who did not conduct meeting at least once were not at all functional. The reason noted were they are in agriculture, or have gone for work or are doing their household work or they are not interested in any kind of discussions/meetings. Also, some are not interested in taking any kind of loan or any kind of discussion related to health/nutrition so are not attending the meetings.

Highlights of Section III

Knowledge about selected FNHW components , Dietary practices and National services

- Post training, around 50% of VO/SHG members were aware about the term FNHW and how it is linked with livelihood
- Knowledge about IYCN practices, anaemia, WASH practices and dietary practices were satisfactory
- Awareness about different food groups to be consumed in a day among members was same as in baseline.
- There is need to strengthen knowledge regarding national services and CBOs

Monitoring and execution of the action plan

- All the VOs were regularly conducting VO meetings ie. once a month
- 9 VOs conducted their meetings every month ie. 97% (29 meetings conducted out of 30 meetings) out of 10 VOs during 3 months
- Similarly, during 3 months intervention period , only 42 SHG meetings were done (29%) out of 168 SHG meetings
- Out of 56 SHG groups, only 23 SHG groups did SHG meeting at least once (41%), 11 SHG groups did SHG meeting twice (20%) and only 4 SHG groups did meeting three times (7%) during these 3 months
- All 10 VOs incorporated FNHW components in their meetings in all the VO meetings conducted
- ASHA/AWW/ANM present in the meetings were 13% in VO meetings and 24% in SHG meetings respectively
- All who conducted SHG meetings (42 SHG meetings) integrated FNHW components in their meetings and all the topics were covered by them during 3 month period
- Only 20% of the pregnant women, lactating mothers and adolescent girls were counselled during FNHW meetings, and only 10% of the newly married women were counselled during FNHW meetings from all the VOs
- Major issues faced in the villages were drainage problems and irregular water supply. Other issues reported were sewage water entering from neighbouring villages, the need to clean the lake, the absence of drainage lids, and a lack of awareness about government services.

- These issues highlight the need for better infrastructure, improved sanitation management, and increased awareness programs to help villagers access essential government schemes and services

Post Intervention, significant improvement was seen in following knowledge aspects:

- IYCN practices
- Anaemia
- WASH practices
- Food groups, balanced diet and nutrients
- Undernutrition
- Unhealthy dietary patterns
- Number of food groups consumed
- Services of ICDS
- Community based events (CBEs)
- MDM

Enabling Environment and Barriers

Enabling Environment

- Where members were committed and SHG groups where loan related work was more, there members could conduct the meetings regularly and had opportunity to integrate FNHW concepts.

Barriers

- Due to harvesting period/marriage season, people were not ready to attend any meetings.
- Members who were daily workers or were going to jobs refused to come for meetings or any kind of data collection
- Many SHG groups were not functional because of either agriculture work or because of lack of interest in attending meetings

DISCUSSION

The Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM) has adopted an integrated approach that includes Food, Nutrition, Health, and WASH (Water, Sanitation, and Hygiene) for the holistic development of Self-Help Group (SHG) members and their families. **Food, Nutrition and Health** include 1000 Days window - institutional delivery, colostrum feeding, prenatal and antenatal care, exclusive breastfeeding, and complementary feeding, dietary diversification, reducing anemia, menstrual hygiene - for women and adolescent girls and development of nutri-enterprises and **WASH** includes usage of sanitary toilets, hand washing practices, management of waste at home and development of sanitation-related enterprises. **(DAY-NRLM)**

Self-Help Groups (SHGs) are informal associations of people who choose to come together to find ways to improve their living conditions. Villages face numerous problems related to poverty, illiteracy, lack of skills, lack of formal credit etc. These problems cannot be tackled at an individual level and need collective efforts. Thus, SHG can become a vehicle of change for the poor and marginalized. SHG rely on the notion of "Self Help" to encourage self-employment and poverty alleviation.

The key highlights of the results are discussed below. It includes knowledge and practice of VO/SHG members on FNHW components, dietary practices and services of various National Programs (ICDS, PDS, PM-POSHAN and Ayushman Bharat- PM JAY).

Total 120 VO/SHG members were enrolled for the study, out of which 89% of the members were from reserved category like SC/ST/OBC. Out of which 40% belong to OBC. 8% of the members consumed tobacco.

In the present study, majority of the income was spent on food (90%), followed by repaying loan (78%), children's education (74%), agriculture (48%) and illness (13%).

Rajani Manikonda and Prof. P. Narasimha Rao (2013) carried out a study in Andhra Pradesh explored the impact of Self-Help Groups (SHGs) on the changing socio-economic status of rural women. The research provided valuable insights into the occupational patterns, income distribution, consumption expenditure, asset holdings, and borrowing behaviour of SHG members, shedding light on their financial and social empowerment. The study found that agricultural wage labour was the predominant occupation among SHG women, accounting

for 31.7% of the sample population. A substantial 44.9% of total expenditure was spent on food items, emphasizing the priority given to basic sustenance. Non-food expenditures, including clothing, household utilities, and other essentials, accounted for 31% of total spending. Medical expenses constituted 10.6% of household expenditure, highlighting the financial burden of healthcare in rural areas. Additionally, 9.9% of spending was dedicated to education, reflecting an awareness of the importance of investing in children's schooling. However, a smaller proportion (3.6%) of household expenditure was directed toward liquor and tobacco, indicating that while some resources were spent on non-essential items, they formed a minor portion of overall consumption.

36% enrolled members belonged to BPL category. A study conducted by **Ranjit Barman and Dr. Ujjwal Bhui (2014)** examined a remarkable 99.04% of women from BPL families expressed a strong willingness to join SHGs as a means to escape poverty. This overwhelming enthusiasm indicates that women saw SHGs as a viable solution to their financial struggles.

In the present study, the nutritional status of VO/SHG members was assessed using WHO Asia Pacific Classification (2007). It was found that 45% of the members were overweight/obese and 24% of the members were underweight due to chronic energy deficiency. The dual burden of malnutrition—where both undernutrition and overnutrition coexisted.

Knowledge and Practice regarding FNHW components and services of various National programs were satisfactory. All members knew about undernutrition and about anaemia after training. **Prof. Sirimavo Nair and Tanveer Moizali Umallawala (2018)** revealed significant gaps in knowledge among SHG members, highlighting the need for enhanced awareness programs in these areas. The findings indicated that a substantial 41.2% of SHG members were unaware of the term "undernutrition", which suggests that a significant portion of women did not fully understand the concept of inadequate nutrition and its potential consequences on health. Additionally, an even larger proportion, 76.5% of SHG members, were unaware of the term "anaemia", indicating a lack of knowledge about this widespread health issue that disproportionately affects women, particularly in rural areas.

Dietary Diversity

Regarding dietary diversity, 95% of the members consumed ≥5 food groups from 24 hr dietary recall **(Fig. 4.22).** This shows members were consuming wide varieties of food groups in a day which indicates good dietary diversity.

Vani Sethi, et al. (2019) examined the key predictors of dietary intake among three critical population groups in rural eastern India—adolescent girls, pregnant women, and mothers with children under the age of two years. The study aimed to assess the diversity and quality of diets consumed by these groups and identify regional disparities in dietary diversity across Bihar, Chhattisgarh, and Odisha. The findings highlighted a lack of dietary diversity, a predominance of cereal-based diets, and regional inequalities in dietary intake, particularly in Bihar. The study also found that there was not much variation in the types of foods consumed daily across the three target groups—adolescent girls, pregnant women, and mothers with young children. Regardless of their life stage, most women and girls in rural eastern India followed a monotonous diet, which was high in cereals and vegetables but lacked diversity in other essential food groups. The heavy dependence on cereals and vegetables, with limited consumption of protein sources such as pulses, dairy, eggs, and meats, raises concerns about nutrient deficiencies, particularly in iron, calcium, and essential vitamins.

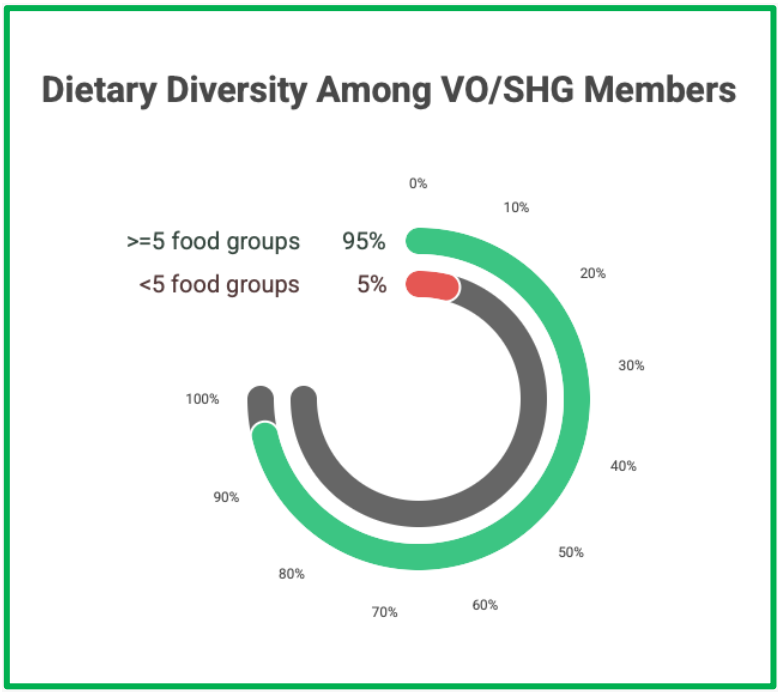
Overall, the study underscores the urgent need for multi-sectoral interventions that improve access to diverse and nutritious foods, strengthen public health programs, and empower women and adolescent girls to make better dietary choices. Addressing these gaps will be crucial in reducing malnutrition, preventing anemia, and improving the overall health outcomes of women and children in India.

Thakar and Rajpura in 2021 summarized various research papers. According to her, various review of previous research on nutritional status of farm women both in India and Gujarat indicated that those who are engaged in agricultural work, their nutritional status are not found to be satisfactory. It is found that the nutrient intake of farm women do not meet the Recommended Dietary Allowances (RDA). The various stakeholders need to educate the women about the importance of balanced diet, according to their body requirements and drudgery conditions in order to improve the work participation for economic growth.

Roy et.al in 2019 reported that dietary score indicates that 37% of women from Gujarat consume more diversified food compared to 23% from Maharashtra.

Hazra et.al in 2025 reported that women who did not have a household kitchen garden, had poor dietary outcomes, with DDS <5 (OR: 0.163, $p = 0.001$).

Fig. 4.22: Minimum Dietary Diversity of VO/SHG members

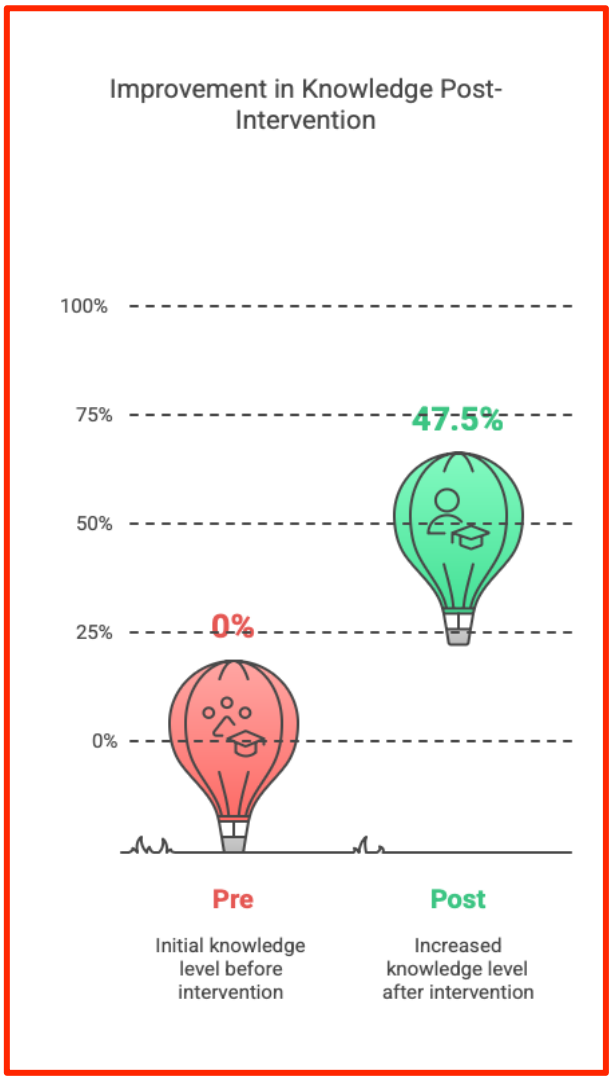


In the present study, all were washing their hands after using toilet, after handling child, after cooking, and after handling cattle. Also, all were using either soap or handwash for washing hands. A study conducted by **Vani Sethi, et al. (2016)** examined the Water, Sanitation, and Hygiene (WASH) practices and their association with the nutritional status of adolescent girls in poverty-stricken areas of Bihar, Chhattisgarh, and Odisha. The research highlighted the widespread prevalence of poor sanitation and hygiene practices among adolescent girls in these states and established a clear link between inadequate WASH facilities and poor nutritional outcomes.

Knowledge about Food, Nutrition, Health and WASH

An attempt was made before at baseline to find out whether current VO/SHG members are aware about FNHW concept and how it is linked with livelihood. Post training, around 50% of the members have heard about FNHW and how it is linked with livelihood correctly **(Fig. 4.23).** To best of our knowledge, no similar study was reported from India/Gujarat.

Fig. 4.23: Knowledge about Food, Nutrition, Health and WASH



Monitoring and execution of action plan

Out of 56 SHG groups, SHG meetings account to only 32% of the SHG groups who conduct meeting on regular basis and it is good to report that discussions on loan recovery was 98%, followed by health and nutrition (95%), micro-finance (50%) and livelihood generation (31%) after training. Those who conducted SHG meetings during 3 month intervention covered all the topics of FNHW components.

Only 20% of the pregnant women and adolescent girls were counselled during FNHW meetings, and only 10% of the lactating mothers and newly married women were counselled during FNHW meetings. There is strong need to aware them on the topics of FNHW as they are the most vulnerable groups of the community.

Vani Sethi, et al. (2013) examined critical health and nutrition indicators among adolescent girls and women, particularly within tribal populations. The study found a high prevalence of thinness (low body mass index for age) among adolescent girls, with Jharkhand reporting the highest proportion at 43.8%, followed by 40% in Chhattisgarh and 38.5% in Odisha. Anaemia was found to be alarmingly high across all three states, with Jharkhand recording the highest prevalence (65%) among both adolescent girls and women. The study also evaluated the coverage and consumption of iron and folic acid (IFA) supplements among pregnant women. However, while IFA distribution was relatively high in Chhattisgarh and Odisha, the actual consumption of at least 100 IFA tablets during pregnancy remained low across all three states. It was also found that a significant proportion of pregnant women from tribal households were unable to access essential healthcare services during the crucial first trimester of pregnancy.

Another study by **Vani Sethi, et al. (2014)** explored the potential of partnering with women's collectives, particularly Self-Help Groups (SHGs), to deliver essential nutrition interventions for women in tribal areas of eastern India, specifically in Chhattisgarh, Jharkhand, and Odisha. The study revealed Limited Targeting of the Pre-Pregnancy Period, and Delays in First Trimester Registration of Pregnant Women. The study also identified a shortage in the supply of micronutrient supplements, such as iron, folic acid, and calcium, which are essential for maternal and foetal health. Additionally, there was low awareness among women regarding the importance of micronutrient intake during pregnancy and lactation.

Another similar study conducted by **Vani Sethi, et al. (2016)** focused on the Swabhimaan initiative, an integrated multisectoral strategy aimed at improving the nutritional status of girls and women in Bihar, Chhattisgarh, and Odisha. This initiative targeted women's nutrition at three critical life stages: before conception, during pregnancy, and after childbirth. The study highlighted the role of community-driven interventions in improving health outcomes and emphasized the need for strengthening human resources and institutional mechanisms to ensure effective program implementation.

SUMMARY AND CONCLUSION

Self-Help Groups (SHGs) are informal associations of people who choose to come together to find ways to improve their living conditions. Hence, there is need to strengthen their nutrition and health aspects. The **FNHW (Food, Nutrition, Health, and WASH)** concept under **Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM)** is designed to enhance the overall well-being of Self-Help Group (SHG) members and their families by integrating health and nutrition awareness with livelihood programs. The key aspects of FNHW under DAY-NRLM are capacity building for SHG women which enhances knowledge about nutrition, health, sanitation, and hygiene and has a broad objective to improve the overall human development indicators by ensuring access to better food, nutrition, health services, water, sanitation, and hygiene while empowering them as change-makers. **(DAY-NLRM)**

The present study was planned with the broad objective of partnering with local women groups for integration of FNHW concepts in SHG members under DAY-NRLM in Waghodia Block of Vadodara District.

The specific objectives of the study were:

- To assess the profile of VO representatives.
- To assess the knowledge and practices of VO representatives on services of national programs under ICDS, PDS, PM-POSHAN, Ayushman Bharat- PM JAY.
- To assess their knowledge on selected FNHW concepts and dietary practices of VO representatives.
- To compile various IEC materials from existing resources of DAY-NLRM.
- To sensitize VO representatives on selected FNHW aspects.
- To assess knowledge retention and change in dietary practices of VO representatives.
- To encourage and monitor discussion within SHGs in their regular monthly schedule meetings on various FNHW components.

The study was divided into 3 phases:

- **Phase – I** Baseline Assessment
- **Phase – II** Sensitization of VO representatives
- **Phase – III** Impact Evaluation

Study site: Rural Waghodia

Study population: VO/SHG members

Intervention period: 3 months

Phase – I Baseline Assessment

Under Vadodara District, there are two blocks that are selected by GLPC i.e., Vadodara Rural and Waghodia. Out of two blocks, Waghodia block was selected purposively, which consist of **7 Cluster Level Federations, 87 Village Organizations and 936 active Self Help Groups** out of which **1 Cluster Level Federation was randomly selected** and **all Village Organization members** were enrolled for the study. In all 120 members were enrolled. Then from the target group following data was collected:

- VO/SHG members' profile
- Height and Weight of VOs/SHGs
- Knowledge on selected FNHW components
- Dietary practices of VO representatives
- Knowledge and Practice of VOs/SHGs on services of various National Programs (ICDS, PDS, PM-POSHAN and Ayushman Bharat- PM JAY)

Highlights of the findings are:

- 35% of VO/SHG members fall under the age group of 30-40 years, 29% of them fall under the age group of 40-50 years and 19% of them fall under the age group of ≤30 years
- 89% of the enrolled VO/SHG members were from reserved category
- 36% enrolled members belonged to BPL category
- 45% of the members were overweight/obese and 24% of the members were underweight due to chronic energy deficiency. The dual burden of malnutrition—where both undernutrition and overnutrition coexisted
- 78% of the members owned an Ayushman Card
- 81% of the members availed PDS ration from village ration shops
- As reported by members, majority of the income was spent on food, followed by repaying loan, children's education, agriculture and illness

- VO/SHG members needs to be made aware about linkage between FNHW concept and livelihood
- All the members conducted VO/SHG meetings every month (100%) out of which 97% of the VO/SHG members conducted meeting once a month
- The topics discussed in the meetings mainly focused on micro-finance, loan recovery and livelihood generation (99%) and focus on health and nutrition aspects in the meetings was very less (1%)
- 83% of the members knew about early initiation of breastfeeding within 1 hr, 88% of them had knowledge about colostrum, and 50% of the members had knowledge on importance of colostrum
- 61% of the members knew that pre-lacteals should not be given to the child, and 54% of them had seen people giving pre-lacteals to the newborn such as honey, patasha water, jaggery water, etc
- 90% of the members had knowledge about exclusive breastfeeding till 6 months and initiation of complementary feeding after competition of 6 months
- 35% of the members had knowledge regarding continued breastfeeding till 2 years along with complementary feeding
- 95% of the members had heard about the term anemia
- 7% of members reported tobacco consumption, which is a cause for concern due to its harmful health effects
- On an average, 95% of the members consumed ≥5 food groups from 24 hr dietary recall. This shows members were consuming wide varieties of food groups in a day which indicates good dietary diversity

Phase – II Sensitization of VO representatives

Development of IEC materials and handouts on FNHW concepts for VO members:

Based on the knowledge and practices on FNHW components of VO members , topics were identified for orientation to them. A Training module was developed and distributed. Topics for the sensitization were:

- Linking Health, Nutrition, Hygiene and Sanitation, Education with Livelihood
- Balanced Diet and Dietary Diversification
- First 1000 Days Approach and ANC care
- Child Feeding Practices
- Anaemia in vulnerable groups and its preventive measures
- Nutrition for Adolescent girls
- WASH Practices
- Services of national programs under ICDS, PDS, PM-POSHAN, Ayushman Bharat-PM JAY

Handouts were developed and given to VO members for further sensitizing of SHG members.

