IMPROVING THE HEALTH OF WOMEN AND GIRLS IN THAR

Dining for Women

Thousand Currents

Gravis

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Recounting the project progress and learning

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2020

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EXECUTIVE SUMMARY

"Improving health of women and girls in Thar" project demonstrates that it is possible to create an effective program that improves the health of women and adolescent girls in a short time. This publication draws on lessons learnt on how to strengthen community and government efforts to improve reproductive and sexual health of women and girls.

The overarching goal of the project was to contribute to improving the health conditions of women and girls in 5 villages affecting about 3500 women and girls, and 500 adolescent boys through education, nutritional enhancement and better linkages with government healthcare.

The interventions to attain the project objectives included education, training and capacity building of Village Health Workers, women and adolescents, mobile pharmacists, developing Arid Horticulture Units, liaising with the government officials for better services.

To study the impact of the project intervention a brief qualitative assessment was conducted in all 5 project villages. During the study we reached out to 150 Arids (30 from each village) directly and surveyed pregnant women, lactating mothers and adolescent girls.

FINDINGS

Sound planning of the project was a positive attribute that helped methodical execution of all the envisaged activities and outcomes. The cadre of 10 Village Health Workers raised health knowledge of women, adolescent girls and adolescent boys. They proved to be knowledge leaders in the community. Mobile pharmacies provided nutrition supplements/multivitamin and Iron and Folic Acid tablets and medical supplies for minor ailments at people's doorsteps at an affordable cost. The services are sustainable with a cost recovery approach. Arid Horticulture Units will provide all important nutrition to women and girls. The holistic model has addressed multiple aspects of sexual and reproductive health and is a good replicable model in other regions.

RECOMMENDATIONS

- Although much progress has been made in a very short span of time, the project activities should continue/extended for at least two years as behavioral change in any community requires constant interaction and follow up for mobilizing the communities and expand their participation in the planning and management of health services to improve women's nutrition, general health and birth preparedness, to ensure timely and safe deliveries there is a need to encourage husbands, parents, in-laws, families and neighbors to become active partners in supporting women to make choices that will improve their lives and health.
- The novel concept of mobile pharmacist has been highly appreciated by the community and has an inbuilt sustainable cost recovery approach hence should continue services with a hand holding support from GRAVIS hospital.

Chapter 1: Situational background

1.1 The health scenario in India

India ranks extraordinarily high in maternal mortality rate as compared to many developing nations. Despite being one of the first countries of the world to launch maternal health programme, India is still struggling with a high maternal mortality. India accounts for 20 percent of global deaths occurring due to preventable causes related to pregnancy and childbirth. Though Maternal Mortality Ratio (MMR) has dropped from 212 deaths per 100,000 live births in 2007 to 130 deaths in 2014 - 16, the decline is not enough to meet the Sustainable Development Goals (SDG) target of 70 deaths per 1,00,000 live births. Only three states- Kerala, Maharashtra and Tamil Nadu have been able to meet the target till date. In addition to the number of deaths each year, over 50 million women still suffer from maternal morbidity due to acute complications from pregnancy. The Infant Mortality Rate (IMR) remains at 43 per 1000 live births, which is not only higher as compared to its South Asian counterparts, but more than the sub Saharan African countries too.

Government has taken many steps to provide better healthcare facilities across the country and promised to address roadblocks in the health care sector including shortage in infrastructure, access to medical facilities and inexpensive treatments.

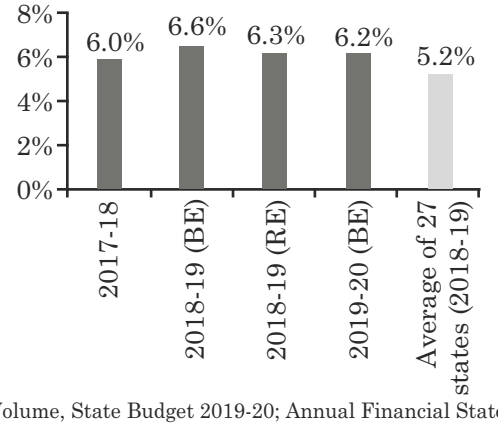
Thar Desert Landscape

1.2 Problems of health in Rajasthan- The Thar Desert

Rajasthan is the largest state in India with vast area covered by Thar Desert or the Great Indian Desert. Although this area is devoid of many natural resources it still remains one of the most inhabited deserts in the world. Although Rajasthan has close to 5 percent of India's population, the state government's expenditure on health care is 6.1percent, 93.9 percent of revenue is allocated to meeting other needs. However, it is highest among other larger states of the country. Over a period of time the State has shown improvements in health indicators and stands at the second position in India. Despite all this success, Rajasthan may be one of the largest states in India, but it is still one of the lowest in terms of basic health indicators.

