

Towards Improved Nutrition and Sanitation: A Case Study of Nuh, Haryana

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Introduction

The United Nations World Food Programme's podcast series on '*Food Systems: Solutions to Ending Global Hunger*' highlights the importance of awareness around basic nutrition principles pertaining to diversity of food sources, and accessibility to affordable nutrition as some of the major factors that can improve balanced diets and good nutrition for global population. The podcast series further identifies women and children as the most vulnerable who are affected by poor diets worldwide.

Globally, malnutrition is a major determinant of poor quality of life and health-related issues, especially for women and children. The National Institute of Nutrition (NIN) under the Ministry of Health and Family Welfare, Government of India prescribes a balanced diet for individuals based on their activity level, gender and pregnancy status for female who needs special attention. In addition to this, the NIN also publishes the key micronutrients present in different food groups. However, lack of awareness about the inherent connection between poor nutrition and how it weakens health thereby making it prone to various diseases makes the situation more challenging across rural India. Other areas of concerns include the incorrect

choice of food, leading to nutritional deficiencies, and lack of knowledge about hygiene and sanitation practices. Further, lack of knowledge around various national nutrition programs also deters rural communities from accessing the benefits designed to improve their nutritional outcomes.

Nuh, the only aspirational district of Haryana (as listed by the *Niti Ayog*, still has a long way to go to secure a decent position in terms of the National Family Health Survey (NFHS) indicators which includes nutrition, non-communicable diseases, reproductive and child health, among many other such related metrics. NFHS-5 data, with a reference period of 2019-2021, reveals 28.7 percent of women aged 20-24 continues to get married before the legal age of 18 and only 45.9 percent of the expecting mothers had a bare minimum of 4 antenatal care visits. Across the community, only 11.5 percent of women with a reference age of 15-49 are literate, leaving a lot of scopes to improve female literacy. The data clearly indicates a prevailing backward socio-cultural setting in the district which further impacts the nutrition and health aspects of the local communities, especially women and children. There exists an enormous lack of awareness about improved nutrition and sanitation practices in the district thereby creating the need to design and implement rural development projects with these two factors as lynchpins.

Nestle India and S M Sehgal Foundation, having the shared vision to promote community-led village development, have collaboratively conceptualized and implemented Project *Vridhhi* since 2019 focussing on water and sanitation, nutrition, education, livelihood enhancement, and holistic rural development. The journey which started with the intention to transform one village Rohira in 2019 has gradually expanded to four more villages namely Naharpur and Gabanspur in 2021 followed by Sihri and Singalheri in 2022. Project *Vridhhi* specifically aspires to promote nutrition and sanitation

smart practices among rural communities in the selected five intervention villages of Punhana block in Nuh district, Haryana. The project is impacting lives of more than 6000 villagers positively till now through its various interventions.

Below are some of the major cornerstones that the project has attempted to cover, along with accounts of select success stories it has delivered within a short span.

1. Generating awareness about balanced diet and nutrition among rural women

Women are at an added disadvantage in Haryana because of low literacy levels and socio-cultural norms characterized by inequitable access to resources. In the intervention villages of Project *Vridhhi*, the situation is no different. Their needs and opinions remain mostly unheard as they do not have any platform to voice their concerns. Thus women's perspectives are unrepresented, leaving out about half the population from the village's and household's decision-making process.

Though women are primarily responsible for a household's nutrition and sanitation, yet majority of women in these villages were unaware of the risk of diseases that can arise due to a lack of personal hygiene. While some women admitted their child's food requirements were not being met satisfactorily, others were totally unsure due to a lack of information and understanding about balanced diet and nutrition. The majority of village women had less awareness about the benefits of balanced diet. Myths like pregnant women should eat less, as extra food can put pressure and harm the child are rampant. There is heavy reliance on grains and vegetables in the daily consumption pattern of the villagers. Lack of diversity in food options is evident, the most common cause of which is lack of monetary resources. Overall, the team observed that the nutritional standards of women and children in the intervention villages suffer due to general lack of information and awareness

and therefore decided to address this issue first starting with educating the community regarding government sponsored nutritional schemes.

Monthly sessions on balanced diet and nutrition are designed and conducted with select groups of 20-25 women in each of the project villages continuously for three years. The sessions emphasize generating awareness over a wide variety of topics such as malnutrition, existing diseases, basic components of macro and micro-nutrients, food hygiene, the importance of safe drinking water, provisions of government's flagship food security programs, like Targeted Public Distribution System (TPDS), Integrated Child Development Services (ICDS), Mid-Day Meal (MDM), among others. Overall, the sessions attempt to demonstrate the importance of not only understanding the concept of malnutrition, but also adapting a balanced diet coupled with good sanitation practices in daily life, thereby promoting a more nutrition-sensitive lifestyle. In addition to this, nutrition camps are also organized in the villages where the projects are being implemented to create awareness among women and adolescent girls on the importance of a balanced diet and nutrition.

A combination of theoretical aspects and participatory activities are included to garner effective understanding and involvement of the participants. Participatory exercises include nutrition mapping and identifying pockets of poor nutritional practices, working on a food calendar, and games like snake and ladder to make concepts of malnutrition as well as nutrition and balanced diet easy to remember and a fun engagement for the participants. Practical sessions are also conducted demonstrating healthy recipes with the aim to show how nutritional balance can be achieved with the resources available locally to the community.

In addition to this, the celebration of hallmark days like National Nutrition Week are organized to generate general

awareness and motivate the villagers to adopt improved nutrition in their daily lives. During such events the participant women interacts with an expert dietician who is invited to the event to discuss in detail the components of micro and macro demonstrations.