Sensitization of VO members:

All VO representatives that were selected were provided one-day training session on various topics under FNHW concepts using various IEC materials and handouts and action plan was made to encourage SHG groups for FNHW components.

Highlights of the findings are:

- All VO representatives were provided one-day training session on various topics under FNHW concepts using various IEC materials and handouts.
- Action plan was developed by VOs to be done in 3 months.
- Gaps related to knowledge and practices of VO/SHG members were:
    - VO/SHG members were not aware about the term FNHW and how it is linked with livelihood.
    - Knowledge about IYCN practices, WASH practices and dietary practices were fairly satisfactory.
    - VO/SHG members knew about the term anemia, causes and preventive measures but they did not know about its signs and symptoms.
    - There was very less awareness of different food groups to be consumed in a day among members
    - There is need to strengthen knowledge regarding national services and CBOs

Phase – III Impact Evaluation

Phase- III (A): Knowledge Retention

After imparting sensitization sessions, to evaluate the impact of the training and action plan strategy post data was collected on their knowledge related to selected FNHW components, dietary diversity and services of various national programs under ICDS, PDS, PM-POSHAN and Ayushman Bharat- PM JAY of VO representatives after 3 months.

Phase- III (B): Monitoring of Action Plan

After collecting post data, execution of the action plan was done by VOs for 3 months and monitoring of it was done through checklist. Random monitoring of the execution was done by researcher, VO President and concerned authorities.

Monitoring was done for 3 months for all the members of VOs that whether they are encouraging discussion of FNHW concepts in SHG meetings regularly. Also, how many members asked about FNHW concepts in the meeting.

Highlights of the findings are:

- Post training, around 50% of VO/SHG members were aware about the term FNHW and how it is linked with livelihood
- Knowledge about IYCN practices, anaemia, WASH practices and dietary practices were satisfactory ie. there was increase in major aspects of IYCN practices and dietary practices
- There is need to strengthen knowledge regarding national services and CBOs
- All the VOs were regularly conducting VO meetings ie. once a month
- 9 VOs conducted their meetings every month ie. 97% (29 meetings conducted out of 30 meetings) out of 10 VOs during 3 months
- Similarly, during 3 months intervention period , only 42 SHG meetings were done (29%) out of 168 SHG meetings
- Out of 56 SHG groups, only 23 SHG groups did SHG meeting at least once (41%), 11 SHG groups did SHG meeting twice (20%) and only 4 SHG groups did meeting three times (7%) during these 3 months
- All 10 VOs incorporated FNHW components in their meetings in all the VO meetings conducted

- ASHA/AWW/ANM present in the meetings were 13% in VO meetings and 24% in SHG meetings respectively
- All who conducted SHG meetings (42 SHG meetings) integrated FNHW components in their meetings and all the topics were covered by them during 3 month period
- Only 20% of the pregnant women, lactating mothers and adolescent girls were counselled during FNHW meetings, and only 10% of the newly married women were counselled during FNHW meetings from all the VOs
- Major issues faced in the villages were drainage problems and irregular water supply. Other issues reported were sewage water entering from neighbouring villages, the need to clean the lake, the absence of drainage lids, and a lack of awareness about government services

CONCLUSIONS

From the findings of the current study, following conclusions can be drawn:

- Dual burden of malnutrition co-exist in SHG/VO members which is a cause of concern
- Sensitization on integration of FNHW concept with livelihood improved the knowledge of basic Food, Nutrition, Health and WASH among SHG/VO members
- All the VO members could conduct the monthly meetings for 3 months as per action plan to integrate FNHW concept under DAY-NRLM with their SHG members. However, only one-third of the SHG members could implement the action plan
- There is a need to have inbuilt monitoring system by State Livelihood Mission for integrating FNHW concept during SHG meetings to improve quality of life including nutritional status and service utilisation of government programs for attaining SDG goals 1, 2 and 3

RECOMMENDATIONS

- There is need to strengthen FNHW Integration in SHG/VO Meetings
    - Increase focus on health, nutrition, and WASH practices in VO/SHG meetings
    - Ensure regular SHG meetings to reinforce FNHW concepts
    - Enhance participation of ASHA/AWW/ANM workers in meetings for improving nutrition health counselling and better service utilisation of various programs

POLICY IMPLICATIONS

Data and observations generated through the research study will

- Help program managers and policy makers of DAY-NRLM to integrate FNHW concepts into existing SHG and livelihood programs, ensuring both health and nutrition as critical to economic well-being
- It may help in providing solutions for barriers for making functional SHGs who will also integrate FNHW concepts

DISSEMINATION OF FINDINGS

An effort was made to present some of the findings of the study at **International Conference on Occupational Health and Safety Measures (2025)** which was held on 20-21st March. The topic for the presentation was *" SOCIO-ECONOMIC STATUS AND DIETARY PRACTICES OF SELF-HELP GROUP MEMBERS OF SELECTED BLOCK OF VADODARA DISTRICT, GUJARAT, INDIA."*

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INTERNATIONAL CONFERENCE ON
OCCUPATIONAL HEALTH AND SAFETY MEASURES-2025

DEPARTMENT OF HOME SCIENCE
CERTIFICATE

This is to certify that Dr/ Mr./Ms./ Mrs. AASTHA BALONI Dept of Foods and Nutrition, The Maharaja Sayajirao University of Baroda has participated as Resource person/ Delegate / Paper Presenter / Rapporteur. The title of the paper Socio-economic status and Dietary Practices of Self-Help Group Members of Selected Block of Vadodhara District, Vadodhara, Gujarat in the International Conference organized by the Department of Home Science, Gandhigram Rural Institute Deemed To Be University, Gsandhigram on 20 th and 21st March 2025.

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Appendix I

सत्यं शिवं सुन्दरम्
Estd. 1949

Institutional Ethics
Committee for Human
Research
(IECHR)

FACULTY OF FAMILY AND COMMUNITY SCIENCES
THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA

Ethical Compliance Certificate 2024-2025

This is to certify Ms. Aastha Baloni study titled; "Partnering with local women groups for integration of Food, Nutrition, Health and WASH Practices (FNHW) concepts in Self Help Groups members under Deendayal Antyodaya Yojana-National Rural Livelihood Mission (DAY-NLRM) in Waghodia Block of Vadodara District." from Department of Foods and Nutrition has been approved by the Institutional Ethics Committee for Human Research (IECHR), Faculty of Family and Community Sciences, The Maharaja Sayajirao University of Baroda. The study has been allotted the ethical approval number IECHR/FCSc/M.Sc./10/2024/39.

Komal

Prof. Komal Chauhan
Member Secretary
IECHR

Prof. Mini Sheth
Chairperson
IECHR

Chair Person
IECHR
Faculty of Family & Community Sciences
The Maharaja Sayajirao University of Baroda

Appendix II

ગુજરાત લાઈવલીહુડ પ્રમોશન કંપની લી.
(ગુજરાત સરકારનું સાહસ)
જીલ્લા ગ્રામ વિકાસ એજન્સી, શ્રીપાદનગર સોસાયટી, VIP રોડ, વડોદરા
NRLM

ફોન નં.(૦૨૬૫)૨૪૮૪૩૨
ફેક્સ નં. (૦૨૬૫) ૨૪૮૫૬૦૮
ઇ-મેઇલ:-vadodara@glpc.co.in
વેબ સાઇટ:- www.glpc.co.in
સી.આઈ.એન.નં:-
U74900GJ2010SGSC060349

નં.ગલઅ/જી.એલ.પી.સી./એન.આર.એલ.એમ./૨૦૨૪-૨૫/વશી-760 તા:- 11/10/2024

To,
Dr. Hemangini Gandhi
Assistant Professor
Dept. of Foods & Nutrition
Faculty of Family & Community Sciences,
The M.S University of Baroda
Vadodara – 390 002

Subject: Permission as per proposal.
Refrence: Praposal Dt.25/09/2024

Dear,

With reference to the subject mentioned above here the permission is granted as per your proposal to carry out research as a part of master dissertation on partnering with local women groups for integration of FNHW concepts in SHG members under DAY-NRLM in Waghodia Block Of Vadodara District by Miss. Aastha Baloni From October to April.

Senior Genral Manager,
Director,
District Rural Devlopment Agency (DRDA)
Vadodara

Appendix III

ખાદ્ય અને પોષણ વિભાગ
ફેકલ્ટી ઓફ ફેમિલી એન્ડ કોમ્યુનિટી સાયન્સ sciences
ધ મહારાજા સયાજીરાવ યુનિવર્સિટી ઓફ બરોડા, વડોદરા

<u>સંમતિ ફોર્મ</u>

પ્રિય સહભાગી,

ખાદ્ય અને પોષણ વિભાગ, ફેકલ્ટી ઓફ ફેમિલી એન્ડ કોમ્યુનિટી સાયન્સ, મહારાજા સયાજીરાવ યુનિવર્સિટી ઓફ બરોડા વડોદરા જિલ્લાના વાઘોડિયા બ્લોકમાં DAY-NLRM હેઠળ સહ સખી મંડળના સભ્યોમાં FNHW ખ્યાલોના એકીકરણ માટે સ્થાનિક મહિલા જૂથો સાથે ભાગીદારી વિષય પર અભ્યાસ હાથ ધરવા માંગે છે. તેના ભાગ રૂપે, VO પ્રતિનિધિઓ પાસેથી માહિતી એકત્રિત કરવાની છે અને અમે VO/ સહ સખી મંડળના સભ્યોની પ્રોફાઇલ, પસંદ કરેલ FNHW વિષય, આહાર પ્રથાઓ અને ICDS, PDS, PM-POSHAN અને આયુષ્માન ભારત-PM JAY હેઠળના વિવિધ રાષ્ટ્રીય કાર્યક્રમોની સેવાઓ વિશેની માહિતી મેળવવા માંગીએ છીએ. સર્વેક્ષણ પછી, અમે વાઘોડિયા બ્લોકના VO પ્રતિનિધિઓને DAY-NLRM હેઠળ આવરી લેવામાં આવેલ FNHW વિષય પર માહિતી આપવા માંગીએ છીએ. આ અભ્યાસ હાથ ધરવા માટે તમારી સહભાગિતા અને સહકાર જરૂરી છે અમે તમને તેના માટે સંમતિ આપવા વિનંતી કરીએ છીએ.

અભ્યાસ નિરીક્ષક,
નામ: ડૉ. હેમાંગીની ગાંધી
મો.નં.: 9824320554

સંશોધન વિદ્યાર્થી,
નામ: આસ્થા બલોની
મો.નં.: 7778050255

સભ્ય સચિવ,
સંસ્થાકીય નૈતિક સમિતિ, ફેકલ્ટી ઓફ ફેમિલી એન્ડ કોમ્યુનિટી સાયન્સ
નામ: પ્રો. કોમલ ચૌહાણ
મો.નં.: 9898790340

હું _____ VO નો _____ પ્રતિનિધિ અભ્યાસ માટે માહિતી પ્રદાન કરવા માટે સંમતિ આપું છું.

નામ: **સહી:**
તારીખ: **સ્થળ:**

Appendix IV

Pre- Questionnaire

VO/ SHG members profile:

Date: -	**Block: -**	
Cluster -	**VO: -**	**SHG: -**

	Questions	Choose from responses/ Write responses	Write code
1.	Name of VO member		
2.	Date of birth		
3.	Age (yrs)		
4.	Height (cms)		
5.	Weight (kgs)		
6.	Religion	1.Hindu 2.Muslim 3.Any other specify	
7.	Caste	1.General 2.SC 3.ST 4.OBC	
8.	Economic category	1.APL 2.BPL	
9.	Marital Status	1.Married 2.Unmarried 3.Widow 4.Other (specify)	
10.	Qualification	1.Post Graduate 2.Graduate 3.Diploma 4.Higher secondary 5.Secondary 6.Primary 7.Illiterate	
11.	Occupation	1.Business 2.Service 3.Skilled worker 4.Unskilled worker 5.Self- employed 6.Agriculture	
12.	Type of house	1.Katcha 2.Semi- pucca 3.Pucca	

13.	Health Insurance If yes, how many members have it?	1.Yes 2.No	
14.	Addiction	1.Tobacco 2.Bidi 3.Gutka 4.Alcohol	
15.	Ayushman Card	1.Yes 2.No	
16.	Do you regularly attend VO/SHG meetings? શું તમે નિયમિત રીતે VO/SHG (મહિલા સ્વસહાય જૂથ)ની બેઠકમાં હાજર રહો છો?	1.Yes 2.No	
17.	If yes, how frequently it is done? જો હા, તો કેટલી વાર થાય છે?	1.Once a month 2. 2 times a month 3. Yearly	
18.	What topics you discuss in VO/SHG meeting? VO/SHG (મહિલા સ્વસહાય જૂથ) ની બેઠકમાં તમે કયા વિષયોની ચર્ચા કરો છો?	1.Micro-finance 2.Loan recovery 3.Health/Nutrition 4.Livelihood generation 5.Any other specify	
19.	Have you got any training for SHG concepts? શું તમને SHG (મહિલા સ્વસહાય જૂથ)ના માળખા અંગે કોઈ તાલીમ મળી છે?	1.Yes 2.No	
20.	If yes, specify. જો હા, તો સ્પષ્ટ કરો.		

Knowledge on selected FNHW components and Dietary practices of VO representatives

	Knowledge & Practices about IYCN Practices		
	Questions	**Choose from responses/ Write responses**	**Write code**
1.	When should breastfeeding be initiated after birth? જન્મ પછી સ્તનપાન ક્યારે શરૂ કરવું જોઈએ?	1. Within 1 hr 2. After 1 hr 3. Any other specify 0. Don't know	
2.	Do you know about colostrum which is yellowish in color? શું તમને પહેલું ચીકણું પીળું દૂધ (Colostrum) વિષે ખબર છે?	1.Yes 2. No	
3.	If yes, what is its importance? જો હા, તો તેનું મહત્વ શું છે?	1. Fights against antibodies/foreign bodies entering inside the body and makes the system immune 2. Makes the baby ill 3. Any other specify 0. Don't know	
4.	Should pre-lacteals be given to the child? શું બાળકને જન્મ પછી ગલથૂથી (Pre-lacteal) આપવું જોઈએ?	1. Yes 2. No	
5.	Have you seen anyone giving pre-lacteals to the child? શું તમે કોઈને બાળકને ગલથૂથી આપતા જોયા છે?	1. Yes 2. No	
6.	Exclusive breastfeeding should be done up to? ફક્ત સ્તનપાન કેટલા મહિના સુધી કરવું જોઈએ?	1. 3 months 2. 6 months 3. 9 months 4. Any other specify 0. Don't know	
7.	At what age complementary foods should be initiated? પૂરક આહાર ક્યાર થી શરૂ કરવું જોઈએ?	1. 3 months 2. 6 months 3. After completion of 6 months 4. Any other specify 0. Don't know	

8.	Along with complementary feeding, continued breastfeeding should be done till what age? પૂરક આહાર સાથે સ્તનપાન કેટલા વર્ષ સુધી ચાલુ રાખવું જોઈએ?	1. 6 months 2. 1 year 3. 2 years 4. Any other specify 0. Don't know	
	Knowledge & Practices about Anemia		
	Questions	**Choose from responses/ Write responses**	**Write code**
9.	Have you heard about the term anemia? શું તમે 'એનિમિયા' વિષે સાંભળ્યું છે?	1. Yes 2. No	
10.	If yes, then what is anemia? જો હા, તો એનિમિયા શું છે?	1. Low hemoglobin levels in the blood 2. Paleness of eyes, nails, tongue 3. Weakness 4. Any other	
11.	What are the causes of anemia? ***(Probe and read out the options to make them understand)*** એનિમિયાના કારણો શું છે? (વિકલ્પો વાંચો અને સમજાવો)	1. Inadequate consumption of Iron Rich Foods in theDiet 2. Consumption of Iron Rich Foods with inhibitors likeTea and Coffee 3. Excessive blood loss as in menstruation, delivery,hemorrhage 4. Blood loss during accidents 5. Frequent Episodes of Malaria 6. Hookworm Infestations 7. Any other specify 0. Don't know 1. લોહીની સમૃદ્ધિવાળી ખોરાકની અપૂર્ણ ખાપ 2. ચા અને કોફી જેવા અવરોધક પદાર્થો સાથે લોહી સમૃદ્ધ ખોરાકનું સેવન 3. મહિનો, ડિલિવરી અથવા હેમોરેજ દરમિયાન અતિશય રક્તપ્રવાહ 4. અકસ્માત દરમિયાન રક્તપ્રવાહ 5. વારંવાર મેલેરિયા 6. હૂકવોર્મ (હુકવર્મ) ચેપ 7. અન્ય (સ્પષ્ટ કરો) 0. ખબર નથી	

12.	What are the signs and symptoms of anemia? ***(Probe and read out the options to make them understand)*** એનિમિયાના લક્ષણો શું છે?	1. Fatigue 2. Weakness 3. Pallor of skin, tongue and nails 4. Shortness of breath 5. Dizziness 6. Brittle and spoon-shaped nails 7. Headaches 8. Fast irregular heartbeat 9. Swelling and soreness of the tongue 10. Cold hands and feet 11. Tingling sensations in legs 12. Any other specify 0.Don't know 1. થાક 2. નબળાઈ 3. ચામડી, જીભ અને નખની પીળાશ 4. શ્વાસ લેવાનો તકલીફ 5. ચક્કર 6. નાજુક અને ચમચા-આકારના નખ 7. માથાનો દુખાવો 8. ઝડપથી અનિયમિત હૃદયધબકનો 9. જીભની સોજા અને સુરા 10.ઠંડા હાથ અને પગ 11. પગમાં સૂંસારાવ 12. અન્ય (સ્પષ્ટ કરો) 13. ખબર નથી	
13.	What are the preventive measures for Anemia? ***(Probe and read out the options to make them understand)*** એનિમિયા માટે કયા રોકથામના પગલા છે?	1. Consumption of Iron Rich Food with enhancers anddietary diversity 2. Consume Iron Folic Acid Tablets 3. Prevention of Malaria 4. Cleanliness of house inside and outside 5. Consume Albendazole tablets twice a year 6. Eat Purna Shakti packets 7. Any other specify 0. Don't know 1.લોહી સમૃદ્ધ ખોરાક અને ખોરાકની વિવિધતા 2. આયર્ન ફોલિક એસિડની ગોળીઓનું સેવન 3. મેલેરિયાની રોકથામ	

		4. ઘર અને આસપાસની સફાઈ 5. વર્ષમાં બે વખત અલ્બેન્ડાઝોલ ગોળીઓનું સેવન 6. પૂર્ણ શક્તિ પેકેટ ખાવું 7. અન્ય (સ્પષ્ટ કરો) 8. ખબર નથી	
14.	According to you, which are the iron-rich sources of food? તમારા પ્રમાણે, કયા લોહી સમૃદ્ધ ખોરાક સ્ત્રોતો છે?	1. Green leafy vegetables 2. Whole cereals and Pulses 3. Dates 4. Beet 5. Soybean 6. Jaggery 7. Egg/Meat/ Fish 8. Any other specify 0. Don't know	
15.	Which foods should be consumed with iron rich foods? કયા ખોરાક લોહી સમૃદ્ધ ખોરાક સાથે લેવાય છે?	1. Vitamin C-rich foods- Amla/ lemon/ orange/ guava 2. Any other specify 0. Don't know	
16.	Which foods should not to be consumed with iron rich foods? કયા ખોરાક લોહી સમૃદ્ધ ખોરાક સાથે લેવાય નહીં?	1. Tea or coffee 2. Any other specify 0. Don't know	
17.	Who all get IFA syrup/tablet in your village by ASHA/AWW? તમારા ગામમાં કોણે આશા/આગનવાડી કાર્યકર દ્વારા IFA સિરપ/ ગોળી મળે છે?	1. Pregnant mothers 2. Lactating mothers 3. Adolescent girls 4. Children <6 years 5. Women of reproductive age (WRA) 6. Any other specify 0. Don't know	
18.	Who provides the IFA tablets to the beneficiaries? લાભાર્થીઓને IFA ની ગોળી કોણ આપે છે?	1.ASHA 2. ANM 3. AWW 4. FHW 5. Any other specify	