According to Health Index report 2019, released by Ministry of Health and Family Welfare (MoHFW) & NITI Aayog, Rajasthan is among top three states in terms of incremental performance but on overall health indicators it still stands on 16th position among 21 larger states in India. Primary health care in the State has not reached a large number of poor people, especially women, people belonging to the lower castes and communities living in remote areas. One of the underlying reasons is that 20 percent positions of the Auxiliary Nurse Midwives (ANM) at sub centers are vacant. There are many other factors that lead to poor health. Health problems are linked to poverty, poor hygiene practices, insufficient education and limited access to health services due to remoteness of villages. They are uninformed of their rights as individuals and lack the resources to change their situation for themselves and their families. Trained health staff is often limited and shared between health posts and the high level of absenteeism among health practitioners. These factors come together they create a vicious cycle in which many people, including men, women and children cannot find their way out.

Spending on health as a % of total expenditure



Source : Rajasthan Volume1 : Summary Volume, State Budget 2019-20; Annual Financial Statement 2018-19 of respective states; PRS.

* The 27 states include all states except Arunachal Pradesh, Manipur, and Meghalaya. It also includes the Union Territory of Delhi.

1.3 THE PROJECT

A) Project background - The project "Improving the Health of Women and Girls" (IHWG) aimed to address the health challenges prevailing in the Thar region through its proven best practices and community based interventions that had been instrumental in bringing positive changes in the life of people, especially women in the region.

Women and Girls in Thar

Overall goal of the project implemented by GRAVIS and Dining for Women (DFW), in five villages of Osian block of Jodhpur district in Rajasthan was to promote gender equality, enhance food & nutrition security and climate resilience through horticulture and availability of medicines within the villages.

The prime beneficiaries of the project were 3,500 women and girls, including a total of 7500 people in 5 villages of Thar who were found to be severely impacted due to food and water insecurity as well as due to lack of medical and public health services, during the preliminary study of these villages. The health problems including anemia, malnutrition and vitamin deficiencies were most common. In addition, 500 adolescent boys were also included in the trainings. Hence, the overall direct beneficiaries' numbers were 4,000. The project provided indirect benefits to the rest of the population, the remaining 3,500 persons.

B) Activities Accomplished

Sr. No	Activity	Activities Planned	Activities Completed	Beneficaries
1.	VHWs	6	6	All Villagers
2.	Adolescents Training	50	50	2092
3.	Arid Horticulture Units	30	30	30
4.	Mobile Pharmacy	2	200 Visits in the 5 Villages	2410
5.	Project Document	1	1	Over 5000 People

C) **Outcomes**

- A cadre of 10 Village Health Workers (VHWs) identified and trained.
- The VHWs cadre improved the health knowledge levels of about 3,500 women and girls and about 500 adolescent boys.
- 2 mobile pharmacists continue providing nutrition and medical support to about 300 woman and girls in a month.
- 30 AHUs developed providing food and nutrition security to 30 families or about 300 persons.
- 1 project document developed and published, promoting replication of the model.

1.4 GRAVIS : Meeting the health needs of women in Thar

GRAVIS or Center for People's Science for Rural Development has been working in the Thar for more than three and a half decades. Its vision is to empower the improvised rural communities in Thar region with an integrated community approach towards rural development. With primary focus on water security, food security, education and health care, GRAVIS is doing a commendable job.

Founded in 1983, **GRAVIS or Center for People's Science for Rural Development** is a Non -Governmental Organization. It employs Gandhian principles to serve the poor inhabitants of Thar Desert in Rajasthan, Uttarakhand, UP and MP in India and provides technical support to projects in Africa and South East Asian countries. During its journey in Thar Desert GRAVIS has served in more than 1,300 villages with its activities and interventions and benefits over 1.3 million people living in this region.

To provide health services to the rural population, GRAVIS has set up a comprehensive hospital in a village of Thar Desert. This 70-bed facility hospital is fully equipped and is manned with a team of well qualified doctors and nurses. The facility caters to people living in about 50 villages in the surrounding area and is a major source of medical help for about 40,000 women. In the last 15 years, the hospital has provided very good services to women and other patients of the area.