19.	Do you know how to consume an IFA tablet? શું તમને ખબર છે કે IFA ની ગોળી કેવી રીતે લેવી?	1. Consuming IFA after having Food 2. Not to consume IFA with Tea/coffee 3. Including Citrus fruits like lemon in food 4. Any other specify 0. Don't know	
	Knowledge & Practices about WASH Practices		
	Questions	**Choose from responses/ Write responses**	**Write code**
20.	What is the drinking water source in your village? તમારા ગામમાં પીવાના પાણીનો સ્ત્રોત શું છે?	1. Tap water inside house 2. Tap water outside house 3. Public Tap 4.Tube well/Bore well	
21.	Most of the people in your village use toilet or go for open defecation? તમારા ગામમાં મોટા ભાગના લોકો શૌચાલય વાપરે છે કે ખુલ્લામાં સંડાસ માટે જાય છે?	1.Public toilet 2.Household toilet 3. Open defecation	
22.	When do you wash your hands? તમે ક્યારે-ક્યારે હાથ ધોવો છો?	1. After using toilet 2. Before cooking 3. After handling the child 4. After handling cattle 5. Any other specify	
23.	How do you wash your hands? તમે કેવી રીતે હાથ ધોવો છો?	1.Only water 2.With soap/ash/handwash 3. No handwashing	
	Knowledge and Dietary Practices		
	Questions	**Choose from responses/ Write responses**	**Write code**
24.	According to you what is good health? તમારા પ્રમાણે, સારું સ્વાસ્થ્ય એટલે શું?	1. Free from illnesses 2. Can do household chores 3. Any other specify 0. Don't know	
25.	What is your type of diet? તમારો આહાર કયો પ્રકારનો છે?	1. Vegetarian 2. Non-Vegetarian 3. Eggetarian	

26.	Are you aware of different food groups? શું તમને અલગ-અલગ ખાદ્ય જૂથો વિશે ખબર છે?	1. Yes 2. No	
27.	If yes, mention the food groups. જો હા, તો ખાદ્ય જૂથો જણાવો.	1. Grains, white roots and tubers, and plantains 2. Pulses (beans, peas and lentils) 3. Nuts and Seeds. 4. Dairy 5. Meat, Poultry and Fish 6. Eggs 7. Dark GLVs 8. Other vitamin A-rich fruits and vegetables 9. Other Vegetables 10. Other Fruits	
28.	According to you what is a balanced diet or a healthy diet? તમારા પ્રમાણે, સંતુલિત આહાર શું છે?	1. A diet that includes Cereals, Pulses, Dairy products, Fruits and Vegetables, egg/fish/meat,oil/ghee 2. A diet that has the right quantity of food groups that can meet all the nutrient requirements 3. Any other 0. Don't know	
29.	Which food groups should be included in your daily diet to have a balanced diet? તમારા દૈનિક આહારમાં સંતુલિત આહાર માટે કયા આહાર જૂથોને સમાવેશ કરવો જોઈએ?	1. Grains, white roots and tubers, and plantains 2. Pulses (beans, peas and lentils) 3. Nuts and Seeds. 4. Dairy 5. Meat, Poultry and Fish 6. Eggs 7. Dark GLVs 8. Other vitamin A-rich fruits and vegetables 9. Other Vegetables 10. Other Fruits	
30.	Which nutrients are required in your daily diet? તમારા દૈનિક આહારમાં કયા-કયા પોષક તત્વો જરૂરી છે?	1. Carbohydrates 2. Protein 3. Fat 4. vitamins and minerals 5. Any other specify 0. Don't know	
31.	What will happen if you do not consume nutrients in the required quantity? જો તમે જરૂરી માત્રામાં પોષક તત્વોનું સેવન ન કરો તો શું થશે?	1. Undernutrition 2. Overweight and obesity 3. Different nutrient deficiencies (Vitamins andmineral deficiencies) 4. non-communicable diseases like diabetes,CVD, cancer, etc. 5. Any other specify 0. Don't know	

32.	Do you know what undernutrition is? શું તમને કુપોષણ શું છે તે ખબર છે?	1. Yes 2. No	
33.	If yes, what is undernutrition? જો હા, તો કુપોષણ શું છે?	1. Low weight for age 2. Can't work properly, Weakness 3. Being unhealthy 4. Any other specify 0. Don't know	
34.	What are the preventive measures for undernutrition? કુપોષણ માટે પ્રતિકારક પગલાં શું છે?	1. To consume a balanced diet regularly 2. To keep home and village clean 3. To avail the benefits of government services 4. Any other specify 0. Don't know	
35.	Do you think you are healthy? શું તમે તમારી જાતને આરોગ્યમંદ માનો છો?	1. Yes 2. No 0. Don't know	
36.	If no, why do you think that you are not healthy? જો નહીં, તો તમે કેમ માનો છો કે તમે આરોગ્યમંદ નથી?	1. Weight is low as per age-underweight 2. Can't work properly, Weakness 3. Anemic 4. Any other specify 0. Don't know	
37.	What is unhealthy food? અપોષક આહાર શું છે?	1. Foods that are rich in essential nutrients 2. Foods that are fresh and minimally processed 3. Foods that contain excessive amounts of added sugars, unhealthy fats, and/or sodium 4. Foods that are organic and locally sourced 0. Don't know	
38.	Can you name any 3 unhealthy foods? તમે કોઇ પણ 3 અપોષક આહારના નામ આપી શકો છો?		
39.	What meals do you eat in a day? તમે દિવસમાં ક્યારે ક્યારે ખાવ છો?	1.Breakfast 2. Brunch 3. Lunch 4. Supper 5. Dinner 6. Bed time	
40.	Do you have breakfast every day? શું તમે દરરોજ નાસ્તો કરો છો?	1. Yes 2. No	

41.	How often do you eat outside home? તમે ઘરના બહાર ક્યારે ક્યારે ખાવ છો?	1. Daily 2. 3-4 times a week 3. 2-3 times a week 4. once a week 5. Never		
42.	Do you buy any junk food/packagedfood? શું તમે કોઈ પણ ફાસ્ટ ફૂડ/પેકેટ ખરીદો છો?	1. Yes 2. No		
43.	If yes, what do you prefer to buy? જો હા, તો તમે શું ખરીદવાનું પસંદ કરો છો?	1. Packed snacks (Potato/ banana wafers, Kurkure,Gopal) 2. Fried snacks (samosa, bhajiya, kachori,panipuri) 3. Carbonated drinks ThumsUp,7 Up, Pepsi,Coca-Cola, Limca) 4. Sweets (burfi, laddoo, pastries/ cakes,chocolates, ice cream, biscuits) 5. Any other specify		
44.	What is diet diversity? આહાર વૈવિધ્યતા શું છે?	1. Consuming a wide variety of foods and foodgroups 2. Eating the same foods every day 3. Focusing only on protein-rich foods 4. Eliminating all carbohydrates from the diet		
45.	How do you achieve diet diversity in daily life? તમારા દૈનિક જીવનમાં આહાર વૈવિધ્યતા કેવી રીતે મેળવો છો?	1. Eating the same foods every day 2. Focusing exclusively on one food group 3. Trying new foods and recipes 4. Skipping meals		
46.	Write down the food items and ingredients consumed on the previous day			
	Meal and timing	**Food Items**	**Ingredients**	
	Breakfast			
	Mid-morning			

	Lunch Time			
	Evening Snack			
	Dinner			
	Any other item if consumed(Packets, outside home)			
47.	List food groups from the above recall. **(From 24 hr dietary recall)** **(To be done by research student)**	1. Grains, white roots and tubers, and Plantains 2. Pulses (beans, peas and lentils) 3. Nuts and seeds 4. Dairy 5. Meat, Fish and poultry 6. Eggs 7. Dark green leafy vegetables 8. Vitamin A-rich fruits and vegetables 9. Other vegetables 10. Other fruits		

Knowledge and Practice of VOs on services of various National Programs (ICDS, PDS, PM-POSHAN and Ayushman Bharat- PM JAY)

	Knowledge and Practice of services under ICDS						
	Questions	**Choose from responses/ Write responses**					**Write code**
1.	From following services, which services are available and to whom?						
	Services	**Pregnant mothers**	**Lactating mothers**	**Adolescent girls**	**Children <6 years**	**Women of reproductive age (WRA)**	
	1. Iron Folic Acid Supplementation						
	2. Deworming (Albendazole)tablet						
	3. Menstrual hygiene management - information						
	4. Vitamin A Supplementation						
	5. Immunization						
	6. Health check-up (weight,height)						
	7. Take Home Ration (Balshakti, Purnashakti, Matrushakti)						
	8. Counseling sessions						
2.	Are you aware of Mamta Divas?	1. Yes 2. No					
3.	If yes, when it is celebrated?	1.Every Wednesday 2. Every Monday 3. Any other specify 0. Don't know					
4.	Are you aware of Suposhan Samvad?	1. Yes 2. No					
5.	If yes, when it is celebrated?	1. 1st Tuesday 2. 2nd Tuesday 3. 3rd Tuesday 4. 4th Tuesday 0. Don't know					
6.	Are you aware of Baltula Divas?	1. Yes 2. No					

7.	If yes, when it is celebrated?	1. 1st Tuesday 2. 2nd Tuesday 3. 3rd Tuesday 4. 4th Tuesday 0. Don't know	
8.	Are you aware of Annaprashan Divas?	1. Yes 2. No	
9.	If yes, when it is celebrated?	1. 1st Tuesday 2. 2nd Tuesday 3. 3rd Tuesday 4. 4th Tuesday 0. Don't know	
10.	Are you aware of Purna Divas?	1. Yes 2. No	
11.	If yes, when it is celebrated?	1. 1st Tuesday 2. 2nd Tuesday 3. 3rd Tuesday 4. 4th Tuesday 0. Don't know	
	Knowledge and Practice of services under PDS		
	Questions	**Choose from responses/ Write responses**	**Write code**
12.	Do you have PDS in your village?	1. Yes 2. No	
13.	If yes, what food items are available in PDS?	1.Fortified Rice 2.Fortified Wheat 3. Dal 4. Oil 5. Sugar 6. Iodized salt 7. Any other specify 0. Don't know	
14.	Do you know about Antyodaya Anna Yojana (AAY)?	1. Yes 2. No	
15.	If yes, what is it?	1. The poorest of poor households will receive 35 kg of food grains per household per month 2. The poorest of poor households will receive 10 kg of food grains per household per month 3. The poorest of poor households will not receive any of food grains per household per month 4. Any other specify 0. Don't know	

	Knowledge and Practice of services under PM-POSHAN		
	Questions	**Choose from responses/ Write responses**	**Write code**
16.	Do you know about Mid-day meal Scheme (MDM)?	1. Yes 2. No	
17.	Who is eligible for MDM? MDM માટે કોણ પાત્ર છે?	1. Children studying in Primary and Upper Primary classes 2. Any other specify 0. Don't know	
18.	What is the importance of MDM? MDM નું મહત્વ શું છે?	1.To satisfy hunger of school children 2.To bridge the gap of protein and calorie 3.For Health 0.Don't know	
	Knowledge and Practice of services under Ayushman Bharat- PM JAY		
	Questions	**Choose from responses/ Write responses**	**Write code**
19.	Do you know about Ayushman Bharat- PM JAY Scheme?	1. Yes 2. No	
20.	If yes, what is it?	1. It provides a cover of Rs. 5 lakhs per family per year for secondary and tertiary care hospitalization across public and private empanelled hospitals in India 2. It provides a cover of Rs. 2 lakhs per family per year for secondary and tertiary care hospitalization across public and private empanelled hospitals in India 3. It provides a cover of Rs. 10 lakhs per family per year for secondary and tertiary care hospitalization across public and private empanelled hospitals in India 0. Don't know	
21.	Have you ever visited Health and Wellness center in your village?	1.Yes 2.No	
	About FNHW concepts		
22.	Have you heard about FNHW?	1.Yes 2.No	
23.	If yes, how it is linked with livelihood? જો હા, તો તે આજીવિકા સાથે કેવી રીતે જોડાયેલી છે?	1.If good health, good livelihood 2.If Bad health, Poor livelihood 3.Any other specify 0.Don't know	

24.	Majority of family income is spent for which expenditure? મોટા ભાગે પરિવારની આવક કયા ખર્ચ માટે ખર્ચવામાં આવે છે?	1.Illness 2.Children's education 3.Agriculture 4.Marriage/any other events 5.To repay loan 6.Food 7.Any other specify 0.Don't know	
25.	To make family happy, whose care should we take? પરિવારને ખુશ રાખવા માટે, કાળજી કોની લેવી જોઈએ?	1.Pregnant mothers 2.Young children 3.Lactating mothers 4.Adolescent girls 5.School children 6.Any other specify 0.Don't know	

Added questions for Post-Questionnaire

	Questions	**Choose from responses/ Write responses**	**Write code**
21.	Do you think utilizing services provided by government will have good nutritional status?	1. Yes 2. No 0. Don't know	
22.	Do you think good nutritional status will have good livelihood?	1. Yes 2. No 0. Don't know	

Appendix V

મોનીટરીંગ ચેકલિસ્ટ

મીટિંગની તારીખ: -	બ્લોક: -	
CLF: -	**VO: -**	**SHG: -**
ગામનું નામ: -		
નિરીક્ષણના દિવસે સ્વસહાય જૂથના સભ્યોની હાજરીના કુલ નં.: -		મીટિંગની અવધિ: -

	પ્રશ્નો	પ્રતિભાવોમાંથી પસંદ કરો/ પ્રતિસાદો લખો
1.	મીટિંગમાં કયા-કયા વિષયો પર ચર્ચા કરવામાં આવી?	1. માઇક્રો-ફાઇનાન્સ 2. લોન વસૂલાત 3. આરોગ્ય/પોષણ 4. આજીવિકા
2.	શું ખાદ્ય, પોષણ, આરોગ્ય અને સ્વચ્છતા (FNHW) થી સંબંધિત કોઈ વિષયો પર મીટિંગમાં ચર્ચા કરવામાં આવી હતી?	1. હા 2. ના
3.	જો હા, તો કયા વિષયો પર ચર્ચા કરવામાં આવી હતી?	1. આજીવિકા સાથે આરોગ્ય, પોષણ, સ્વચ્છતા અને શિક્ષણને જોડવું 2. સંતુલિત આહાર અને આહાર વૈવિધતા 3. પ્રથમ 1000 દિવસ અને પ્રસૂતિ પહેલા ની સંભાળ 4. શિશુ અને બાળ આહાર 5. એનિમિયા (પાંડુરોગ/ લોહીની ફિકસ) 6. કિશોરવયની છોકરીઓ માટે પોષણ 7. સ્વચ્છતા 8. માતા અને બાળકો માટે સરકારી કાર્યક્રમો ની સેવાઓ
4.	શું મીટિંગમાં કોઈ AWW/ASHA/ANM હાજર હતા?	1. હા 2. ના
5.	જો હા, તો કોણ હાજર હતું?	1. આંગણવાડી વર્કર 2. આશા 3. એ એન એમ
6.	શું મીટિંગ દરમિયાન ખાદ્ય, પોષણ, આરોગ્ય અને સ્વચ્છતા સંબંધિત કોઈ પણ પ્રશ્નો પૂછવામાં આવ્યા હતા?	1. હા 2. ના
7.	જો હા, તો સ્પષ્ટ કરો.	
8.	સ્વસહાય જૂથો દ્વારા આપવામાં આવેલ પ્રતિસાદ.	

મોનીટરીંગ ચેકલિસ્ટ

બ્લોકનું નામ:	
ગામનું નામ:	પંચાયતનું નામ:
VO:	**CLF:**

ક્રમાંક	સમસ્યા	શું કરવામાં આવશે?	કેવી રીતે કરવામાં આવશે?	કોણ કરશે?	સમય ગાળો

માસિક રિપોર્ટિંગ

બ્લોકનું નામ:	
ગામનું નામ:	પંચાયતનું નામ:
VO:	**CLF:**

મહિના	સગર્ભાઓ		ધાત્રી માતાઓ				કિશોરવયની છોકરી		નવપરિણીત	
			0-6 મહિનાના બાળક સાથે ધાત્રી માતાઓ		6-24 મહિનાના બાળક સાથે ધાત્રી માતાઓ					
	લક્ષ્ય	માસિક FNHW મીટિંગ્સ દરમિયાન લાભાર્થીનું કાઉન્સેલિંગ	લક્ષ્ય	માસિક FNHW મીટિંગ્સ દરમિયાન લાભાર્થીનું કાઉન્સેલિંગ	લક્ષ્ય	માસિક FNHW મીટિંગ્સ દરમિયાન લાભાર્થીનું કાઉન્સેલિંગ	લક્ષ્ય	માસિક FNHW મીટિંગ્સ દરમિયાન લાભાર્થીનું કાઉન્સેલિંગ	લક્ષ્ય	માસિક FNHW મીટિંગ્સ દરમિયાન લાભાર્થીનું કાઉન્સેલિંગ
જાન્યુઆરી										
ફેબ્રુઆરી										
માર્ચ										

Appendix VI

Training Module for VO/SHG members

સ્વ સહાય જૂથો માટે ખોરાક, પોષણ, આરોગ્ય અને સ્વચ્છતા (FNHW) પાસાના સંકલન અંગેની માર્ગદર્શિકા

ફુડ્સ એન્ડ ન્યૂટ્રિશન, ફેમિલી એન્ડ કમ્યૂનિટી સાયન્સીસ, MSU

તકનિકી નિષ્ણાત: ડૉ. હેમાંગીની ગાંધી (આસિસ્ટન્ટ પ્રોફેસર)

રીસર્ચ સ્ટુડન્ટ: આસ્થા બલોની (Sr. MSC PHN)

December 2024

અનુક્રમણિકા

પ્રસ્તાવના

ડેઝર્ટેશનના ભાગ રૂપે, અમે વડોદરા જિલ્લાના વાઘોડિયા બ્લોક ના એક CLF ના VO સભ્યોમાં ખોરાક, પોષણ, આરોગ્ય અને સ્વચ્છતા (FNHW) પાસાને એકીકૃત કરવાનો પ્રયાસ કરી રહ્યા છીએ. ગુજરાત લાઇવલીહુડ પ્રોમોશન કંપની (GLPC), ગાંધીનગર દ્વારા પસંદ કરાયેલ વડોદરા જિલ્લાના વાઘોડિયા બ્લોકમાં સ્વ-સહાય જૂથો (SHGs) માટે દીનદયાળ અંત્યોદય યોજના- રાષ્ટ્રીય ગ્રામીણ આજીવિકા મિશન (DAY- NRLM) હેઠળ ખોરાક, પોષણ, આરોગ્ય અને સ્વચ્છતા (FNHW) પહેલને અમલમાં મૂકવાનું શરૂ કર્યું છે. અમારો અભિગમ ગ્રામીણ સમુદાયોને જ્ઞાન સાથે સશક્ત બનાવવા, તેમના જીવનની ગુણવત્તા સુધારવા માટે જરૂરી સાધનો અને સંસાધનો પર કેન્દ્રિત છે. આ પહેલનો ઉદ્દેશ્ય જાગૃતિને ઉત્તેજન આપીને અને ટકાઉ અને સ્થાનિક રીતે સંચાલિત ઉકેલોને અપનાવવા માટે પ્રોત્સાહિત કરીને કુપોષણ, નબળા સ્વાસ્થ્ય અને અપૂરતી સ્વચ્છતા પ્રથાઓના ગંભીર મુદ્દાઓને ઉકેલવાનો છે. આ દ્વારા, અમારો હેતુ સ્વ સહાય જૂથના સભ્યો અને તેમના પરિવારોના સ્વાસ્થ્ય અને સુખાકારી પર સર્વગ્રાહી અસર સુનિશ્ચિત કરવાનો છે.

અમારો આગળનો માર્ગ લક્ષિત હસ્તક્ષેપો પહોંચાડવા માટે એક સંરચિત અને સમાવિષ્ટ માળખું બનાવવા પર ભાર મૂકે છે. આમાં સ્વ સહાય જૂથના સભ્યોને સંતુલિત આહાર, વ્યક્તિગત અને સામુદાયિક સ્વચ્છતા અને નિવારક આરોગ્ય સંભાળના હિમાયતી બનવાની તાલીમ આપવામાં આવે છે. પોષણ-સંવેદનશીલ આજીવિકાને પ્રોત્સાહન આપીને, અમે સુધારેલા પોષણ અને આરોગ્ય પરિણામો સાથે આર્થિક વિકાસને એકીકૃત કરવાનું લક્ષ્ય રાખીએ છીએ. વર્કશોપ અને હેન્ડ-ઓન ડેમોસ્ટ્રેશન વ્યવહારુ જ્ઞાન સંક્રમણ કરશે, જ્યારે નિયમિત આરોગ્ય તપાસ, એનિમિયા સ્ક્રીનીંગ અને સેનિટેશન ડ્રાઇવ ખોરાક, પોષણ, આરોગ્ય અને ધોવા (FNHW) પદ્ધતીના મહત્વને વધુ મજબૂત બનાવશે. વર્તણૂકલક્ષી પરિવર્તન સંચાર વ્યૂહરચનાઓ આ પ્રથાઓને લાંબા ગાળાના અપનાવવા માટે કેન્દ્રિય હશે.

ટકાઉપણું સુનિશ્ચિત કરવા માટે, અમે સ્થાનિક સંસ્થાઓ અને હિતધારકો સાથે ભાગીદારી બનાવતી વખતે વર્તમાન સરકારી યોજનાઓ અને સેવાઓ જેમ કે આઈ સી ડી એસ (ICDS), પી ડી એસ (PDS), પીએમ પોષણ (PM POSHAN) અને આયુષ્માન ભારત- PM JAY સાથે સંકલન પર ધ્યાન કેન્દ્રિત કરીશું. મોનિટરિંગ, એક્શન પ્લાનનું આયોજન અને મૂલ્યાંકન પ્રગતિને ટ્રેક કરશે અને મહત્તમ અસર માટે વ્યૂહરચનાઓને સુધારશે. વાઘોડિયામાં સ્વસહાય જૂથોને આ પ્રયત્નોનું નેતૃત્વ કરવા માટે કૌશલ્ય અને આત્મવિશ્વાસથી સજ્જ કરીને, અમારું લક્ષ્ય સમગ્ર સમુદાયમાં આરોગ્ય, સ્વચ્છતા અને આજીવિકાની સારી અસર ઊભી કરવાનો છે. અમારું અંતિમ ધ્યેય એક કરી શકાય તેવું મોડેલ સ્થાપિત કરવાનું છે જે ખોરાક, પોષણ, આરોગ્ય અને ધોવા (FNHW) ને ગ્રામીણ વિકાસ એજન્ડામાં એકીકૃત કરવાની પરિવર્તનકારી સંભવિતતા દર્શાવે છે.

અમે આશા રાખીએ છીએ, આ માર્ગદર્શિકા સ્વસહાય જૂથોની બહેનોને આરોગ્ય પોષણની જાણકારી મેળવી અન્ય બહેનો સુધી પહોચાડવામાં મદદરૂપ થશે.

હેમાંગીની ગાંધી
આસ્થા બલોની
ફુડ્સ એન્ડ ન્યૂટ્રિશન,
ફેમિલી એન્ડ કમ્યૂનિટી સાયન્સીસ, MSU

અનુક્રમણિકા

સત્ર-૧ વિષય: આજીવિકા – કમાણી સાથે ખોરાક, પોષણ, આરોગ્ય, અને સ્વાસ્થ્ય નો સંબંધ

❖ સ્વ સહાય જૂથ માં જોડાવવાના ફાયદા: -

- સ્વ સહાય જૂથ ના સભ્ય બનવાથી માઈક્રો ફાઈનાન્સ એટલે કે, વ્યક્તિની જરૂરિયાત મુજબ ની લોન સહેલાઇ અને સરળતા થી મળી શકે છે.
- સ્વ સહાય જૂથ માં સાથે ઉઠવા બેસવા થી, મળવા થી ઘણા બધા વિષયો પર જાણકારી પ્રાપ્ત થાય છે જે કુટુંબના અને સામાજિક વિકાસ માટે મદદ કરે છે.
- સ્વ સહાય જૂથ ની જુદી જુદી તાલીમો દ્વારા કુટુંબની કમાણી અને બચત વધે છે.
- સ્વ સહાય જૂથ ના સભ્યો ની એકતા, હિંમત અને જાગૃતિ વધે છે.
- જરૂર પડે એક બીજા ની મદદ આવી વૃતિ કેળવાય છે.

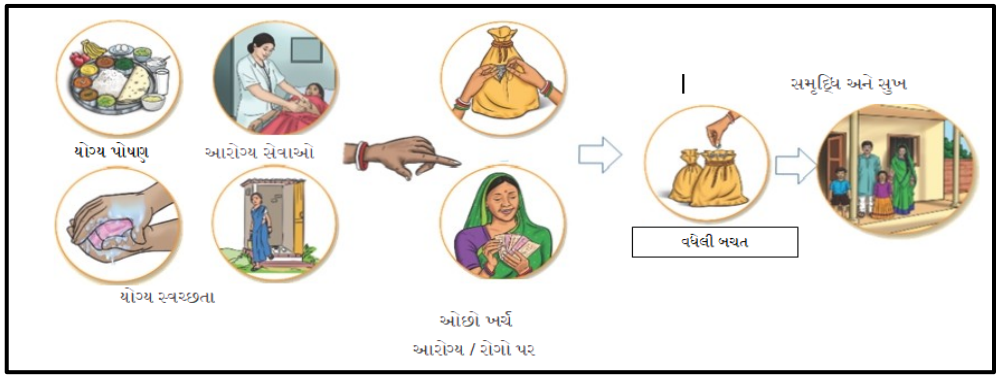
❖ કુટુંબ ની આવક નો મોટો ભાગ ક્યાં વપરાય છે?

- સામાન્ય રીતે કુટુંબ ની અવાકનો ભાગ રોજીંદા રહેલા ખર્ચ, બાળકોની શિક્ષા, સામાજિક વ્યવહાર, તહેવારો, ખોરાક, ઘર બનાવવા તેમજ કેટલાક ન ધરેલા ખર્ચ માટે વપરાય છે.
- ઘણા બધા ખર્ચ એવા છે જે ટાળી શકીએ છે અને કુટુંબ માટે વધુ સારી રીતે વાપરી શકીએ છે.
- કુટુંબ ના કોઈ પણ સભ્ય ને બીમારી, દવા ખર્ચ, બીમારી ના લીધે રોજી રોટી ન મળવી અને કેટલાક અણધાર્યા ખર્ચ આપણી બચત પૂરી કરી નાખે છે.

❖ કુટુંબ ની આવક સાથે સારું પોષણ, આરોગ્ય અને સ્વચ્છતા નો સંબંધ:-

અપને સૌ ઘણા બધા પ્રયત્નો અને મહેનત થી કમાણી કરીએ છીએ અને તેમાંથી બચત દ્વારા કુટુંબ ને પ્રસન્ન રાખી શકીએ પણ જો આપણે પોષણ, આરોગ્ય અને સ્વચ્છતા પર ધ્યાન ન આપીએ તો: -

- કુટુંબ ના સભ્યોનો બીમારી અને દવા પાચળ ખર્ચ વધી જાય.
- તેની સીધી અસર રોજી રોતી પર, શારીરિક અને માનસિક વિકાસ પર પડી શકે.
- બાળકો ને પણ યોગ્ય પોષણ મળવાથી કુપોષિત થઇ જાય અને તેમનું ભણવામાં ધ્યાન રહે.



❖ કુટુંબ ની તંદુરસ્તી, કુપોષણ દુર કરવા અને બીમારીઓ થી થતા ખર્ચ બચાવવા શું કરી શકાય

પોષણ, આરોગ્ય અને સ્વચ્છતા પર ધ્યાન આપવાથી કુટુંબની બીમારીઓ ઓછી થાય તેમજ કામ કરવાની ક્ષમતા વધે છે. કુટુંબ ખુશખુશાલ રહે તે માટે:-

- બીમારીઓ થી થતા ખર્ચ બચાવા તેમજ કુપોષણ દુર રાખવા કુટુંબના બધા જ સભ્યો ખાસ કરીને સગર્ભા, ધાત્રી માતા અને બાળકો ના પોષણ પર ધ્યાન આપવું જોઈએ.
- ઘરમાં શોચાલય બનાવી તેનો ઉપયોગ નિયમિત કરી વ્યક્તિગત સ્વચ્છતા અને ઘરની સ્વચ્છતા રાખવા થી બીમારીઓ દુર થઇ શકે.
- સરકારશ્રી ની આરોગ્ય સેવાઓ અને જુદી જુદી યોજનાઓની સેવાઓ નો યોગ્ય લાભ લેવો જોઈએ.

ખોરાક, પોષણ, આરોગ્ય અને સ્વચ્છતા: મુખ્ય પાસાઓ

ખોરાક
ન્યુટ્રી ગાર્ડન
જાહેર વિતરણ વ્યવસ્થાની સુલભતા
ટીએચઆરની સુલભતા
મધ્યાહન ભોજન
ન્યુટ્રી એન્ટરપ્રાઇઝ

આરોગ્ય અને પોષણ	
સગર્ભાવસ્થા સંભાળ	પાંડુરોગ માં ઘટાડો
નવજાતની સંભાળ	પરિવાર નિયોજન
૧૦૦૦ દિવસ	વૃદ્ધો અને વિકલાંગો માટે આરોગ્ય અને પોષણ
બાળ આહાર પોષણ	બિન ચેપી રોગો દરમિયાન પોષણ અને સ્વાસ્થ્ય
માતાનું પોષણ	માસિક સ્ત્રાવ દરમિયાન સ્વચ્છતા
પારિવારિક આહારની વિવિધતા	

સ્વચ્છતા
શોચાલય નો ઉપયોગ
હાથ ધોવાની પ્રક્રિયા
ઘરગથ્થું કચરાનો નિકાલ

આટલું યાદ રાખો :

- કુટુંબ ની આવક અને બચત વધારવા માટે બીમારીઓ પર થતા ખર્ચા અને કુપોષણ ને રોકવા આરોગ્ય, પોષણ અને સ્વચ્છતા પર ધ્યાન આપવું ખુબ જ જરૂરી.
- જીવન ના પ્રારંભિક ૧૦૦૦ દિવસ પર વિશેષ ધ્યાન આપવાથી કુટુંબની તંદુરસ્તી જાળવી શકાય જેથી બીમારીઓ/કુપોષણ પર થતા ખર્ચા બચાવી ને આવક અને બચત વધારી શકાય.

સ્વ સહાય જૂથના સભ્યો શું કરી શકે?

- સ્વ સહાય જૂથના દરેક સભ્ય સુધી કુટુંબની આવક અને બચત માટે સારું પોષણ, આરોગ્ય અને સ્વચ્છતા અંગે ની સાચી જાણકારી આપવી.
- સારું પોષણ, આરોગ્ય અને સ્વચ્છતા એક બીજા સાથે જોડાયેલ છે તેની ચર્ચા કરવી.

સત્ર- ૨ વિષય – સંતુલિત આહાર અને ખોરાકની વિવિધતા

❖ ખોરાક એટલે શું?

ખોરાક એ કોઈ પણ પૌષ્ટિક પદાર્થ છે જે ખાઈ અથવા પી શકાય અને એ ખાવાથી શરીરને કામ કરવાની શક્તિ અને પોષણ મળે છે અને આપણી વૃદ્ધિ થાય છે.

❖ ખોરાકના મુખ્ય ત્રણ કાર્યો શું છે?

1. ખોરાક શરીરને શારીરિક પ્રવૃત્તિઓ કરવા અને સ્વસ્થ અને સક્રિય રહેવા માટે ઊર્જા પ્રદાન કરે છે.
2. ખોરાક શરીરને વૃદ્ધિ માટે નવા પેશીઓ અને કોષો બનાવવામાં મદદ કરે છે.
3. ખોરાક શરીરના ક્ષતિગ્રસ્ત ભાગોને સુધારવા અને બદલવામાં મદદ કરે છે.

રોજિંદા જીવનમાં પોષકતત્વોની જરૂરિયાત પુરી કરવા ખોરાકના વિવિધ જૂથોનો સમાવેશ કરવો જરૂરી છે.

❖ 10 જરૂરી ખોરાકના જૂથો:

1. **અનાજ:** અનાજ, સફેદ મૂળ અને કંદ, અને કેળ, કાર્બોહાઇડ્રેટ્સ સ્ત્રોત
2. **કઠોળ:** કઠોળ, વટાણા અને દાળ
3. **તેલીબીયા અને બીજ:** પ્રોટીન, આયર્ન અને અન્ય વિટામિન્સ અને ખનિજોનો સ્ત્રોત
4. **ડેરી:** પ્રોટીન, વિટામિન્સ અને કેલ્શિયમનો સારો સ્ત્રોત
5. **માંસ, મરઘાં અને માછલી:** પ્રોટીનનો સ્ત્રોત
6. **ઇંડા:** પ્રોટીનનો સ્ત્રોત
7. **લીલા પાંદડાવાળા શાકભાજી:** વિટામિન્સ, ખનિજો, અને ફાઇબરનો સ્ત્રોત
8. **અન્ય વિટામિન A સમૃદ્ધ ફળો અને શાકભાજી:** વિટામિન્સનો સ્ત્રોત
9. **અન્ય શાકભાજી:** વિટામિન્સ, ખનિજો, અને ફાઇબરનો સ્ત્રોત
10. **અન્ય ફળો:** વિટામિન્સનો સ્ત્રોત

❖ **ખોરાકના જૂથો અને કાર્યો:**

ખોરાકના જૂથો અને કાર્યો	
૧. a. અનાજ: ઘઉં, ઘઉંનો લોટ, ચોખા, ચોખાના ટુકડા, મકાઈ, જવ, ઓટ્સ (જય), સુજી, વર્મિસેલી (સેવિયન), ફૂલેલા ચોખા વગેરે. **b. મિલેટ્સ (બરછટ ધાન્ય):** જુવાર, રાગી, કોદરી, સામો, બાજરી વગેરે. તે કાર્બોહાઇડ્રેટથી સમૃદ્ધ છે. કાર્બોહાઇડ્રેટ આપણને ઊર્જા અને ફાઇબર આપે છે.	
૨. દાળ અને કઠોળ: ચણા દાળ, ચણાનો લોટ (બેસન), મગની દાળ, કાળા ચણા, અડદની દાળ, તુવેર દાળ, ચણા (સફેદ/કાળી/લીલા ચણા), ફણગાવેલા કઠોળ, રાજમા, ચોડી, સોયાબીન વગેરે. તે પ્રોટીનથી સમૃદ્ધ છે.	
૩. શાકભાજી અને ફળો: આ જૂથ વિટામિસ અને ખનિજો પ્રદાન કરે છે. આપણા શરીરને સામાન્ય માટે વિટામિન અને ખનિજોની જરૂર છે. શરીરની કામગીરી અને ચેપ સામે લડવામાં મદદ કરે છે. **a. શાકભાજી** **લીલા પાંદડાવાળા શાકભાજી -** પાલક, રાઈના પાન (સરસોન), મેથીના પાન (મેથી), બથુઆ, કોથમીરના પાંદડા (ધનિયા), ફુદીના, વગેરે; **અન્ય શાકભાજી -** ગાજર, ડુંગળી, રીંગણ, લેડી ફિંગર, કાકડી, ફૂલકોબી, ટામેટા, કેપ્સિકમ, કોબીજ વગેરે; **મૂળ અને કંદ -** બટાકા, શક્કરટેટી, યમ, કોલોસિયા અને અન્ય મૂળ શાકભાજી; **b. ફળ -** કેરી, જામફળ, પપૈયા, નારંગી, તરબૂચ, લીંબુ, દ્રાક્ષ, આમળા વગેરે.	 

૪. દૂધ અને પ્રાણી ઉત્પાદનો: આ જૂથમાં એવા ખોરાકનો સમાવેશ થાય છે જે સારી ગુણવત્તાવાળા પ્રોટીન પ્રદાન કરે છે. શરીરના પેશીઓ અને સ્નાયુઓ પ્રોટીન બનાવવા અને સમારકામ માટે મહત્વપૂર્ણ છે.

a. દૂધ અને દૂધની બનાવટો - દૂધ, દહીં, ચીઝ, પનીર, વગેરે.

b. પ્રાણી ઉત્પાદનો - માંસ, ઇંડા, માછલી, ચિકન, યકૃત વગેરે.

૫. ચરબી/તેલ, ખાંડ અને સૂકા મેવા: આ જૂથમાં એવા ખોરાકનો સમાવેશ થાય છે જેમાં ઊર્જાનું પ્રમાણ વધારે હોય છે.

a. તેલ અને ચરબી - માખણ, ઘી, શાકભાજી રાંધવાનું તેલ જેમ કે મગફળીનું તેલ, સરસવનું તેલ, નાળિયેર તેલ વગેરે;

b. ખાંડ - ખાંડ, ગોળ, મધ;

c. સૂકા મેવા - સીંગદાણા, બદામ, કાજુ, પિસ્તા, અખરોટ વગેરે.

❖ પોષકતત્વો એટલે શું?

- પોષક તત્વો એ ખોરાકમાં રાસાયણિક સંયોજનો છે જેનો ઉપયોગ શરીર દ્વારા યોગ્ય રીતે કાર્ય કરવા અને આરોગ્ય જાળવવા માટે થાય છે.
- પોષતત્વોની જરૂરિયાત પ્રમાણે બે પ્રકારના હોય છે:

૧. શરીર દ્વારા વધારે માત્રામાં જરૂરી છે- કાર્બોદિત પદાર્થો, પ્રોટીન, ચરબી

૨. શરીર દ્વારા ઓછી માત્રામાં જરૂરી છે- ખનીજદ્રવ્યો જેવા કે સોડિયમ, પોટેશિયમ, કેલ્શિયમ, લોહતત્વ અને વિટામિન જેવા કે વિટામિન એ, વિટામિન બી કોમ્પ્લેક્સ, વિટામિન સી, વિટામિન ડી, વિટામિન ઈ, વિટામિન કે વગેરે.

❖ સંતુલિત આહાર એટલે શું?

સંતુલિત આહાર આરોગ્ય જાળવવા, વૃદ્ધિને વધારવા અને ઉર્જા પ્રદાન કરવા માટે યોગ્ય પ્રમાણમાં તમામ જરૂરી પોષક તત્વો પૂરા પાડે છે. તેમાં કાર્બોહાઇડ્રેટ્સ, પ્રોટીન, ચરબી, વિટામિન્સ, ખનિજો , ફાઇબર અને પાણીનો સમાવેશ થાય છે.

સંતુલિત આહાર કેવી રીતે પ્રાપ્ત કરવું?
• વિવિધ તાજી, રંગબેરંગી અને સ્થાનિક રીતે ઉપલબ્ધ ફળો અને શાકભાજીનું સેવન કરો.
• કુદરતી ફાઇબરથી ભરપૂર હોવાથી આખા ફળો ખાઓ.
• મેંદાથી બનેલા ખોરાક સહિત શુદ્ધ અનાજના વપરાશને મર્યાદિત કરો.
• તમારા આહારમાં દરેક ખોરાક જૂથના ખોરાકનો સમાવેશ કરવાનો પ્રયાસ કરો.
• સરસવનું તેલ, મગફળીનું તેલ, સોયાબીન તેલ વગેરે વનસ્પતિ તેલ પસંદ કરો રાંધવા/તળવા માટે. રોટેશનમાં વિવિધ તેલનો ઉપયોગ કરવો વધુ સારું છે.
• ખાદ્ય તેલો અને પ્રાણીઓના ખોરાકનો મધ્યમ ઉપયોગ સુનિશ્ચિત કરો.
• માખણ/ઘીનો ઉપયોગ મર્યાદિત કરો અને વનસ્પતી ટાળો અને ફરીથી ગરમ ચરબી અને તેલનો ઉપયોગ કરો.
• રોજ પુષ્કળ પાણી પીવો. ઠંડા પીણાં અને ફળોના રસને બદલે પાણી, છાશ, લસ્સી, નાળિયેર પાણી, લીંબુ પાણી/નિમ્બુ પાની, આમ પાન, કોકમ, સત્તુ વગેરે પીવો જોઈએ.

❖ ખોરાકમાં વિવિધતા શું છે?

- આહારની વિવિધતા એ ચોક્કસ સમયગાળા દરમિયાન ખાવામાં આવેલા ખોરાકના જૂથો દ્વારા નક્કી કરવામાં આવે છે. આથી આહારમાં વિવિધ પ્રકારના ખોરાક અને ખોરાકના જૂથો વધારવાથી જરૂરી પોષક તત્વો પૂરતા પ્રમાણમાં મળી રહે છે. 10 ખાદ્ય જૂથોમાંથી ઓછામાં ઓછા 5 ખાદ્ય જૂથો દરરોજ ખાવા જોઈએ.

❖ પોષણયુક્ત ખોરાક અને ખોરાક માં વિવિધતા કેમ જરૂરી છે?