1.5 Dinning for Women (DFW)

DFW is the world's largest educational giving circle that funds grass root projects working in developing countries to fight gender inequality, dedicated to transforming lives and eradicating poverty among women and girls. Their education component is equally as important as their fund raising. Through member education and engagement, as well as the power of collective giving, it funds grass root organizations that empower women and girls in

Adolescent training

An AHU

GRAVIS and DFW under took IHWG project in early 2019 in remote villages of the Thar Desert. This project document records the progress adn learning of the project, to share the experiences and promote replication.

Chapter 2 : Study design

The impact assessment study for project entitled **"IHWG"** was conducted in 5 villages of Osian block of Jodhpur district in the Thar Desert. A broad qualitative methodology was adopted to analyze and understand the impact of intervention under the project for improving health of women and adolescents.

A VHW meeting

2.1 Aims & objectives

The objectives of the study were:

- To assess the impact and effectiveness of the interventions undertaken under the IHWG project
- To identify factors that constrain safe motherhood
- To identify the factors that can be leveraged and built to
  - Reduce infant and maternal mortality
  - Enhance nutrition

2.2 Data collection

The study is primarily based on the information gathered from five identified project villages. The primary data was collected from a sample of 150 Arids. Qualitative methods of data collection (iterated below) were used to gather insights into the efficacy and impact of interventions:

- Field visits to the villages
- Interactions with the community, community leaders, women's groups
- Focus group discussions, desk review and unstructured interviews were conducted with the community.

Secondary resources on maternal and child health in India, Rajasthan and Jodhpur were studied to understand the current status. Also it helped in understanding the issues and design the study accordingly. Secondary data is used to make comparison of the target area and Rajasthan for a larger outlook.

Chapter 3 : The findings

3.1 Preliminary findings

A brief assessment was conducted in all five project villages prior to the implementation of the project interventions. The major findings of the assessment were:

(a) Women and adolescent living in these remote villages of Thar were severely impacted due to food and water insecurity as well as due to lack of medical and public health services.

(b) It was observed that young girls enter the reproductive age as victims of undernourishment and anemia, and face greater health risks due to early marriage, frequent pregnancies, unsafe deliveries, and sexually transmitted diseases.

(c) The incidence of infectious diseases such as malaria, tuberculosis and gastro intestinal infections were also very high.

(d) Lack of health services, limited knowledge about nutrition and health, poor hygiene and sanitation conditions, myths and misconceptions about menstrual health was prevalent in these villages.

(e) High number of school drop outs and early marriage were high leading the young girls into the vicious cycle of malnutrition. The communities did not have access to fresh vegetables and a fruit, void of daily requirement of balanced diet leads to various deficiencies among children, adolescents and women of reproductive age.

3.2 Project interventions and their impact : Past one year has seen a number of activities in this regard. The main interventions were:

(1) Mainstreaming gender for building healthy community

Gender main streaming has been identified as one of the key strategies in the project and accordingly a number of interventions have been designed as part of the project with a view to empower women to take control over their health and well-being of their family. Women empowerment has direct ramifications for building equitable and sustainable societies. Recognition of the role of women constitutes an important aspect of national development. Main streaming gender concerns is also reflective of general well being and harmonious social relations that further propel growth, livelihood security and better standards of living.

The project coordinated goal oriented interventions that empower rural communities and is gender sensitive as well as context specific. The aim was to create an enabling environment to empower, specifically women and communities in general to enhance the demand for health services along with access to services. Gender mainstreaming has various dimensions that relate to status of girls and women in families, communities and

in society as citizens. Adoption of gender mainstreaming approach and gender sensitive strategies confront constant challenges when translated into interventions. Since gender connotes the differences in opportunities and privileges available to women and men in almost all spheres of life, the constraints are either embedded or emanate from socio-cultural and institutional factors. Understanding and acknowledging these constraints is crucial to address them effectively and ensure favorable outcomes.

Community centered participatory approach to social development entailed exploring the potential of the vulnerable groups as well to contribute towards improving their health while transacting the empowering process. Health is an important programmatic priority for GRAVIS and in addition to the curative medical services; GRAVIS also provides preventive aspect by generating awareness and education of self- care etc. The integrated community development approach as juxtaposed to the complexity of the problems faced by the women that are aggravated by the belligerent climate, demands special focus on exploring their potential and building their capacities to be able to contribute towards addressing their own health related problems.

(2) VHW : Foot soldiers to combat health needs in the community.