- સ્ત્રીએ સંતુલિત અને પૌષ્ટિક આહાર લેવો જોઈએ. આહારમાં અનાજ, કઠોળ, લીલા પાંદડાવાળા શાકભાજી, દૂધ, ઇંડા, માંસ અને માછલી સહિતના શાકભાજીનું મિશ્રણ હોવું જોઈએ. માંસ અને બદામ ખાસ કરીને એનિમિક મહિલાઓ માટે સારા છે.
- ચોખા, ઘઉં, રાગી, બાજરી, રોટલી, હલવો, ઇડલી, ડોસા, ઉપમા, પૌઆ વગેરે જેવા અનાજ ખાઓ. સફેદ બ્રેડ, બિસ્કિટ અને રિફાઇન્ડ લોટ (મેંદા)થી બનેલા અન્ય ખોરાકને ટાળો.
- મોસમી અને સ્થાનિક રીતે ઉપલબ્ધ ફળો અને શાકભાજી ઉદારતાથી ખાઓ.
- આહારમાં લીલા પાંદડાવાળા શાકભાજી (પાલક, મેથીના પાંદડા, વગેરે સ્ટાર્ચી શાકભાજી (શક્કરટેટી, યમ, કોલોસિયા વગેરે) અને અન્ય શાકભાજી (બીટરૂટ, રીંગણ, લેડી ફિંગર, ફૂલકોબી, કોબીજ, કઠોળ, ગાજર વગેરે) શામેલ કરો.
- સારી રીતે રાંધેલા ઇંડા, મરઘાં, માછલી વગેરે રાંધેલા માંસ નું સેવન કરો અને દૂધની બનાવટો જેમ કે દહીં, પનીર વગેરેનું મધ્યમ સેવન કરો.
- રોજ મગ, મસૂર, તુવેર, રાજમા વગેરે કઠોળનું સેવન કરો.
- રાંધણમાં સરસવનું તેલ, સોયાબીન તેલ, સૂર્યમુખીનું તેલ, મગફળીનું તેલ વગેરે ચરબીના શાકભાજીના સ્ત્રોતોનો ઉપયોગ કરો.
- દરરોજ પુષ્કળ પ્રવાહી પીવો.
- ઘઉં, ચોખા, તેલ, દૂધ અને મીઠું જેવા કિલ્લેબંધ ખોરાકનું સેવન કરો.

❖ આયોડાઇઝ્ડ મીઠું:

આયોડાઇઝ્ડ મીઠું બાળક ના વિકાસ માંટે ખુબ જ જરૂરી છે. બાળક ના ખોરાક માં હંમેશા આયોડાઇઝ્ડ મીઠા નો જ ઉપયોગ કરવો જોઈએ.

આયોડાઇઝ્ડ મીઠાના નિયમિત ઉપયોગથી થતા ફાયદા:

- વ્યક્તિના શારીરિક તથા માનસિક વિકાસમાં સહાયરૂપ.
- શક્તિ અને બુદ્ધિવર્ધક.
- શરીરમાં લોહીની ઉણપ (આયર્નની ખામીથી થતા અનેમિયા) થી બચવામાં મદદરૂપ.
- આયોડીનની ઉણપથી થતા વિકાસલક્ષી વિલંબ અને ગલગંડ ના રોગથી બચાવ.
- આયોડીન સામાન્ય વૃદ્ધિ, થાઈરોઈડ અને મગજના વિકાસ માટે આવશ્યક છે.

ડબલ ફોર્ટીફાઈડ મીઠું આઈ સી ડી અસ (ICDS)/ પી ડી એસ (PDS) માંથી આપવામાં આવે છે જેમાં આયોડીન અને આયર્ન બંને ફોર્ટીફાય કરવામાં આવ્યા છે.

સામાન્ય રીતે, આપણે દિવસમાં 3 વખત ભોજન લઈએ છીએ: સવારનો નાસ્તો, બપોરનું ભોજન અને રાતનું ભોજન. આ બધામાંથી સવાર ના નાસ્તો ખૂબ જરૂરી છે.

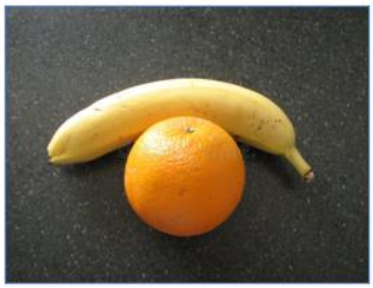
❖ દરેક ભોજન નું મહત્વ:

સવારના નાસ્તાનું મહત્વ

- દરરોજ સવારે નાસ્તો કરવો જોઈએ.
- સવારનો નાસ્તો એ દિવસનો સૌથી મહત્વપૂર્ણ ભોજન છે કારણ કે આપણે રાત્રે કઈપણ ખાતા નથી અને સવાર આપણું પેટ ખાલી રહે છે.
- સવારે નાસ્તો ખાવાથી મગજને ફરીથી કામ કરવા માટે પોષણ મળે છે.
- જો આપણે સારી નાસ્તો નહીં કરીએ, તો આપણે થાક અનુભવીશું અને કામમાં ધ્યાન નહીં રહી શકે.
- આપણને ઉબકા અને માથાની દુખાવી સાથે થાક પણ અનુભવી શકીએ છીએ. સવારનો નાસ્તો આપણને વધુ ઊર્જા આપશે અને આપણી એકાગ્રતામાં સુધારો કરશે.


બીજા નાસ્તા નું મહત્વ-બપોર પહેલાના નાસ્તાનું મહત્વ

- સાવરનો નાસ્તો કર્યા પછી થોડો નાસ્તો લઈ શકાય છે. ચિપ્સ અથવા બિસ્કિટના પેકેટને બદલે એક ફળ અને થોડી મગફળી લો.
- તે ભોજન વચ્ચે ઉર્જામાં વધારો કરે છે અને લોહીમાં શર્કરાનું સ્તર જાળવી રાખે છે. તે પછીના ભોજનમાં માપસર ખોરાક ખાવામાં મદદ કરે છે.
- તે ફળો અને સૂકામેવામાંથી આવશ્યક વિટામિન્સ, ખનિજો અને પ્રોટીન પ્રદાન કરે છે.




બપોરના ભોજનનું મહત્વ

- બપોરનું ભોજન એ મહત્વનું ભોજન છે તે દિવસનું સૌથી મોટું ભોજન હોવું જોઈએ.
- તે શરીર અને મગજને દિવસભર યોગ્ય રીતે કામ કરતા રાખવા માટે ઊર્જા અને પોષક તત્વો પ્રદાન કરે છે.
- બપોરે જમવા આવામાં આવેલ સંતુલિત ભોજન જેમાં તમામ પ ખાધ જૂથો હોય છે તે સ્વાદિષ્ટ અને સ્વસ્થ પસંદગી છે. ઘરે રાંધેલ ખોરાક આપણને ખોરાક અને ઘટકોની ગુણવત્તા પર નિયંત્રણ આપે છે.

સાંજના નાસ્તાનું મહત્વ

- સાંજનો નાસ્તો કામથી આયા પાછી કાંતો કામ વચ્ચે લેવો જોઈએ.
- તે રાતના ભોજનનો સમય થાય ત્યાં સુધી ઊર્જા ટકાવી રાખવામાં મદદ કરે છે.
- સાંજના નાસ્તામાં ચણા, મગફળી, લેવ, એક ફળ વેવાની પ્રયાસ કરી અને ચિપ્સ અથવા નમકિન અથવા ભજીયા સાથે ચા પીવાનું ટાળો.
- તે દિવસના બીજા ભાગમાં આપણને ઊર્જાથી ભરપૂર અને તાજગીભર્યા રાખે છે.

રાતના ભોજનનું મહત્વ

- રાતનું ભોજન હળવું હોવું જોઈએ.
- રાતનું તંદુરસ્ત ભોજનથી સારી ઊંઘ આવે છે, બળતરા ઓછી થાય છે, તણાવ ઓછો કરે છે,પાચન સારું થાય છે, લોહીમાં શર્કરાનું પ્રમાણ જાળવે છે અને ચિંતા ઓછી કરે છે.

આટલું યાદ રાખો :

- 10 ખાદ્ય જૂથોમાંથી ઓછામાં ઓછા 5 ખાદ્ય જૂથો દરરોજ ખાવા જોઈએ.
- વિવિધ પ્રકારનો ખોરાક લેવા જોઈએ અને આયોડાઇઝ્ડ મીઠું ખાવું જોઈએ.
- દરેક ભોજન નું મહત્વ જાણવું જરૂરી છે.

સ્વ સહાય જૂથના સભ્યો શું કરી શકે?

- સ્વ સહાય જૂથના દરેક સભ્ય સુધી 10 ખાદ્ય જૂથોની અને તેના કર્યોની જાણકારી આપવી.
- ખોરાકની વિવિધતા,ડબલ ફોર્ટિફાઇડ મીઠું અને દરેક ભોજન ના મહત્વતની ચર્ચા કરવી.

સત્ર- ૩ વિષય: પ્રારંભિક ૧૦૦૦ દિવસ અને પ્રસ્તુતિ પહેલાની સંભાળ

❖ જીવન ના પ્રારંભિક ૧૦૦૦ દિવસ:-

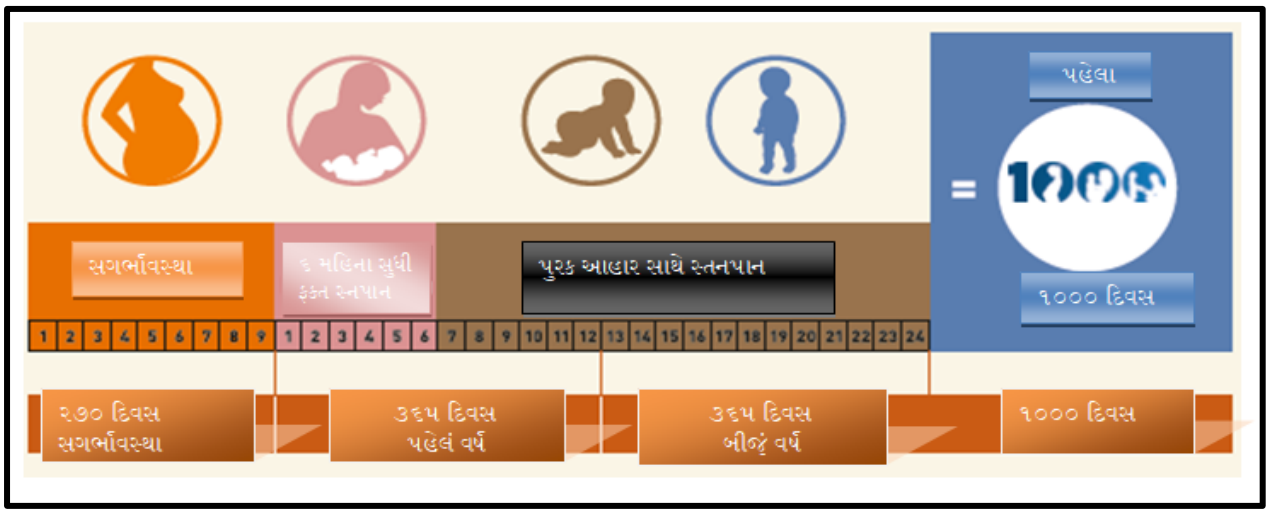
સગર્ભાવસ્થાના ૨૭૦ દિવસ અને બાળક ના જન્મ ના બે વર્ષ ૭૩૦ દિવસ મળીને ૧૦૦૦ દિવસ થાય.

પ્રારંભિક ૧૦૦૦ દિવસ નું મહત્વ: -

કોઈ પણ ઘરની મજબૂતી માટે ઘરનો પાયો મજબુત હોવો જરૂરી છે તેવી જ રીતે તંદુરસ્ત જીવન માટે જીવન ના પહેલા ૧૦૦૦ દિવસ પર ધ્યાન રાખવું જરૂરી છે.

જીવન ના પ્રારંભિક ૧૦૦૦ દિવસ દરમિયાન:-

- વિકાસ અને વૃદ્ધિ સૌ થી વધારે થાય છે.
- ગર્ભ ધારણ ના ૧૬માં દિવસથી બાળક ના મગજ નો વિકાસ શરુ થઇ જાય છે.
- જન્મ ના પહેલા વર્ષ માં બાળકનો વિકાસ અને વૃદ્ધિ સૌથી વધારે હોય છે. જન્મ ના ૬ મહિનામાં બાળકનું વજન તેના જન્મ ના વજન કરતા બમણું થઇ જાય અને ૧ વર્ષ માં ત્રણગણું વધે છે.



❖ પ્રસ્તુતિ પહેલાની સંભાળ:

- 12 અઠવાડિયાની અંદર ગર્ભાવસ્થાની પ્રારંભિક નોંધણી.
- વજન, અને ઊંચાઈ આંગણવાડી/સબસેન્ટર/પીએચસી માં કરવામાં આવે છે. મમતા દિવસ પર, વજન અને બીપી માપન કરવામાં આવે છે.
- પીએચસી માં વિવિધ પ્રકારના ટેસ્ટ કરવામાં આવે છે (લોહ તત્વ, બ્લડ ગ્રુપ,બ્લડ શુગર, બીપી, HIV માટે પરીક્ષણ)

- આયર્ન અને ફોલિક એસિડની ગોળી
- કેલ્શિયમની ગોળી
- ધનુર (ટિટાનસ ટોક્સોઇડની) રસી
- કૃમિની ગોળી
- THR- માતૃશક્તિના પેકેટો
- આયોડાઇઝ્ડ/ડબલ ફોર્ટિફાઇડ મીઠાનો વપરાશ
- ગંભીર એનિમિયા, કેસ મેનેજમેન્ટ સાથે સગર્ભા સ્ત્રીઓનું ટ્રેકિંગ

સગર્ભાવસ્થાના જોખમના ચિહ્નો અને લક્ષણોની ઓળખ

આટલું યાદ રાખો :

- જીવન ના પ્રારંભિક ૧૦૦૦ દિવસ પર વિશેષ ધ્યાન આપવાથી કુટુંબની તંદુરસ્તી જાળવી શકાય જેથી બીમારીઓ/કુપોષણ પર થતા ખર્ચા બચાવી ને આવક અને બચત વધારી શકાય.

સ્વ સહાય જૂથના સભ્યો શું કરી શકે છે?

- કુટુંબની સગર્ભા, ધાત્રી માતાઓ અને બે વર્ષ ના બાળકો પર વિશેષ ધ્યાન રાખવું.
- સમુદાયના સભ્યોનું સંવેદનશીલીકરણ અને યુવાન માતાઓને પ્રસૂતિ પૂર્વેની યોગ્ય સંભાળ અને પ્રસૂતિ પછીની સંભાળ મેળવવા માટે પ્રોત્સાહિત કરે છે.
- માતાઓને ગર્ભાવસ્થા દરમિયાન અને પછી યોગ્ય સંભાળ લેવા પ્રોત્સાહિત કરે છે.

સત્ર- ૪ વિષય – શિશુ અને બાળ આહાર

❖ સ્તનપાન

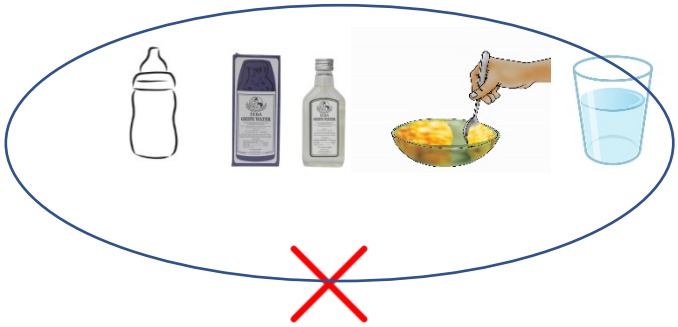
જન્મના 1 કલાકની અંદર સ્તનપાનની શરૂઆત:

- માતાને ડિલિવરી પછી તરત જ સ્તનપાન શરૂ કરવા પ્રોત્સાહિત કરવું જોઈએ.
- આ માતા અને બાળક બંને માટે ફાયદાકારક છે કારણ કે તે બાળકને વધુ મજબૂત બનાવે છે એટલું જ નહીં પરંતુ પ્લેસેન્ટાની ઝડપી ડિલિવરીકરવામાં પણ મદદ કરે છે અને રક્તસ્ત્રાવ ઘટાડે છે.
- કોલોસ્ટ્રમ તરીકે ઓળખાતી માતાનું પહેલું પીળું જાડું દૂધ બાળકને ખવડાવવું જોઈએ અને તેને ફેંકી દેવું જોઈએ નહીં કારણ કે તે બાળકને ચેપથી અટકાવે છે.
- પ્રિ-લેક્ટિયલ ફીડ્સ ટાળવું: મધ, ખાંડનું પાણી વગેરે બાળકને ન આપવું જોઈએ કારણ કે તે ચેપ અથવા ઝાડાનું કારણ બની શકે છે. બાળકને માત્ર માતાનું દૂધ જ ખવડાવવું જોઈએ.

છ મહિનાની ઉંમર સુધી માત્ર સ્તનપાન:

- બાળકને છ મહિનાની ઉંમર સુધી માત્ર સ્તનપાન કરાવવું જોઈએ અને અન્ય કોઈ બહારનું ફીડ આપવું જોઈએ નહીં.
- માતાનું દૂધ બાળકની આહારની તમામ જરૂરિયાતો પૂરી પાડે છે. તે બાળકને પૂરતું પાણી પણ પ્રદાન કરે છે, આમ ઉનાળાના દિવસોમાં પણ બાળકને પાણી ન આપવું જોઈએ.

- તે સલામત છે, બીમારીઓ સામે રોગપ્રતિકારક શક્તિ બનાવે છે, બાળકને ગરમ રાખવામાં મદદ કરે છે અને માતા અને બાળક વચ્ચે બંધન વિકસાવવામાં મદદ કરે છે.
- માતાના દૂધ સિવાય અન્ય ખોરાક લેવાથી પોષક તત્વો નબળા રહેવાને કારણે ચેપ અને કુપોષણ થઈ શકે છે. બાળકને આવા ખોરાક પચાવવામાં મુશ્કેલી પડી શકે છે જેના પરિણામે ઝાડા અને ઊલટી થાય છે. સ્તનપાન બાળક ઇચ્છે તેટલી વાર અને બાળક ઇચ્છે તેટલા લાંબા સમય સુધી, દિવસ અને રાત દરમિયાન કરવું જોઈએ.



બોટલ ફીડિંગનો ગેરલાભ

- બોટલ-ફીડિંગ તમારા બાળકની રોગપ્રતિકારક શક્તિ સાથે સમાધાન કરી શકે છે.
- તે માતા-બાળકના બંધનને અસર કરે છે.
- ક્રોનિક રોગોનું જોખમ વધારે છે.
- વધુ વજનવાળા બાળકો.
- ચેપ અને કુપોષણથી મૃત્યુ થવાની સંભાવના વધુ છે.
- ઝાડા અને અન્ય ચેપ તરફ દોરી જાય છે.

❖ ઉપરી આહાર:

બાળક ૬ મહિનાનું થઇ જાય ત્યાર પછી ફક્ત સ્તનપાન બાળક ના વિકાસ માટે પુરતું ના પડી રહે. ૬ મહિનાની ઉંમર પછી બાળકને ઉપરી આહાર આપવો શરુ કરવો જરૂરી છે અને તેની સાથે સાથે ૨ વર્ષ સુધી સ્તનપાન આપવું પણ જરૂરી છે. પુરક આહાર યોગ્ય સમય પર શરુ ના થાય તો બાળક કુપોષિત થઇ શકે અને બાળક નું યોગ્ય ઉંમર પ્રમાણે વિકાસ પણ ન થાય.

ઉપરી આહાર માટે નીચે આપેલા મુદ્દાઓ ધ્યાન માં રાખવા: -

- બધા જ નાના બાળકો ને ૬ મહિના ની ઉંમર પછી ઉપરી આહાર ની જરૂરત પડે.
- બાળકો માં ૬-૧૧ મહિના નો સમય ખુબ જ જોખમી હોય કારણ કે આ સમયે બાળકો માં કુપોષણ સામાન્ય છે. બાળકો આ ઉંમર માં ઉપરી આહાર ખાતા શીખે છે અને પુરતો ખોરાક લેવા માટે સક્ષમ નથી હોતા.
- ૬ મહિના ની ઉંમર પછી બાળકો પ્રવાહી અને પોચો ખોરાક લેતા શીખે, બાળકો ના નવા દાત આવવા પણ શરુ થાય છે અને બાળકો ખોરાકનુ પાચન કરવા પણ સક્ષમ થાય છે.
- ૯ મહિનાની ઉંમર પછી બાળક અર્ધઘટ મસળેલો ખોરાક ખાવા માટે સક્ષમ થાય છે.
- ૧૫ મહિનાની ઉંમર પછી બાળક ઘર ના બીજા બધા સભ્યો ની જેમ કઠણ ખોરાક ખાવા શીખી જાય છે.