VHWs play catalytic role in the community. Usually the women who had been already working as a traditional birth attendant in the village were identified to work as village health workers. These women are well accepted by the community hence it is easy for them to mobilize the community. Their education level is low but they are highly devoted and determined to work for the well being of the community. VHWs have been the key **change agents** for organization's comprehensive approach to health improvement. 10 VHWs in 5 project villages were selected who were trained on various health interventions of the project. These VHWs met on monthly basis to review skills, share stories, and update statistics.

Trainings of VHWs

Once identified and selected, VHWs initially received extensive training at GRAVIS field training center by the resource team. Over half of the training time was dedicated to personal development in order to build self-esteem, confidence, and skills necessary for community organization and effective communication. The rest of the training was spent developing clinical knowledge and skills that equip these women to function as primary health care workers. Equipped with indigenous knowledge these VHWs were skilled with modern concepts of nutrition and health care - before, during pregnancy and after delivery, issues of adolescent girls and boys. Various audio visual tools were used for their training for better retention and understanding of messages. Additional importance was given to enhance their communication skills through role plays, to build their confidence and strengthen their knowledge on health and nutrition messages. During the training a field visit was also

conducted to the nearby village for demonstration of counseling a pregnant woman for Antenatal Care (ANC) and care during pregnancy. This gave them an insight to improve their message delivery skills and developed a better understanding on the technical interventions.

A VHW training

The training provided by GRAVIS focused on various aspects pertaining to leadership. Health and nutrition, horticulture, rainwater harvesting, rights and entitlements of women, self -care during pregnancy, after delivery and counseling mothers for infant feeding. They were also informed about various government schemes and benefits for the women and adolescents.

The trainings enhanced the capacities of these frontline workers and equipped them to play their role confidently in the community. VHWs have been enthusiastically involved in playing the major role in addressing many issues at the community level such as improving school education, reducing the number of school dropout, providing better health care counseling to women of reproductive age, accompanying the families to hospital for referral services and institutional deliveries and also ensuring that government funds at the village level are judiciously spent. They adopted a multi –pronged strategy to address the health of women of reproductive age.

Role and impact of VHW

They play a key role in promoting utilisation of available maternal and child health services and raise awareness on Iron and Folic Acid (IFA) and other health and nutrition programs through monthly mothers' groups meetings and one-to-one counseling during Arid visits. The distribution of IFA is reinforced by them through primary health centers and outreach and ANC clinics resulting in substantial increase in institutional deliveries, early initiation of breast feeding, immunization and proper post natal care to reduce chances of obstetric infections. They also lay special emphasis on educating the mothers in proper handling of drinking water to avoid diarrohea among children. Improving diet practices cannot be changed by counseling the mother along, as the decision maker in the house is generally husband or the mother –in- law, hence the VHWs include elder women and men of the families too, while imparting health education to the families.

VHWs support the organization team in organizing awareness camps, medical camps and trainings for adolescents and women. They are actively involved in adolescents' training and helped in motivating the girls for participating in these trainings. They work closely with the village development committees and government health service providers. VHWs provide basic preventive healthcare and knowledge to the villagers and help organize and facilitate Women's Groups and the Adolescent Girls Programs.

VHWs not only act as health workers and provide minor health services but they also mobilize the communities to achieve better sanitation, hygiene, family planning methods among newlyweds; ensure availability of pills and condoms for families, as better access to contraceptive information and services can reduce the number of girls becoming pregnant and giving birth at too young an age. They accompany families for institutional deliveries too as the families have faith and confidence in them.

They act as guide, friend and philosopher to support the girls in pursuing higher education, personal issues and problems which girls cannot share with anyone, they share with these VHWs. These workers have been strongly supporting the adolescent girls' issues with their parents to delay the girls' marriage and help them in pursuing higher education. They educate them for eating proper diet as developing healthy eating habits in adolescence are foundations for good health in adulthood. They ensure that girls ensure IFA and multi vitamins and maintain hygiene during menstruation. For that matter she even makes the sanitary pads available from the schools or at times from nearby markets. The VHWs try to in silt values and norms of community among both boys and girls of adolescent age which will lead to improvement in positive attitudes and practices that would help the girls and boys realize their aspirations.

CASE STUDY

Every life counts

Sita Devi lives in Cherai village with her family of 9 including her husband, 6 boys, 1 girl. Her husband works on daily wages and the financial condition of the family was miserable.