પૂરક ખોરાકની માત્રા અને આવૃત્તિ:

આપવા માટે ખોરાકની માત્રા			
ઉમર	ખોરાકના પ્રકારો	આવૃત્તિ	દરેક ભોજનમાં રકમ
6 મહિના	નરમ લાપસી, સારી રીતે મેશ કરેલું શાક, માંસના ફળો	દરરોજ 2-3 વખત ઉપરાંત વારંવાર સ્તનપાન	2-3 ટેબલ ચમચી
૭-૮ મહિનો	મસ્ડેલો ખોરાક	દરરોજ 3 વખત ઉપરાંત વારંવાર સ્તનપાન	250 મિલી કાટોરી/બાઉલમાંથી ધીરે ધીરે વધીને 2/3
9-11 મહિના	ઝીણા સમારેલા અથવા મેશ કરેલા ખોરાક, અને બાળક ઉપાડી શકે તેવા ખોરાક	ભોજન અને સ્તનપાન વચ્ચે 3 ભોજન ઉપરાંત 1 નાસ્તો	250 મિલી કાટોરી/બાઉલમાંથી 3/4
12-24 મહિના	જો જરૂરી હોય તો કુટુંબના ખોરાક, સમારેલા અથવા મેશ કરેલા	ભોજન ઉપરાંત સ્તનપાન વચ્ચે 3 ભોજન ઉપરાંત 2 નાસ્તો	સંપૂર્ણ 250 મિલી કાટોરી/બાઉલ અથવા તેથી વધુ

❖ આંગણવાડી માં થી મળતા બાલશક્તિ ના પેકેટ અંગે સમજ

બાલશક્તિઃ- બાલશક્તિ ૬ મહિનાથી ૩ વર્ષની વય-સામાન્ય અને ગંભીર રીતે ઓછા વજનવાળા બાળકો અને ૩-૬ વર્ષના ગંભીર રીતે ઓછા વજનવાળા બાળકોમાં બાળકોની પોષક સ્થિતિ સુધારવા માટે ખાસ તૈયાર કરવામાં આવી છે. બાલશક્તિના ૫૦૦ કિલો કેલરી ઊર્જાને મળતા ૫૦૦ ગ્રામના ૭ પેકેટ અને સામાન્ય વજનધરાવતા બાળકોને ૧૨-૧૫ ગ્રામ પ્રોટીન આપવામાં આવે છે અને ૮૦૦ કિલોકેલરી ઊર્જાને મળતા ૧૦ પેકેટ અને ૬ મહિનાથી ૩ વર્ષની ઉંમરના ગંભીર રીતે ઓછા વજનવાળા બાળકોને ૨૦-૨૫ ગ્રામ પ્રોટીન આપવામાં આવે છે. જ્યારે ગંભીર રીતે ઓછા વજનવાળા બાળકોને દર મહિને ટેક હોમ રેશન (THR) જેવા 4 પેકેટ આપવામાં આવે છે.	

આટલું યાદ રાખો :

- જન્મના 1 કલાકની અંદર સ્તનપાનની શરૂઆત કરવી જોઈએ અને ૬ મહિના સુધી માત્ર સ્તનપાન જ કરાવવું જોઈએ.
- બાળકને ૬ મહિના થઈ જાય પછી તેને ઉપરી આહાર શરૂ કરાવો જોઈએ અને સાથે સાથે ૨ વર્ષ સુધી સ્તનપાન આપવું જોઈએ.

સ્વ સહાય જૂથના સભ્યો શું કરી શકે છે?

- યોગ્ય સ્તનપાન અને શિશુ અને બાળ આહાર ના મહત્વ વિશે માતા અને પરિવારના સભ્યને પ્રોત્સાહિત કરો.
- ઉપરી ખોરાક કેવો હોવો જોઈએ તેના વિષે માતાઓ ને સમજણ આપો અને નિદર્શન ગોઠવો.

સત્ર- ૫ - વિષય - એનિમિયા (પાંડુરોગ/ લોહીની ફિકાસ)

❖ એનિમિયા એટલે શું?

શરીરમાં જ્યારે લાલ રક્તકણો ઓછા થાય છે, ત્યારે લોહીની ઊણપ સર્જાય છે. આ સમસ્યાને એનિમિયા કહેવામાં આવે છે. લોહીમાં હિમોગ્લોબિનની ઊણપ થવા થી લોહી ફિક્કુ પડે છે, નબળાઈ વર્તાય છે. એનિમિયાનો યોગ્ય ઈલાજ ન કરાવવા પર ગંભીર બીમારીઓ થઈ શકે છે.

- એનિમિયા એક એવી સ્થિતિ છે જેમાં લોહીના લાલ રક્તકણોની સંખ્યા અથવા તેમની ઓક્સિજન-વહન કરવાની ક્ષમતા, શરીરની શારીરિક જરૂરિયાતોને પહોંચી વળવા માટે અપર્યાપ્ત થઈ જાય છે.
- સાદી ભાષામાં એમ પણ કહેવાય કે લોહીમાં ફિક્કાશ આવી જાય છે.

❖ એનિમિયા કોણે-કોણે થઈ શકે?

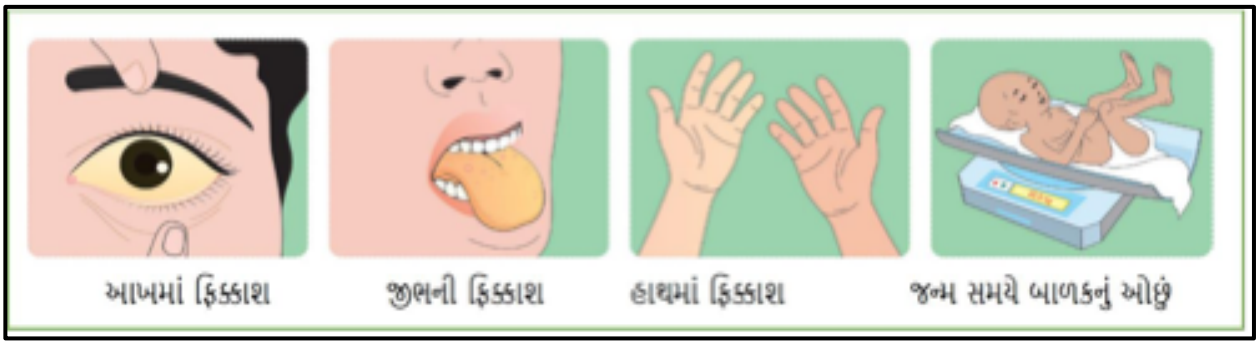
સ્ત્રોત: નેશનલ આયરન પ્લસ ઈનિશિયેટિવ (NIPI)

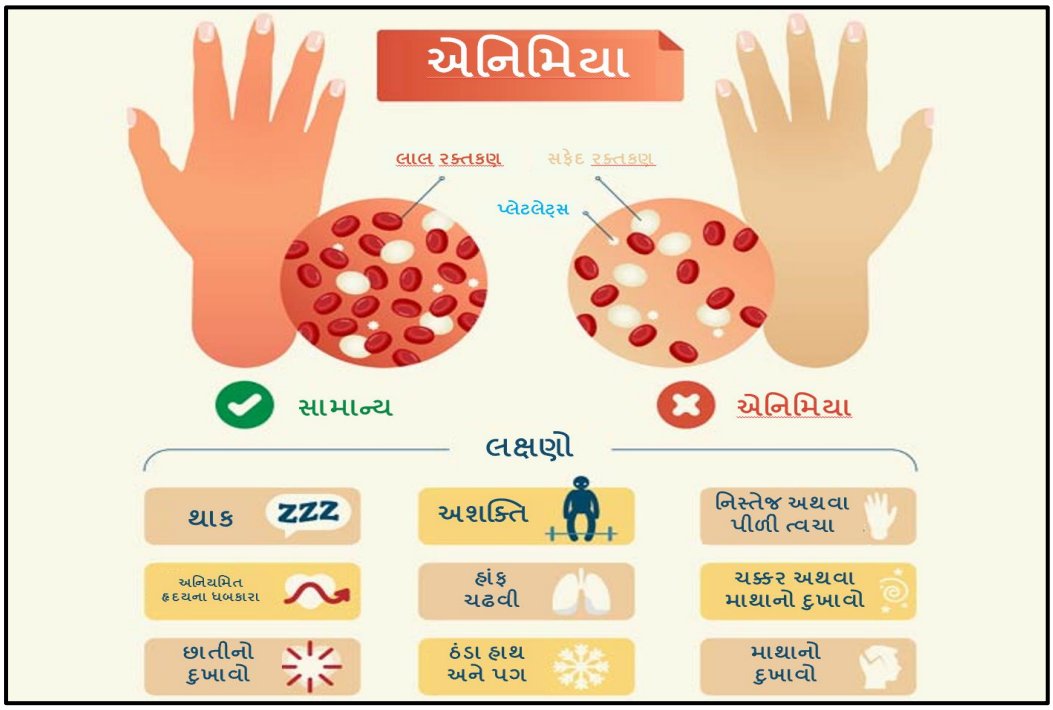
❖ એનિમિયા થવાના કારણો:

- રોજિંદા આહારમાં લોહતત્વ યુક્ત ખોરાકની અપૂરતી માત્રા
- લોહતત્વ યુક્ત ખોરાક સાથે ચા, કોફી પીવી
- માસિકના દરમિયાન, પ્રસવમાં કે કોઈ ઇજાના કારણે વધારે માત્રામાં લોહી વહી જવું
- વારંવાર મલેરિયા થવાથી - હિમોગ્લોબિનના સ્તરમાં ઘટાડો થાય છે
- કૃમિ હોવાથી

❖ એનિમિયાના લક્ષણો:

- આંખો, જીભ અને નખમાં ફિક્કાશ
- થાક લાગવો
- ભૂખ ન લાગવી
- શરીરમાં અશક્તિ લાગવી
- હાંફ ચઢવો
- ચક્કર આવવા
- નખ બરડ, ફીકા અને ચમચી જેવા થઈ જવા-અતિ ગંબીર એનિમિયાની પરિસ્થિતિમાં
- ઝડપી અને અનિયમિત હૃદયના ધબકારા





❖ એનિમિયાના આડ અસરો:

- કામ કરવાની ક્ષમતામાં ઘટાડો
- ભણતરમાં નબળો દેખાવ
- રોજિંદા ઘરકામ કરવામાં ખૂબ અશક્તિ લાગવી
- વારંવાર માંદા પડવું
- કિશોરીઓમાં અનિયમિત માસિક આવર્તન
- ભૂખ ઓછી લાગવી
- રોગ પ્રતિકારક શક્તિમાં ઘટાડો
- કાર્યશક્તિમાં ઘટાડો

❖ લોહતત્વ ખોરાક માં ક્યાંથી મળે છે?

- લીલા પાંદડાવાડા શાકભાજી- મેથી, પાલક, મૂળાના પાન, સરગવાના પાન, અરબીના પાન (પાતરા), તાંદળજો, વગેરે
- કઠોળ- મગ, ચણા, મઠ, ચોળા, વાલ, વગેરે
- મિલેટ્સ- બાજરી, જોવર, રાગી
- ખજૂર
- બીટ
- ઈંડા, માંસ, મચ્છી

❖ એનિમિયા કેવી રીતે અટકાવી શકાય/નિવારણ પગલા:

અનિમિયા (પાંડુરોગ) નિવારણના પગલાં
અનેમિયાથી બચવા માટે લોહતત્વથી ભરપૂર ખોરાકનો ભોજનમાં નિયમિત રીતે સમાવેશ કરવો • લીલા પાંદડાવાળા શાકભાજી - પાલક, મેથી, સરગવો • માંસાહારી ભોજન -ઈંડા, માંસ, માછલી • ઘઉં, જુવાર, બાજરી, નાગલી, અડદ, ફણગાવેલા કઠોળ, કાળા ચણા, મગફળી, તલ, ખજૂર, સુકોમેવો વગેરે • લોહતત્વથી ફોર્ટિફાઇડ ખોરાક ખાવો 
વિટામિન સી થી ભરપૂર ખાદ્ય પદાર્થોનો ઉપયોગ કરવો • વિટામિન સી યુક્ત ખાદ્ય પદાર્થો શરીરમાં લોહતત્વનું શોષણ કરવામાં સહાયરૂપ બને છે. • રોજિંદા ખોરાકમાંથી લોહતત્વનું શોષણ વધારવા માટે ભોજનમાં આંબળા, જમફળ, ટામેટાં સંતરા, લીંબુ, વગેરે નો સેવન કરવો જોઈએ.   
લોહતત્વયુક્ત ખોરાક સાથે ચા-કોફી નો ઉપયોગ ટાળો • લોહતત્વયુક્ત ખોરાક કે લોહતત્વની ગોળી લીધાના એક કલાક પહેલા કે એક કલાક સુધી ચા કે કોફી પીવાનું ટાળો કારણ કે ચા- કોફી લોહતત્વ પૂરેપૂરું શોષણ થવા દેતું નથી.

- તેમજ કેલ્શિયમની ગોળી અને દૂધ પણ લોહતત્વના શોષણને અટકાવે છે તેથી લોહતત્વની ગોળી સાથે લેવા જોઈએ નહીં.

રોજિંદા ખોરાકમાંથી હંમેશા પુરતું લોહતત્વ મળી શકતું નથી તે માટે લોહતત્વની ગોળી લેવી જોઈએ.

લોહતત્વની ગોળી

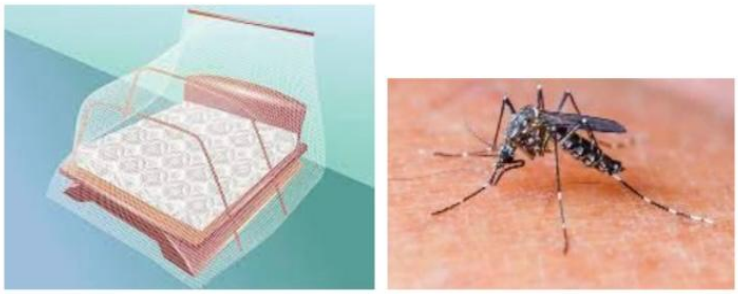
દર ૬ મહિને કૃમિનાશક ગોળી ખાવી

- કૃમિના કારણે યોગ્ય પોષકતત્વો નું શોષણ યોગ્ય રીતે થઈ ધર્મનુ નથી જેથી અનેમિયા તથા અન્ય સૂક્ષ્મ પોષકતત્વોની ઉણપ જેવા રોગો થઈ શકે છે.
- કૃમિ પગના તળિયેથી શરીરમાં પ્રવેશ કરે છે એટલે પગમાં હંમેશા ચપ્પલ કે બુટ પહેરવાની ટેવ પાડવી
- અનીમિયાથી બચવા કૃમિથી બચવું ખૂબ જરૂરી છે. ૬ મહિનામાં એકવાર કૃમિની દવા આંગણવાડી પરથી આપવામાં આવે છે.

કૃમિનાશક ગોળી

રાત્રે ઊંઘતા સમયે મચ્છરથી બચવા મચ્છરદાનીનો ઉપયોગ કરો

- ચેપી મચ્છર કરડવાથી લાલ રક્ત કોશિકાઓને નુકશાન થઈ શકે છે.
- આ પ્રક્રિયા શરીરમાં લાલ રક્તકણોની સંખ્યામાં ઘટાડો કરે છે અને ગંભીર એનિમિયામાં પરિણમી શકે છે.



મચ્છરથી બચવા માટે મચ્છરદાનીનો ઉપયોગ કરો

આટલું યાદ રાખો :

- દૈનિક આહારમાં લોહતત્વ યુક્ત ખોરાક જેમકે લીલા પાંદડા વાડા શાકભાજી, ખજૂર, અસાડિયો, તલ, બાજરી, વગેરે ખાવાથી એનિમિયા થઈ બચી શકાય છે.

સ્વ સહાય જૂથના સભ્યો શું કરી શકે છે?

- એનિમિયા થવાના કારણો, આડ અસરો, લક્ષણો,કયા ખોરાકમાંથી લોહતત્વ મળે અને એનીમિયા કેવી રીતે અટકાવી શકાય પર ચર્ચા કરો.
- લોહતત્વ યુક્ત ખોરાક ખાવા માટે પ્રોત્સાહિત કરો.

સત્ર- ૬ - વિષય - કિશોરવયની છોકરીઓ માટે પોષણ

કુપોષણ એટલે શું?

કુપોષણમાં અલ્પ પોષણ, સૂક્ષ્મ પોષકતત્વોની ઉણપ, મોટાપો, સ્થૂળતા, ખોરાક સંબંધિત બિનચેપી રોગોનો સમાવેશ થાય છે.

કિશોરીઓમાં પાતળાપણું (Thinness) જોવામાં આવે છે જે ઉંમર પ્રમાણે ઓછું બોડી માસ ઇંડેક્સ દ્વારા જોવાય છે. સૂક્ષ્મ પોષકતત્વોની ઉણપ એટલે વિટામીન અને ખનીજતત્વો (વિટામિન એ, ડી, ઈ, કે, વિટામિન બી, લોહતત્વ, ફોલેટ અને અન્ય વિટામિન અને ખનીજક્ષારો) નો અભાવ છે જે શરીરના કાર્યો જેમ કે ઉત્સેચકો, હોર્મોન્સ અને વૃદ્ધિ અને વિકાસ માટે જરૂરી અન્ય પદાર્થોનું ઉત્પાદન કરવા માટે જરૂરી છે. એનિમિયા એ બાળકો, કિશોરો અને પુખ્ત વયના લોકોમાં ભૂખના ગંભીર પરિણામો માંથી એક છે.

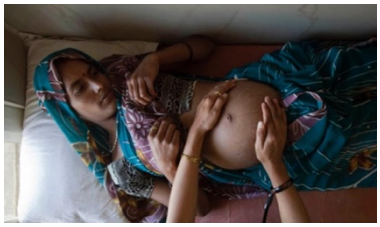
કુપોષણનું ચક્ર

જન્મ સમયે ઓછું વજન

અપુરતો માનસિક વિકાસ
અપૂરતી વૃદ્ધિ વારંવાર ચેપ લાગવો

કુપોષિત બાળક
શીખવાની ક્ષમતામાં ઘટાડો

કુપોષિત કિશોરી શીખવાની ક્ષમતામાં ઘટાડો



કુપોષિત માતા
હૃદયરોગ, બીપી, બિન ચેપી રોગો થવાનું વધુ જોખમ

પ્રસૂતિ સમયે સમસ્યાઓ, ગર્ભાશમાં બાળકી ઓછી વૃદ્ધિ થવી, માતાનું મૃત્યુ

કિશોરાવસ્થા એ પોષક તત્વોની ઉણપને સુધારવાની તક પૂરી પાડે છે જે શરૂઆતના જીવનમાં આવી હોય શકે છે અને વૃદ્ધિ વિકાસ માટે જરૂરી છે અને સારા આહાર વર્તણૂકો સ્થાપિત કરે છે.

કિશોરાવસ્થા એ પોષણની દ્રષ્ટિએ સંવેદનશીલ સમય છે જ્યારે ઝડપી શારીરિક વૃદ્ધિ એ પોષક તત્વોની માંગમાં વધારો કરે છે. કિશોરાવસ્થામાં પડેલી ખોરાકની ટેવો, પોષણ-સંબંધિત સમસ્યાઓમાં ફાળો આપી શકે છે જે લાંબા સમયગાળે સ્વાસ્થ્ય પર અસર કરે છે.

જો કિશોરી કુપોષિત રહી તો પુખ્તવસ્થામાં વિવિધ પ્રકારના જોખમ થઈ શકે છે:

કિશોરીઓમાં કુપોષણના પરિણામો:

જો કિશોરીઓ દરરોજ યોગ્ય માત્રામાં પોષણ યુક્ત ખોરાક ન લે તો તે કુપોષિત થઈ શકે છે અને વિવિધ પ્રકારના જોખમ થઈ શકે છે જેમ કે-

- કામ કરવાની ક્ષમતામાં ઘટાડો
- ભણતરમાં નબળો દેખાવ
- રોજિંદા ઘરકામ કરવામાં ખૂબ અશક્તિ લાગવી
- વારંવાર માંદા પડવું
- જ્ઞાનાત્મક અને માનસિક વિકાસ ધીમી ગતિએ થવું
- એકાગ્રતામાં ઘટાડો
- ભૂખ ઓછી લાગવી

કુપોષણ કેવી રીતે અટકાવી શકાય:

- દરરોજ સંતુલિત આહાર લેવાનો જેમાં જરૂરી માત્રામાં બધા જ ખાદ્ય જૂથોનો સમાવેશ થાય છે.
- બિનઆરોગ્યપ્રદ ખોરાક, પ્રોસેસ્ડ અને પેકેજ્ડ ખોરાક જેવા કે બિસ્કિટ, મેગી/નૂડલ્સ,
- વેફર/ગોપાલ, ચોકલેટ, ઠંડા પીણા, સમોસા, ભજીયા, પાણીપુરી જેવા તળેલા ખોરાકનું સેવન મર્યાદિત કરવું.
- વ્યક્તિગત અને પર્યાવરણીય સ્વચ્છતા જાળવવી.

માય થાળી:

સ્ત્રોત: આરોગ્ય વર્લ્ડ, ઇંડિયા ટ્રસ્ટ

ફૂડ પિરામિડ:

ફૂડ ગાઈડ પિરામિડ એ પોષણની માર્ગદર્શિકા છે જેમાં તંદુરસ્ત રહેવા માટે ખોરાકના જૂથોને અને તેના પ્રમાણને અલગ-અલગ વિભાગમાં વિભાજિત કરવામાં આવ્યા છે. પિરામિડનો સૌથી નીચેનો ભાગ એવા ખોરાકનો બનેલો હોવો જોઈએ જે ખોરાક તમારા સ્વસ્થ આહારનો મૂજભૂત પાયો છે. તેનાથી વિપરીત તમારે જે ખોરાક ઓછી માત્રામાં કે ઓછી વખત ખાવો જોઈએ તે પિરામિડના નાના વિભાગોમાં દર્શાવામાં આવે છે. ભોજનના દરેક જુથ જુદા જુદા પોષક્તત્વો પૂરા

પાડે છે અને કોઈ એક જુથ આપણા શરીરને જરૂરી તમામ પોષક્તત્વો પૂરા પડી શકતું નથી.

સ્ત્રોત: ભારતીઓ માટે ભોજનને લગતી માર્ગદર્શિકા, નેશનલ ઇન્સ્ટિટ્યૂટ ઓફ ન્યૂટ્રિશન , ૨૦૧૮-2020

આટલું યાદ રાખો :

- **કિશોરિયોનું સમયાંતરે પોષણ સ્તર ચકાસવું.**
- ખોરાકમાં વિવિધતા લાવાથી કુપોષણ ની સમસ્યા દૂર કરી શકાય છે.

સ્વ સહાય જૂથના સભ્યો શું કરી શકે છે?

- કુપોષણ, કુપોષણ ના પ્રકારો અને કુપોષણ ચક્ર વિશે ચર્ચા કરો.
- કિશોરી કુપોષિત હોય તો એના જોખમી ચિહ્નો એન્ડ તેના પરિણામો વિશે જાણ કરો.
- રોજિંદા ખાદ્ય પદાર્થો કેટલી માત્રા માં સેવન કરવાના વિશે ચર્ચા કરો.
- તંદુરસ્ત વણગી સ્પર્ધા/હરિફાઈ નું આયોજન કરો.

સત્ર- ૭ - વિષય - સ્વચ્છ જળ, સ્વચ્છતા અને આરોગ્ય નો સંબંધ

❖ સ્વચ્છતા અને આરોગ્ય નું મહત્વ:

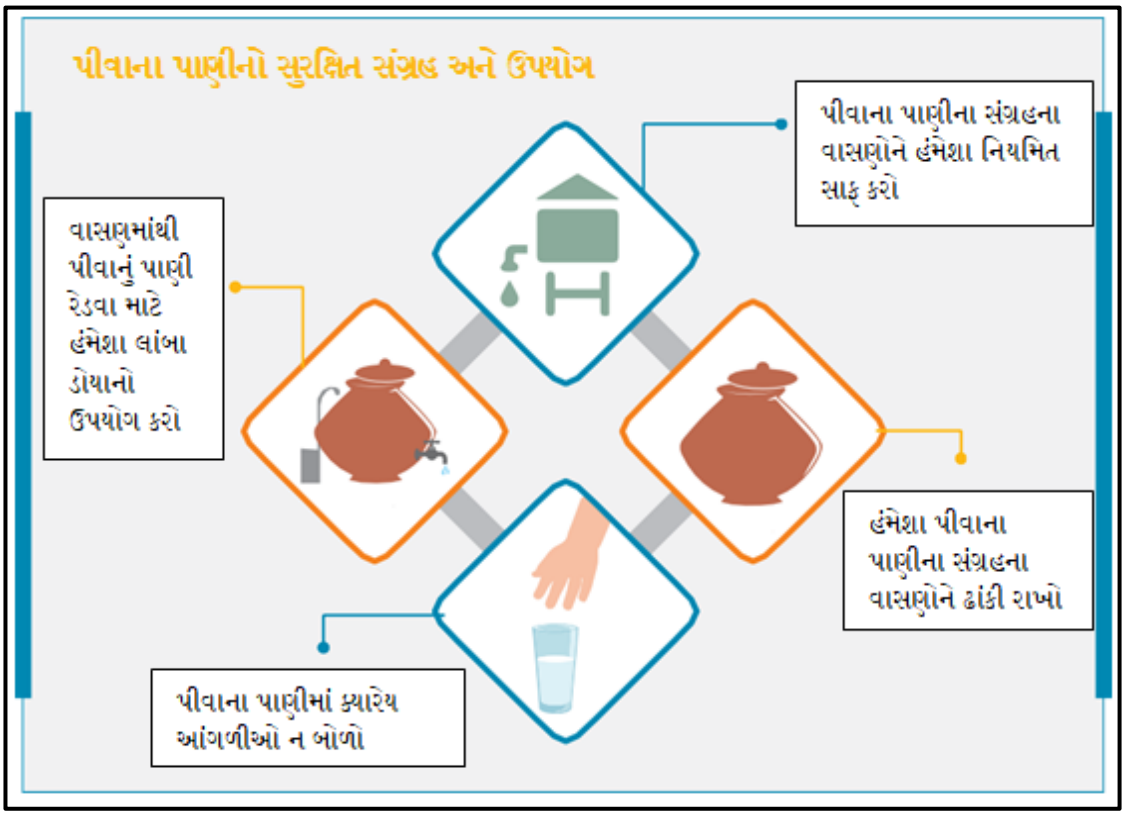
સ્વચ્છતા એ પીવાના શુદ્ધ પાણી અને સારવાર અને માનવ મળમૂત્ર અને ગટરના નિકાલ સાથે સંબંધિત જાહેર આરોગ્યની સ્થિતિનો ઉલ્લેખ કરે છે. મળ સાથે માનવ સંપર્ક અટકાવવો એ સ્વચ્છતાનો એક ભાગ છે, જેમ કે સાબુથી હાથ ધોવાનો છે. સ્વચ્છતા પ્રણાલીઓનો ઉદ્દેશ સ્વચ્છ વાતાવરણ પ્રદાન કરીને માનવ આરોગ્યનું રક્ષણ કરવાનો છે જે રોગના સંક્રમણને અટકાવી દેશે, ખાસ કરીને મળ-મૌખિક માર્ગ દ્વારા. ઉદાહરણ તરીકે, બાળકોમાં કુપોષણ અને અટકેલા વિકાસનું મુખ્ય કારણ ઝાડાને પૂરતી સ્વચ્છતા દ્વારા ઘટાડી શકાય છે. અન્ય ઘણા રોગો છે જે સ્વચ્છતાનું સ્તર ઓછું હોય તેવા સમુદાયોમાં સરળતાથી ફેલાય છે, જેમ કે એસ્કેરિયાસિસ (આંતરડાના કીડાનો ચેપ અથવા હેલ્મિન્થિયાસિસનો એક પ્રકાર), કોલેરા, હેપેટાઇટિસ, પોલિયો, શિસ્ટોસોમિયાસિસ અને ટ્રેકોમા, ફક્ત થોડા નામ માટે.

ઘરગથ્થું સ્તરે પાણીનો સુરક્ષિત રીતે ઉપયોગ કરવા અને તેનો સંગ્રહ કરવા માટે શું કરી શકાય છે?

પાણી પુરવઠા યોજના દ્વારા આપવામાં આવતું પાણી સ્વચ્છ અને શુદ્ધ હોવા છતાં જો તેને ઘરગથ્થુ સ્તરે સંગ્રહિત અને યોગ્ય રીતે નિયંત્રિત કરવામાં ન આવે તો તે દૂષિત થઈ શકે છે. ઘરેલું સ્તરે પાણીનું સંચાલન કરતી વખતે કેટલીક સાવચેતી રાખવી આવશ્યક છે.

ઘરગથ્થું સ્તરે પીવાનું પાણી માટે યાદ રાખવા જેવી બાબતોઃ

- પાણી સામાન્ય રીતે ક્યારેય વાસી બનતું નથી, જો કે સંગ્રહ પાત્ર અશુદ્ધ હોય, તો શુદ્ધ પાણી પણ દૂષિત થઈ શકે છે. તેથી, સંગ્રહ પાત્રને દરરોજ સાફ કરવા જોઈએ.
- પીવાનું પાણી સંગ્રહિત કરવા માટે ઉપયોગમાં લેવાતા કોઈ પણ પાત્રમાંથી પાણી બહાર કાઢવા માટે ચોખ્ખા લાડલાનો ઉપયોગ કરો.
- સંગ્રહ પાત્રને એવી ઊંચાઈએ રાખો કે જ્યાં બાળકોને સરળતાથી પહોચી ન શકે. બાળકો અજાણતાં પાણીને દૂષિત કરી શકે છે.



❖ વ્યક્તિગત અને પર્યાવરણ ની સ્વચ્છતા

વ્યક્તિગત સ્વચ્છતા:

વ્યક્તિગત સ્વચ્છતા એ પોતાને બીમારીથી બચાવવાનો સૌથી અસરકારક માર્ગ છે. જો લોકો સારી વ્યક્તિગત સ્વચ્છતા જાળવે તો જંતુઓ શરીરની અંદર જાય તેવી સંભાવના ઓછી છે. વ્યક્તિગત સ્વચ્છતામાં સ્નાન, હાથ ધોવા અને દાંત સાફ કરવા વગેરે જેવી આદતોનો સમાવેશ થાય છે જે જંતુઓને શરીરથી દૂર રાખે છે. તંદુરસ્ત વ્યક્તિગત સ્વચ્છતાની આદતો:

તમારા હાથ ધોઓ: હાથ ધોવાથી બીમારીઓ અને ચેપ ફેલાતો અટકે છે. ધોયા વિનાના હાથના જંતુઓ ખોરાક અને પીણાંમાં પ્રવેશી શકે છે જ્યારે આપણે ખોરાક તૈયાર કરીએ છીએ અથવા તેનું સેવન કરીએ છીએ. જંતુઓને દરવાજાના હેન્ડલ્સ, ટેબલટોપ્સ, વાસણો અથવા રમકડાં જેવી અન્ય વસ્તુઓમાં પણ સ્થાનાંતરિત કરી શકાય છે અને અન્ય વ્યક્તિના હાથમાં પ્રસારિત કરી શકાય છે. તેથી હાથ ધોવા દ્વારા જંતુઓને દૂર કરવાથી ઝાડા અને શ્વસન, આંખ અને ત્વચાના ચેપને રોકવામાં મદદ મળે છે.

તમારે ક્યારે હાથ ધોવા જોઈએ:

- શૌચાલયનો ઉપયોગ કર્યા પછી
- પહેલાં, દરમિયાન અને ખોરાક તૈયાર કર્યા પછી
- ખોરાક ખાતા પહેલા અને પછી
- બીમાર વ્યક્તિની સંભાળ રાખતા પહેલા અને પછી
- કાપ અથવા ઘાની સારવાર કરતા પહેલા અને પછી
- શૌચાલયનો ઉપયોગ કરનારા બાળકને સાફ કર્યા પછી
- તમારા નાકને ફૂંક્યા પછી, ઉધરસ અથવા છીંક ખાધા પછી
- પ્રાણીઓ, પ્રાણીઓના ખોરાક અથવા પ્રાણીઓના કચરાને સ્પર્શ કર્યા પછી અને સંભાળ્યા પછી
- કચરાને સ્પર્શ કર્યા પછી
- જ્યારે તમારા હાથ ગંદા હોય

પર્યાવરણીય/આસપાસની સ્વચ્છતા:

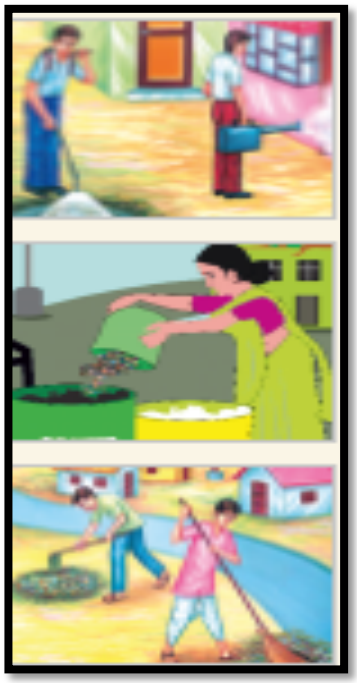
પર્યાવરણીય/આસપાસની સ્વચ્છતા પર્યાવરણીય પરિબળોને નિયંત્રિત કરી રહી છે જે ચેપ અને રોગોનું કારણ બની શકે છે. તેમાં કચરાનું સંચાલન, પીવાનું સલામત પાણી, કચરાનો નિકાલ અને જંતુ નિયંત્રણનો સમાવેશ થાય છે. વ્યક્તિ, પરિવાર અને સમુદાયના સ્વાસ્થ્ય અને સુખાકારી માટે પર્યાવરણીય સ્વચ્છતા મહત્વપૂર્ણ છે.

આસપાસની સ્વચ્છતા જાળવવાની ટીપ્સ:

1. ઘરની અંદર

- તમારા ઘરની અંદર અથવા તેની નજીક પાણી સાથે ખુલ્લા કન્ટેનર/ડોલ ન છોડો, કારણ કે આ સ્થળો મેલેરિયા, ડેન્ગ્યુ અને ચિકનગુનિયા પેદા કરતા મચ્છરોના સંવર્ધન માટેનું વાતાવરણ તરીકે કામ કરે છે.
- કરોળિયાના જાળા અને ધૂળ દૂર કરવા માટે છત, દિવાલો અને પંખા, બલ્બ, ટ્યુબ લાઇટ્સ વગેરે ઉપકરણોને સાફ કરો.

- ફ્લોરને નિયમિત રીતે સાફ કરો અથવા મોપ કરો.
- જમીન, ટેબલ, પલંગ, ખુરશી વગેરેમાંથી ઢોળાયેલા ખોરાકને તરત સાફ કરો.
- બાથરૂમ, રસોડું અને અન્ય વિસ્તારોમાં પાણી ન આવે તે માટે ડ્રેનેજ સિસ્ટમ તપાસો.
- કોઈપણ લીકેજ માટે પાઇપો અને નળને રિપેર કરો.
- રસોડામાં અને અન્ય યોગ્ય સ્થળોએ ડસ્ટબિન મૂકો. ઉપયોગ પછી ડસ્ટબિન ખાલી કરવાની ખાતરી કરો.
- જંતુઓને રોકવા માટે જંતુનાશકો અને જંતુઓ દૂર કરનારાઓનો ઉપયોગ કરો. તેમને બાળકો અને પ્રાણીઓથી દૂર રાખવાની ખાતરી કરો.



2.ઘરની બહાર

- ઘરની બહાર પાણી ન આવે તે માટે ગટરોની તપાસ કરો.
- હંમેશાં તમારા ઘરની આસપાસ એકત્રિત થાય તેવું પાણી સાફ કરો અને એ પણ સુનિશ્ચિત કરો કે તમારા ઘરની નજીકની ગટરો (ડ્રેનેજ) નિયમિત પણે સાફ કરવામાં આવે જેથી મચ્છરોના સંવર્ધનને ટાળી શકાય અને મેલેરિયા, ડેન્ગ્યુ અને ચિકનગુનિયાથી તમારી જાતને બચાવી શકાય.
- મચ્છરોના સંવર્ધનને રોકવા માટે ઘરની બહાર એકત્રિત પાણીમાં કેરોસીનતેલ છાંટવું.
- વર્ષમાં ઓછામાં ઓછી બે વાર ઓવરહેડ ટેન્ક સાફ કરો. દૂષિત પાણી ફૂડ પોઇઝનિંગ/ઝાડાનું કારણ બની શકે છે.
- કચરો ફક્ત ડસ્ટબિનમાં ફેંકી દો. તેમને ઘરની અંદર, અથવા ઘરની બહાર શેરીઓમાં ન ફેંકો.
- હંમેશાં ખાતરી કરો કે તમારા ઘરની નજીકની ઝાડીઓ સારી રીતે સાફ થઈ જાય.
- તમારા પાલતુ પ્રાણીઓ જેવા કે ગાય, ભેંસ, કૂતરા, બકરી વગેરે ને સ્વચ્છ રાખો.
- પ્રાણીઓના શેડને સાફ રાખો, તેમના કચરાનો યોગ્ય રીતે બંધ ડસ્ટબિનમાં નિકાલ કરો અને કચરાને ખાડામાં માનવ સંપર્કથી દૂર ફેંકી દેવાની ખાતરી કરો, અને તેને કાદવથી ઢાંકી દો.
- રસ્તાઓ, ગુલ્લી, મહોલ્લાને છાણ અને કચરાથી મુક્ત રાખો.

❖ હાથ ધોવાની સાચી રીત :-

❖ શૌચાલય ના ઉપયોગ નું મહત્વ

મળ અને પેશાબ: ઝાડા અને અન્ય ચેપી રોગોને રોકવા માટે, શૌચ અને પેશાબ માટે યોગ્ય શૌચાલયોનો ઉપયોગ કરો. શિશુઓ અને નાના બાળકોના મળ અને પેશાબના કચરાનો નિકાલ શૌચાલય અથવા શૌચાલયમાં અથવા ખાડામાં કરવો જોઈએ અને પછી માટીના સ્તરથી ઢાંકી દેવો જોઈએ. જે સમુદાયોમાં શૌચાલય અથવા શૌચાલયની સુવિધા ઉપલબ્ધ નથી, ત્યાં તેઓએ આવી સુવિધાઓ બનાવવાના પ્રયાસો કરવા જોઈએ. તેઓ સરકારની સ્વચ્છ ભારત યોજનામાંથી શૌચાલય બનાવવા માટે અનુદાન માટે પણ અરજી કરી શકે છે. આ યોજના હેઠળ ઘરગથ્થુ શૌચાલયો તેમજ સામુદાયિક શૌચાલયો બનાવવાની જોગવાઈઓ છે.

આટલું યાદ રાખો :

- સ્વચ્છ પાણી પીવું જોઈએ.
- જમવાનું બનાવતા પહેલા, શૌચાલય ગયા પછી, બાળકો ને અડ્યા પાછી અને ઢોર ચારાના કામ કર્યા પાછી હાથ ધોવા જોઈએ.
- શૌચાલય નો ઉપયોગ કરવો જોઈએ.

સ્વ સહાય જૂથના સભ્યો શું કરી શકે છે?

- ગામની પાણી સમિતિ સાથે રહીને ગ્રામજનો ને ચોખ્ખું પાણી મળે તે સુનિશ્ચિત કરવું.
- ઘરમાં શૌચાલય બનવા માટે પ્રોત્સાહન કરવું.