All her deliveries took place at home in the absence of medical aid which were life threatening. Bhavri Devi, a VHW met Sita when she was pregnant for the 7th time and advised her to visit the doctor. She was diagnosed with severe anemia. Sita Devi's financial condition was not good due to which she couldn't consume proper diet, and go for regular check-up during the pregnancy. The mobile pharmacists working in the project gave her IFA and multi vitamins for improving her haemoglobin. By last trimester her haemoglobin had raised which was good and she was suggested to deliver her baby in the hospital. She had a normal delivery in the hospital.

Today, her child is 2 months old and is also getting vaccinations on time.

Sita Devi says **"GRAVIS *team and Bhavri Devi a VHW took care of me during my pregnancy. If they would not have been there this time I might have lost my life, as already I had faced complications during my previous deliveries. They are my life savior".***

(3)Adolescent girls

Adolescence is a period of transition from childhood to adulthood. For many girls in Thar, the mere onset of puberty that occurs during adolescence marks a time of heightened vulnerability in matters like leaving school, child marriage, early pregnancy, sexual exploitation, coercion and violence. Adolescent girls are less likely than older women to access sexual and reproductive health care, including modern contraception and skilled assistance during pregnancy and childbirth.

Adolescent girls in a training

GRAVIS believes that eliminating child marriage and meeting adolescents' sexual and reproductive health needs would protect their rights and help prevent girls from having too many children too early in life, which threatens the health of mothers and children and strains young families' limited resources. The project interventions focused on preventing child marriages and encouraged families for investing in girls' education and health.

To address all the aforementioned issues of adolescents both girls and boys, regular trainings were held in various public and government schools located in the project area and at some locations in the villages. A hands-on curriculum tailored to the girls' interests included topics of mental and physical health, including menstrual health and hygiene, life skills the environment, and social issues. The VHW regularly motivated and counseled the school dropout girls to attend these trainings. For the same they pursued their parents too. The teachers of the schools in the village reported that the school attendance of girls (13 – 16 years) has considerably improved and parents who were planning to withdraw their daughters from schools after grade 8, plan to continue the education of their daughters at least till high school. Further to this the interaction with their parents and teachers has helped in retaining many adolescent girls in schools and convinced their parents in delaying their marriage up to the age of 18 years.

These training sessions resulted in building confidence of the adolescent girls, encouraged them to speak up about their personal issues common during puberty. They have gained the

knowledge about hygiene and sanitation during menstruation, basic understanding about good touch and bad touch. Prior to the trainings the girls were using cloth during menstruation, unhygienic handling of the cloth and lack of sanitation was leading to various infections which the girls were suffering silently. The training and counseling sessions provided the girls' a platform to share and talk about their problems, proper treatment was provided to these girls by the medical officer from GRAVIS.

The lives of girls and boys are deeply entwined, and so must be the solutions to their problems. For the rights of girls and women to be fulfilled, boys were counseled in schools to 'unlearn' negative patterns of behaviour and learn positive new behaviors based on tolerance and equality. Separate trainings were conducted for adolescent boys that helped in sensitizing them about physical changes that occur during puberty, clarifying their doubts, educating them about values and life skills. The trainings were helpful in their personality development.

Working with teachers and parents to break down taboos regarding gender stereotypes was also taken up which resulted in establishing equality and increased girls' access to higher education and postponing their marriage.

These trainings and counseling sessions resulted in enhancing the adolescents' knowledge on personal care and diet. The VHW coordinated with Anganwadi workers and insured the administered IFA tablets weekly to the adolescent girls and boys. Reduced fatigue, increased appetite, and improved concentration were cited as major benefits of IFA tablets. The girls perceived various benefits and they reported to the supervisor and the VHW that since they were consuming IFA tablets, they did not feel tired, can concentrate better on their studies, did not fall sick, were more energetic, having regular menstrual cycle, and reduced abdominal pain during menstruation. In addition, improvement in awareness regarding iron-rich foods among mothers of children was also observed during regular health and nutrition education sessions. This programme became an important platform for inter sectoral convergence among key government departments and GRAVIS programs to empower adolescent girls, reduce gender and social inequities, and break the intergenerational cycle of under nutrition and deprivation in these villages.

IHWG is the first step for thousands of adolescent females like Pooja and Laxmi in coming close to their dreams. By gaining knowledge about various domains of quality of life, they are instilled with a sense of decision-making and critical thinking that does not only cater to their individual needs and health but as a whole can improve their livelihoods and lives of many. It empowers girl to know what's right, what's beneficial, what are the implications of daily-life activities, may be as tiny as disposal of sanitary pads which may look trivial but has the power to influence the health and lives of many.

CASE STUDY
Pooja dreams to become a doctor

Pooja hails from Chandalia Village, a small village in Osian block of Jodhpur district. She is the eldest child of the family with five younger siblings. Her father works as a daily-wage laborer and mother is a homemaker. Pooja aspires to be a doctor as she wants girls and women in the villageto have access to health facilities. Her father wanted to marry her off as soon as she completed her 9th grade education due to financial constraints and social pressure. Since Pooja was determined to continue higher studies, she approached GRAVIS supervisor for convincing her father for postponing her marriage and to enroll her for higher education. The supervisor discussed her case with Dr Vasundhra, Medical Officer at GRAVIS, who called and counseled her father for the same. Pooja's father fairly understood and was convinced to allow Pooja for perusing higher studies. She works hard to make her dreams come true.

In Pooja's words, "I am very thankful to Vasundhra ma'am and Reshma didi, that they talked to my father and convinced him to allow me for further studies. Now I will work hard and educate other girls and encourage them to study. One day I'll become a doctor and provide health services in the villages. '

CASE STUDY

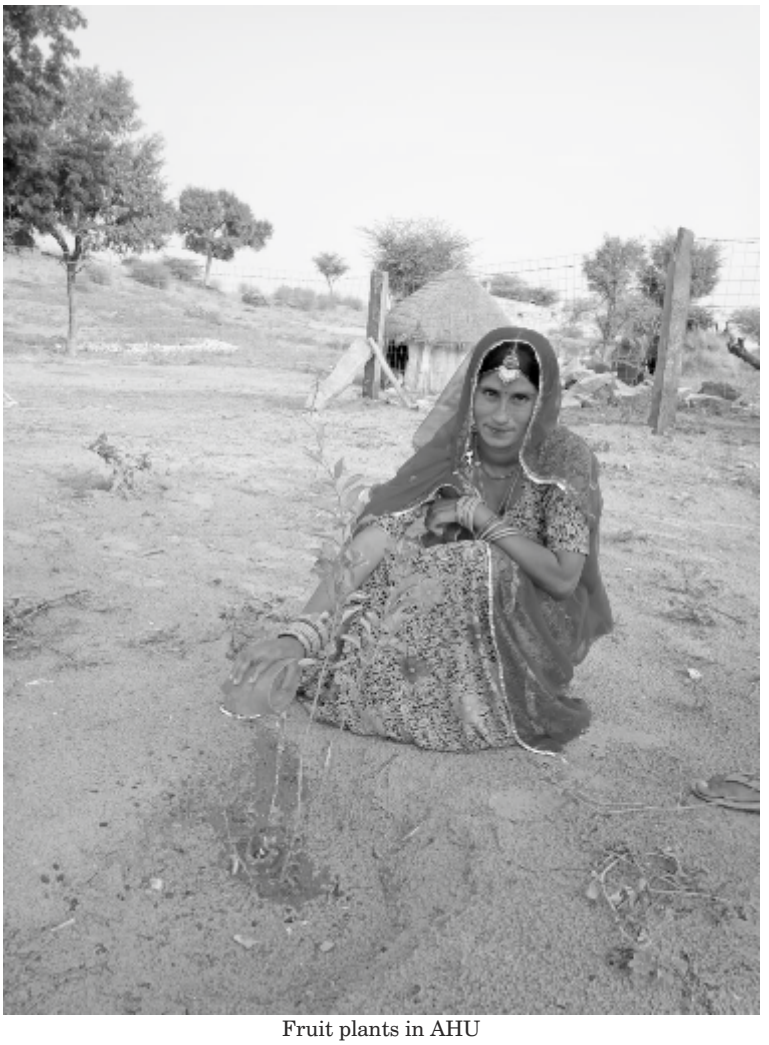
IHWG: A ray of hope for Laxmi

16 year old Laxmi has never been to school but her confidence is far beyond the school going girls of her age. She lives in village Bano ka Baas with her parents and three siblings. Like other girls in the village she did not have the privilege to attend school due to family constraints. Her father works in the nearby mines as a daily labour and mother is a home maker. Being the eldest child the family Laxmi had to forgo school to help her mother in fetching water, cleaning the house and take care of her younger brother sister. Collecting water is an irksome journey, especially in dry areas of Thar Desert.

Being 'needed at home' was the major reason why Laxmi, and other girls like her, from poor families, drop out of school.