સત્ર- ૮- વિષય - માતા અને બાળકો માટે સરકારી કાર્યક્રમો ની સેવાઓ

લાભાર્થીઓ	સેવાઓ	ક્યાંથી આ સેવાઓ મેળવી શકાય છે?
આઇસીડીએસ (ICDS)		
કિશોરવયની છોકરીઓ	ગ્રોથ મોનિટરિંગ (વજન, ઊંચાઈ)	આંગણવાડી
	પૂરક પોષણ /THR (પૂર્ણાશક્તિ પેકેટ્સ- 1 કિલો ના 4 પેકેટ)	આંગણવાડી
	આયર્ન ફોલિક એસિડ ગોળી (અઠવાડિયા માં 1 વાર)	આંગણવાડી / સબસેન્ટર/ શાળા
	કૃમિનાશક ગોળી (વર્ષમાં ૨ વાર- ગુજરાતમાં, તે ફેબ્રુઆરી અને ઓગસ્ટમાં કરવામાં આવે છે)	આંગણવાડી / સબસેન્ટર / શાળા
	ધનુર (ટિટનસ) રસી (10 અને 14 વર્ષ)	આંગણવાડી / સબસેન્ટર
	દવાઓ-મુખ્યત્વે ઉધરસ, શરદી, તાવ, ઝાડા અને ઉલ્ટી ગંભીર કિસ્સાઓમાં, તેઓને મોકલવામાં આવે છે	આંગણવાડી / સબસેન્ટર દવાખાના
	પોષણ આરોગ્ય શિક્ષણ -પૂર્ણા દિવસ (મહિનાનો ચોથો મંગળવાર) પર આહાર, IFA, કૃમિનાશક, WASH પ્રેક્ટિસ, ખરાબ સ્પર્શ સારો સ્પર્શ, THR, માસિક ધર્મ, કુટુંબ નિયોજન, બેંક, પોસ્ટ ઓફિસ, 108, 181 જેવી સાર્વજનિક સુવિધાઓની એક્સેસ , 100, અગ્નિશામક, વગેરે અને વ્યાવસાયિક તાલીમ અંગે પરામર્શ કરવામાં આવે છે	આંગણવાડી

સગર્ભાઓ	12 અઠવાડિયાની અંદર પ્રારંભિક નોંધણી	આંગણવાડી
	ગ્રોથ મોનિટરિંગ (વજન, ઊંચાઈ)	આંગણવાડી
	પૂરક પોષણ /THR (માતૃશક્તિ પેકેટ્સ- 1 કિલો ના 4 પેકેટ)	આંગણવાડી
	ફોલિક એસિડ ગોળી (ત્રીજા મહિના સુધી) } દિવસમાં 1 વાર આયર્ન ફોલિક એસિડ ગોળી (ચોથા મહિનાથી),	આંગણવાડી / સબસેન્ટર
	કેલ્શિયમ ગોળી (દિવસમાં 2 વાર)	આંગણવાડી / સબસેન્ટર
	કૃમિનાશક ગોળી (વર્ષમાં ૨ વાર- ગુજરાતમાં, તે ફેબ્રુઆરી અને ઓગસ્ટમાં કરવામાં આવે છે)	આંગણવાડી / સબસેન્ટર
	(ધનુર) ટિટનસ રસી (2 ડોઝ)	આંગણવાડી / સબસેન્ટર
	દવાઓ-મુખ્યત્વે ઉધરસ, શરદી, તાવ, ઝાડા અને ઉલ્ટી ગંભીર કિસ્સાઓમાં, તેઓને મોકલવામાં આવે છે	આંગણવાડી / સબસેન્ટર પીએચસી / દવાખાના
	પોષણ આરોગ્ય શિક્ષણ- મમતા દિવસ (દર બુધવારે) અને સુપોષણ સંવાદ (મહિનાનો 1 મંગળવાર), આહાર, રસીકરણ, આરોગ્ય તપાસ વગેરે વિશે પરામર્શ કરવામાં આવે છે	આંગણવાડી
	બ્લડ ટેસ્ટ, બીપી, ડાયાબિટીસ	સબસેન્ટર / પીએચસી

ધાત્રી માતાઓ	ગ્રોથ મોનિટરિંગ (વજન, ઊંચાઈ)	આંગણવાડી
	પૂરક પોષણ /THR (માતૃશક્તિ પેકેટ્સ- 1 કિલો ના 4 પેકેટ- બાળક 6 મહિનાનું થાય ત્યાં સુધી)	આંગણવાડી
	આયર્ન ફોલિક એસિડ ગોળી (સુવાવડથી બાળક 6 મહિનાનું થાય ત્યાં સુધી)	આંગણવાડી / સબસેન્ટર
	કેલ્શિયમ ગોળી	આંગણવાડી / સબસેન્ટર
	કૃમિનાશક ગોળી (વર્ષમાં ૨ વાર- ગુજરાતમાં, તે ફેબ્રુઆરી અને ઓગસ્ટમાં કરવામાં આવે છે)	આંગણવાડી / સબસેન્ટર
	દવાઓ-મુખ્યત્વે ઉધરસ, શરદી, તાવ, ઝાડા અને ઉલ્ટી ગંભીર કિસ્સાઓમાં, તેઓને મોકલવામાં આવે છે	આંગણવાડી / સબસેન્ટર પીએચસી/ દવાખાના
બાળકો (0-6 વર્ષ)	ગ્રોથ મોનિટરિંગ (વજન, ઊંચાઈ)- (બાલતુલા દિવસ - મહિનાનો બીજો મંગળવાર)	આંગણવાડી
	પૂરક પોષણ/THR (બાલશક્તિ પેકેટ્સ) **a) 6-36 મહિના** - 500 ગ્રામ ના 7 પેકેટ **b) 3-6 વર્ષ** -1 નાસ્તા અને 1 ગરમ રાંધેલું ભોજન -જો SAM બાળક, બાલશક્તિના 3 પેકેટ આપવામાં આવે છે	આંગણવાડી

	વિટામિન-એ સિરપ -1 ડોઝ (9 મહિનામાં) 2 ડોઝ (12 મહિનામાં)	આંગણવાડી / સબસેન્ટર
	આયર્ન ફોલિક એસિડ ગોળી (અઠવાડિયા માં 2 વાર)	આંગણવાડી / સબસેન્ટર
	કૃમિનાશક ગોળી (વર્ષમાં ૨ વાર- ગુજરાતમાં, તે ફેબ્રુઆરી અને ઓગસ્ટમાં કરવામાં આવે છે)	આંગણવાડી / સબસેન્ટર
	રસીકરણ	આંગણવાડી
	બિન-ઔપચારિક પૂર્વ-શાળા શિક્ષણ (3-6 વર્ષ) - રમત-ગમત પદ્ધતિ	આંગણવાડી
	દવાઓ-મુખ્યત્વે ઉધરસ, શરદી, તાવ, ઝાડા અને ઉલ્ટી ગંભીર કિસ્સાઓમાં, તેઓને મોકલવામાં આવે છે	આંગણવાડી / સબસેન્ટર પીએચસી/ દવાખાના
	અન્નપ્રાશન દિવસ (મહિનાનો ત્રીજો મંગળવાર)- છઠો મહિનો પૂરો થયા પછી બાળકને પ્રથમ ખોરાક આપવામાં આવે	આંગણવાડી
પ્રજનનક્ષમ વયની સ્ત્રીઓ (15-49 વર્ષ)	આયર્ન ફોલિક એસિડ ગોળી (અઠવાડિયા માં 1 વાર)	આંગણવાડી / સબસેન્ટર
	દવાઓ-મુખ્યત્વે ઉધરસ, શરદી, તાવ, ઝાડા અને ઉલ્ટી ગંભીર કિસ્સાઓમાં, તેઓને મોકલવામાં આવે છે	આંગણવાડી / સબસેન્ટર પીએચસી / દવાખાના
	આહારની આદતો અને આહારમાં વૈવિધ્યકરણ, IFA, કેલ્શિયમ, ફેમિલી પ્લાનિંગ વગેરે અંગે કાઉન્સેલિંગ સત્રો	આંગણવાડી

પીડીએસ (PDS)		
રેશન કાર્ડ- BPL	ફોર્ટિફાઇડ ચોખા ફોર્ટિફાઇડ ઘઉં/બાજરી/જુવાર દાળ/ચણા તેલ ખાંડ ફોર્ટિફાઇડ મીઠું	પીડીએસ- રાશનની દુકાન
રેશન કાર્ડ - APL	ફોર્ટિફાઇડ ચોખા ફોર્ટિફાઇડ ઘઉં/બાજરી/જુવાર દાળ/ચણા ફોર્ટિફાઇડ મીઠું	પીડીએસ- રાશનની દુકાન
જે લોકોની વાર્ષિક આવક <15000 રૂપિયા (BPL)	અંત્યોદય અન્ન યોજના (AAY) -35 કિલો અનાજ આપવામાં આવે છે.	રાશનની દુકાન
પીએમ-પોષણ (PM-POSHAN)		
1-8 ધો. વિદ્યાર્થીઓ	અક્ષય પાત્રા દ્વારા વિદ્યાર્થીઓ માટે શાળામાં રાંધેલું ભોજન આપવામાં આવે છે જેમાં નાસ્તા અને સંપૂર્ણ ભોજનનો સમાવેશ થાય છે	સરકારી શાળા
આયુષ્માન ભારત-પીએમ જય (Ayushman Bharat- PM JAY)		
વરિષ્ઠ નાગરિકો જેમની પાસે આયુષ્માન કાર્ડ હોય	તેમને ભારતની જાહેર અને ખાનગી પેનલવાળી હોસ્પિટલોમાં ગૌણ અને તૃતીય સંભાળ હોસ્પિટલમાં દાખલ થવા માટે કુટુંબ દીઠ રૂ. 5 લાખ પ્રતિ વર્ષનું કવર મળે છે.	પીએચસી/ દવાખાના

ગ્રામ આરોગ્ય સ્વચ્છતા અને પોષણ સમિતિ (VHSND) (ગ્રામ સંજીવની) ના દિવસે પૂરી પાડવામાં આવતી સેવાઓની સૂચિ અને લક્ષ્ય જૂથો નીચે આપેલા કોષ્ટકમાં આપેલ છે:

લક્ષ્ય જૂથ	**VHSND સેવાઓનો પ્રકાર**
	આરોગ્ય સેવાઓ
સગર્ભાઓ, ધાત્રી માતાઓ, બાળકો (0-5 વર્ષ, 10 વર્ષ અને 16 વર્ષ), કિશોરો, પ્રજનન વય જૂથની સ્ત્રીઓ	• પ્રસૂતિ પહેલાની સંભાળ- સગર્ભાવસ્થા નોંધણી, તપાસ, સૂક્ષ્મ પોષકતત્વો પૂરક, કાઉન્સેલિંગ વગેરે. • પ્રસૂતિ પછીની સંભાળ- સૂક્ષ્મ પોષકતત્વો પૂરક અને પોષણ પરામર્શ • રસીકરણ - બધા બાળકો અને સગર્ભા માતાઓ માટે • કુટુંબ આયોજન- ગર્ભનિરોધક અને પરામર્શનું વિતરણ • પ્રજનન તંતના ચેપ- સ્ક્રીનિંગ, કાઉન્સેલિંગ અને રેફરલ • કિશોર આરોગ્ય- એનિમિયા માટે સ્ક્રીનીંગ અને BMI ટ્રેકિંગ, ક્લિનિકલ સમસ્યાઓની ઓળખ, સેનિટરી નેપકિનનું વિતરણ, શાળા બહારના કિશોરો માટે IFA સપ્લીમેન્ટેશન અને રેફરલ
તમામ વય જૂથો	• ચેપી રોગો- ટ્યુબરક્યુલોસિસ (ટીબી) ના ચિહ્નો અને લક્ષણો ઓળખો • બિન-ચેપી રોગો- સ્ક્રીનીંગ, કાઉન્સેલિંગ અને રેફરલ
પ્રજનન વય જૂથની સ્ત્રીઓ, તેમના પતિ અને સાસુ	• લિંગ મુદ્દાઓ- ઘરેલું હિંસા અને બાળક/ બાળકી અંગેની જન્મ પહેલા તપાસ
	પોષણ સેવાઓ
પ્રજનન વય જૂથની મહિલાઓ, પરિવારના સભ્યો, 5 વર્ષથી ઓછી ઉંમરના બાળકો, શાળા વયના બાળકો, કિશોરો, સગર્ભા અને ધાત્રી માતાઓ	• પોષણ અંગે જાગૃતિ • વૃદ્ધિ મોનીટરીંગ • એનિમિયા નિવારણ અને વ્યવસ્થાપન • વિટામિન A ના ડોઝ • પૂરક પોષણ (THR) • પોષણ પરામર્શ

	સ્વચ્છતા ને લાગતી સેવાઓ
પ્રજનન વય જૂથની સ્ત્રીઓ, કુટુંબના સભ્યો	• શૌચાલય બનાવવા માટે આર્થિક સહયોગ • સલામત પીવાનું પાણી અને હાથની સ્વચ્છતા • સ્વચ્છતા અભિયાન – ઘર અને આજુબાજુને સ્વચ્છ રાખવું • નિર્મલ ગ્રામ પુરસ્કાર


ફળો
(150 ગ્રામ)
કઠોળ, ઈંડા અને માંસ
(90 ગ્રામ)
દૂધ / દહીં
300 મિલી
સુકા મેવા અને
બીજ (20 ગ્રામ)
ચરબી અને
તેલ (27 ગ્રામ)
કાર્બોહાઈડ્રેટ અને સ્ટાર્ચ યુક્ત ખોરાક
(270 ગ્રામ)
શાકભાજી
350 ગ્રામ

Appendix VII

Handout for VO/SHG members

સ્વ સહાય જૂથો માટે ખોરાક, પોષણ, આરોગ્ય અને સ્વચ્છતા (FNHW) પાસાના સંકલન અંગેની માર્ગદર્શિકા

ફુડ્સ એન્ડ ન્યૂટ્રિશન, ફેમિલી એન્ડ કમ્યૂનિટી સાયન્સીસ, **MSU**

તકનિકી નિષ્ણાત: ડૉ. હેમાંગીની ગાંધી (આસિસ્ટન્ટ પ્રોફેસર)

રીસર્ચ સ્ટુડન્ટ: આસ્થા બલોની (Sr. MSC PHN)

અનુક્રમ

Appendix VIII

Paper Presentations

Paper titled "Nutritional Status and Knowledge about Purna Program of Young Adolescent Girls of Vadodara District" conducted on 04th October, 2024 at ReAP, St. Teresa's College (Autonomous), Ernakulum

ABSTRACT

NUTRITIONAL STATUS AND KNOWLEDGE ABOUT PURNA PROGRAM OF YOUNG ADOLESCENT GIRLS OF VADODARA DISTRICT

Gandhi Hemangini* and Baloni Aastha**
Email ID: hgandhi1950@gmail.com, baloniaastha11@gmail.com

INTRODUCTION: Malnutrition across the lifecycle is prevalent across the country. Adolescent population is about one-fourth of the total population in India. Undernutrition among the late adolescent age group of girls needs to be addressed. In Gujarat, PURNA program is operational for the holistic development of the girls.

OBJECTIVES: The present study was planned to assess the nutritional status of 15-18 yr adolescent girls enrolled under PURNA Program and also to assess knowledge about PURNA Program.

METHODOLOGY: Adolescent girls enrolled under PURNA Program were interviewed using pre-tested semi structured questionnaire. Total 10 Anganwadis were purposively selected and 142 girls were enrolled for the study. Height and weight of the girls were measured using standard methods.

HIGHLIGHTS OF THE FINDINGS: 43% of the adolescent girls fall under the age group of 13-15 yrs and 57% of the girls fall under 16-19 yrs. 54% are school-going and 46% are non-school going girls. 32% girls were thin and 15% girls were severely thin. Nearly 50% of the girls were aware about PURNA Program, its objective and services.

CONCLUSION: There is a need to strengthen counselling part on PURNA day which is 4th Tuesday of the month under PURNA Program. This may create better awareness about PURNA Program and utilization of services by the target group.

ACKNOWLEDGEMENT: We acknowledge 11 students of UG PHN Program who helped us in data collection.

KEY WORDS: Adolescent girls, Nutritional Status, PURNA Program

*Faculty Member, **Research Student

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College with Potential for Excellence-UGC

Presentation Certificate

14 th Edition of ReAP
"The Science of Living Well : Latest Research and Trends in Lifestyle Management"

We hereby certify that the paper titled
'Nutritional Status And Knowledge About Purna Program Of Young Adolescent Girls Of Vadodara District'
was presented by
Baloni Aastha
as
Oral Presentation
Co-author :- **Gandhi Hemangini**

In Research Advancement Programme (ReAP-2024) organized by Department of Home Science and Centre for Research on 4th October, 2024.

Dr. Alphonsa Vijaya Joseph	Ms.Teresa Kuncheria	Dr.Rashmi H Poojara	Ms.Ansu Tom
Principal	Head of the Department	Convenor	Co-convenor

Paper titled "Socio-economic status and Dietary Practices of Self-Help group members of selected block of Vadodara District, Gujarat, India" conducted on 20th and 21st March, 2025 at International Conference on Occupational Health and Safety Measures-2025

ABSTRACT

SOCIO-ECONOMIC STATUS AND DIETARY PRACTICES OF SELF-HELP GROUP MEMBERS OF SELECTED BLOCK OF VADODARA DISTRICT, GUJARAT, INDIA

Gandhi Hemangini* and Baloni Aastha**

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Department of Foods and Nutrition, Faculty of Family and Community Sciences, MSU, Vadodara

INTRODUCTION: Self Help Groups (SHGs) typically belong to low- to middle-income socio-economic backgrounds, where financial constraints, education levels, and access to resources influence their health and well-being. Proper dietary practices are essential for them as they help prevent malnutrition, improve immunity, and reduce the risk of lifestyle diseases such as diabetes and hypertension.

OBJECTIVES: The present study was planned with the broad objective to assess socio-economic status and the dietary food patterns of SHGs in Waghodia Block of Vadodara District.

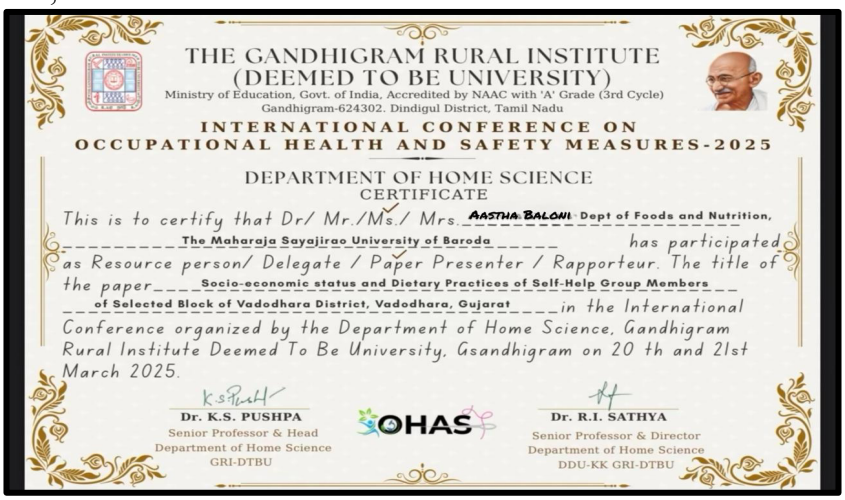
METHEDOLOGY: Under Vadodara district, one block was selected purposively under which **1 Cluster Level Federation (CLF) was randomly selected** and **120 SHG members** were enrolled for the study. All SHG members were interviewed using pre-tested semi structured questionnaire. Dietary information was elicited using 24 hr. dietary recall method.

HIGHLIGHTS OF THE FINDINGS: Around 64% of the SHG members fall under APL category. Forty-eight per cent of them were educated till primary, 30% of them were educated till secondary, and 13% were illiterate. Forty-one percent of them were self-employed, 40% of them are skilled workers, and 13% of them are involved in agriculture. From 24 hr. dietary recall, 92.5% of the members had adequate dietary diversity as they had consumed >=5 food groups in a day.

CONCLUSION: It was found that dietary diversity among SHG members was found to be good yet there is a need to create awareness about FNHW concept under DAY-NRLM for improving nutritional status thereby facilitating livelihood.

KEY WORDS: Socio-economic status, Dietary Practices, Self- Help group members, DAY-NRLM

*Faculty Member, **Research Student



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INTERNATIONAL CONFERENCE ON
OCCUPATIONAL HEALTH AND SAFETY MEASURES-2025

DEPARTMENT OF HOME SCIENCE
CERTIFICATE

This is to certify that Dr/ Mr./Ms./ Mrs. AASTHA BALONI Dept of Foods and Nutrition, The Maharaja Sayajirao University of Baroda has participated as Resource person/ Delegate / Paper Presenter / Rapporteur. The title of the paper Socio-economic status and Dietary Practices of Self-Help Group Members of Selected Block of Vadodhara District, Vadodhara, Gujarat in the International Conference organized by the Department of Home Science, Gandhigram Rural Institute Deemed To Be University, Gsandhigram on 20 th and 21st March 2025.

Dr. K.S. PUSHPA
Senior Professor & Head
Department of Home Science
GRI-DTBU

OHAS

Dr. R.I. SATHYA
Senior Professor & Director
Department of Home Science
DDU-KK GRI-DTBU

Baseline Assessment of VO/SHG members

Sensitizing VO/SHG members on FNHW components through training

FNHW sessions conducted by Researcher and the Guide

Need to integrate FNHW concept under DAY-NRLM session taken by TLM, Waghodia

Rally on gender related violence conducted by VO/SHG members in presence of TLM, Waghodia, and CLF, Nimeta

Endline Assessment of VO/SHG members

Monitoring and execution of action plan in VO/SHG meetings

Integration of FNHW components in VO/SHG meetings conducted during 3 months