After several interactions Bhawari Devi, VHW, could convince Laxmi and her family for sending her to the trainings. Laxmi hesitantly attended few sessions. In no time, Laxmi started enjoying these trainings and there was no looking back. The project has brought a purpose in life of girls like Laxmi. The interactive counseling sessions have answered numerous myths and doubts in the mind of these girls.

(4) Arid Horticulture Units



Fruit plants in AHU

Due to persistent drought conditions and chronic water shortages, cultivating food crops is extremely challenging for Thar Desert communities. AHUs are targeting the nutritional needs of the community, especially women and adolescent girls. Empowering women farmers has become a global goal to improve nutrition in the Arid, particularly for women and children. This model of AHU developed in the project villages is holistic as it empowers the women of the family, can benefit dietary quality, food security, nutritional outcomes, and women's status, decision making, and income levels, can be replicated in other arid zones as well. While vitamins and minerals are essential for women and men of all ages, acute deficiencies for girls, teens, and women, including during pregnancy are extremely common. As part of the IHWG project, a total of 30 units were developed in 5 project villages. Each unit consists of 10 to 15 desert-friendly plants, such as plum, lemon, pomegranate, and guava. The plants are watered using the home's waste water, and pitcher irrigation (an ancient, but efficient system using buried pitchers of water) provides ongoing moisture. Once harvested, the yield is used for both nutrition and income. Surpluses are sold at market and profits go back into creating additional units. AHUs are making a significant difference for rural communities, particularly those challenged by the extreme arid conditions of Thar Desert. As these units are being managed primarily by women, the control over these horticulture units has amplified their abilities to secure livelihoods for their families and helped women explore their potential to contribute towards ensuring food and nutrition as well as livelihood security for the family. It is heartening to know that 85-90 percent of the saplings planted have survived and will start flowering in another two years of time. Many women have planted vegetables like onion, garlic, chilies, radish etc. The VHWs also organized monthly meetings with these families to discuss essential nutrition actions and essential hygiene actions, as well as farming techniques.

CASE STUDY

AHU – Bringing health and happiness to Indira

Indra Devi lives in village Cherai of Tinwari block with her husband and four children. Apart from the house they do not own any land. Her husband sells cosmetics, bangles etc to earn their daily living. They have kept four goats to support the family for milk. Indra had been ill for quite a long time and the family had to spend a lot of money for her treatment. Meanwhile, Ratna Ram met the VHW - Bhawari Devi who facilitated the family in developing the AHU with 20 trees of lemon, plum, gunda, pomegranate and drumstick.

Indra took the initiative to grow vegetables such as garlic, onion, green chillies and beans here, for her daily use. She is confident that soon the horticulture unit will support her family in enhancing their nutritional status as well as yield income. She's proud of her little success and chooses an optimistic view, now that all her primary concerns have been resolved.

Indra Devi says "with the fruit garden at my house, I am busy taking care of it, watering them in my free time, which has helped to keep myself busy. Never did I think in my life that I will have a garden at my home. I am very happy about it."

(5) Mobile pharmacists

Mobile pharmacy concept has been used for the first time and has proved to be a successful, innovative strategy. Taking supplies to people's door steps has not been used in the past in the Thar Desert at any time. Lack of access to healthcare is one of the most challenging health issues confronting the people of Thar. Many women and children do not seek medical care or treatment due to the long distances they have to travel. To address this, GRAVIS has been trying to reach out to the desert community through its outreach mobile medical camps which have been very successful in providing health services to the most vulnerable hard to reach locations. However, these outreach camps cannot reach at the door steps of the communities. Hence, an innovative novel idea of **Mobile Pharmacist** was evolved by GRAVIS team. Two mobile pharmacists, having appropriate qualifications with degree from a recognized institution, with three to five years of experience in practicing pharmacy, were selected, trained and equipped with a motor bike and a pharmacy kit, including vitamin supplement tablets, IFA tablets, Oral Rehydration Salt (ORS), first aid material and contraceptives to reach out men, women and girls within the villages to provide them nutritive supplies and basic medication (prescribed mainly for Non-Communicable Diseases) to take care of their primary nutrition and medical needs. An affordable cost on these supplies was charged from the community for sustainability. They operated in close coordination with the village health worker and ANM in the village. During their home visits they motivated and counseled the adolescent and also pregnant women for IFA consumption. They regularly interaction with men and motivated them for adopting means of family planning for birth spacing. As a result nearly one fourth of the men underwent the sterilization and also started using condoms.

Chapter 4 : Recommendations and conclusion

4.1 Recommendations

Although much progress has been made in a very short span of time, the project activities should continue/extended for at least two years as behavioural change in any community requires constant interaction and follow up for mobilizing the communities and expand their participation in the planning and management of health services to improve women's nutrition, general health and birth preparedness, to ensure timely and safe deliveries there is a need to encourage husbands, parents, in-laws, families and neighbours to become active partners in supporting women to make choices that will improve their lives and health.

Greater focus on nutrition & hygiene –If the health and nutrition of adolescent is improved they will become healthy mothers but any intervention to improve the conditions of adolescent girls cannot be limited to providing information about hygiene or giving additional nutritional supplement, there is a need for interaction with parents to make them sensitive towards health of their young girls and help them pursue their goals. Adolescent girls groups can be created for better interactions. Adolescent girls groups can exert social pressure on parents and communities to change the social norm and prevent child marriage. GRAVIS can advocate for creating spaces for self-expression and meaningful interpersonal communication with peers in schools. This will help girls acquire leadership skills, gain confidence, learn to negotiate and make informed choices and to be equal partners in transforming inequitable structures and systems.

Continuity of mobile pharmacist- With a hand holding support from GRAVIS hospital the innovative concept of mobile pharmacists should continue as their services had been in great demand and they can sustain with an affordable cost recovery approach.

Continuity of VHWs- The VHWs reside in the project villages hence they should continue to sensitize families and bring awareness in the community. VHWs are the back bone of the project and act as change agents in the community. They are a strong link between the project team and the community. They support in sustaining the project best practices in the community beyond the project timeline. They should continue to give their services in the community. The VHWs can also mobilize and motivate the families for upkeep of the AHUs and make them aware about the benefits of AHU.

Linkage with Government schemes- The AHU prove to be an asset in the desert for providing fresh fruits and vegetables, resulting in enhancing nutritional status of women and income of family. These units will also help the community in drought mitigation and climate change adaptation. Establishing linkage and liason with various government schemes can support in scaling up of these units.

Communication through modern means- As these days most of the families posses mobile phones, more electronic medium/ mobile phone Short Message Service (SMS) can be used for spreading messages among the women and adolescents.

4.2 Conclusion

1. Overall, the model has brought self-reliance, leadership and well-being for women and girls.
2. With a multi pronged, gender main streaming approach the project interventions addressed the holistic development of women and adolescents resulting in better health and well being to a large extend.
3. Within its intervention project addressed several SDGs. By providing horticulture, the communities achieved food and nutrition security that is in line with SDG 2 – End hunger, achieve food security and improved nutrition and promote sustainable agriculture. With its major focus on women and girls' health, the project has relevant to SDG 3 – Ensure healthy lives and promote well-being for all at all ages. The project interventions could impact girls' health status providing them opportunities to attend schools, that is directly linked with SDG 4 – Ensure inclusive and quality education for all and promote life-long learning. With women and girls being the direct beneficiaries of the project, the project has been in line with SDG 5 – achieve gender equality and empower women and girls. The project also has relevance with SGD 13 and SDG 15 focused on climate action and life on land through its focus on arid horticulture.
4. The holistic model of the project was able to address multiple aspects of sexual and reproductive health and can be a good replicable model in other regions.

Acronyms –

ANC – Antenatal Care

AHU – Arid Horticulture Units

ANM – Auxiliary Nurse Midwives

DFW – Dining for Women

GRAVIS – Gramin Vikas Vigyan Samiti

IMR – Infant Mortality Rate

IHWG – Improving Health of Women and Girls in Thar

IFA – Iron and Folic Acid

MMR – Maternal Mortality Ratio

MoHFW – Ministry of Health & Family Welfare

ORS – Oral Rehydration Salt

SMS – Short Message Service

SDG – Sustainable Development Goals

VHW – Village Health Workers

Glossary

Anganwadi	–	Government Health Centre
Auxiliary Nurse Midwife	–	Village level female health worker in India
Gunda	–	Glossy green globular fruit of the cordial tree

Notes

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Gramin Vikas Vigyan Samiti (GRAVIS) or Center of People's Science for Rural Development is a non-governmental, voluntary organization that takes a Gandhian approach to rural development by working with the poor of the Thar Desert to enable them to help themselves. Since its inception in 1983, GRAVIS has worked with over 67,000 families across over 1,400 villages reaching a population of over 1.3 million, and has established over 3,300 Community Based Organizations (CBOs).

GRAVIS is registered under Rajasthan Societies Registration Act and under section 80 (G) and has tax exemption under section 12 A of IT Act, 1961 of Govt. of India.