Such continuous and concerted efforts of capacity building on the importance of balanced diet and nutrition in maintaining a healthy life help to create general awareness among the village communities, especially women, in the intervention villages. Endline evaluation conducted after the completion of Phase I of Project Vriddhi in Rohira village found that there is a positive change in the community with an increase in the food intake in the village resulting in increased calorie intake among female population and children. Health and hygiene awareness and corresponding practices have seen a positive incline with a greater proportion of targeted individuals being aware of waterborne diseases and the need to not only purify drinking water but also to use clean utensils.

Sarla inspires the community of Naharpur village to adopt improved nutrition and sanitation

Sarla of Naharpur village belongs to a landless family and has never been part of any formal education system. However, obstacles like illiteracy and lack of formal education, patriarchal binds of village society never dissuaded her from participating in activities for public welfare in her village. She visited her neighbouring village Rohira and was surprised to see the holistic development of the village under Project Vriddhi supported by Nestle India and implemented by S M Sehgal Foundation. School and water chamber transformation, the inclusion of various locally available and affordable food items in daily diets and behaviour changes towards improved hygiene and sanitation related practices, caught her attention. She felt worried about the future of her own village Naharpur

which was facing similar issues including poor nutrition and sanitation practices.

When in July 2021, the scope of project *Vridhhi* was expanded to Naharpur and Gabanspur, her joy knew no bounds. She proactively joined the group of balanced diet and improved nutrition and regularly participated in the monthly awareness generation sessions. She also mobilized her fellow village women and wanted them to join the group to gain knowledge about good nutrition and sanitation practices which, she believes, can in turn improve health in Naharpur households. Her role during nutrition mapping was remarkable as she almost led the group and conducted the exercise involving members of different wards.

Emerging women leaders and change-agents like Sarla, despite being challenged by illiteracy and patriarchal norms, are classic examples of how determined women can contribute to the efforts of ushering in long-term behavior changes related to matters like nutrition, sanitation, and health, among others.

2. Promoting kitchen nutri-garden demonstration to improve household nutrition

Innovative nutritional solutions such as kitchen gardens can be established and maintained on a small patch of land with minimum technical inputs. Family labour, especially the efforts of women, becomes particularly important in the management of these gardens. Besides, the prevalent use of organic farming practices makes these gardens environment-friendly during the inception and later maintenance phases. Therefore, to promote supplemental food production among the poor households in the intervention villages, project *Vridhhi* has promoted the kitchen garden model with an aim to improve nutrition security. The primary rationale behind this model is to help improve the nutrition status of small and marginal farmers and their

families, providing them with an assorted mix of vegetables for a considerable stretch of the year.

Kitchen gardens are cost-effective, practical and can meet the balanced dietary requirements of rural households. Crops are selected considering the prevailing food habits and climatic conditions of the implementation areas, and with the larger goal of ensuring the availability of wholesome and nutritious food. Between 2020-2022, 25 kitchen garden demonstrations were promoted in the intervention villages which included the distribution of seed kits, consisting of spinach, fenugreek, coriander, brinjal, radish, carrot, tomato, beetroot, and cauliflower, among others.

Beneficiaries later shared that adoption of kitchen garden demonstrations helped them to ensure food security and improve the nutrition status of their family. Regular intake of nutrient rich vegetables like spinach, beetroot etc. also helped to increase energy levels and efficiency in their work.

Improving household nutrition through kitchen garden demonstration in Gabanspur village

Amina is a resident of Gabanspur village, who has a family of 14, and owns 3 acres of land. She had been struggling with poor health since long and falls ill almost every month. Doctors consistently recommended that she should increase her intake of green leafy vegetables, but because of her low income made it became difficult for her to afford adequate quantity of these healthy ingredients. Amina attended a training program on the role of kitchen gardens in improving household nutrition. During the training, Amina was taught about the importance of growing healthy vegetables in the empty space around the courtyard of her house.

Subsequently, she was provided with seeds of various vegetables, including spinach, fenugreek, coriander, brinjal,

radish, carrot, tomato, beetroot, cauliflower, among others. She planted these in a 30x30 sq.ft. plot as her personal kitchen garden and successfully implemented the knowledge she learned during her training to grow multiple vegetables with minimum effort. Now Amina is able to cook balanced meals including both macro and micro nutrients on a daily basis for her family from vegetables grown by her, and she feels more energetic than before. She doesn't have to invest additional cash to restore the balance of nutrients in her daily meal plans which makes the solution affordable and long-lasting for her family. Amina says,

"Through the capacity building sessions and the kitchen garden demonstration organised as a part of Project Vriddhi, I learned about the importance of wholesome nutrition for good health, and the skills required to manage a kitchen garden. Its positive impact has brought my family much joy and has improved the quality of life as a whole".

3. Promoting cultivation of millets as nutri cereals among farmers

As a part of Project Vriddhi, farmers in the intervention villages are made aware of the multiple benefits of millets as nutri-cereals. Gradually, millets were reintroduced to the farmers as a climate-resilient and highly nutritious. The team conducted multiple sessions with farmers and motivated them to start cultivating pearl millet emphasizing its growing global and national market demand. The project started in 2019 with only ten farmers of Rohira village agreeing to pearl millet cultivation. The team decided to demonstrate the benefits of millet cultivation using an interesting approach. The farmers were given seeds for one-acre land. Thereafter, for the first half acre the farmers were provided with a Package of Practices (PoP) which included micronutrients such as zinc sulphate, boron, ferrous sulphate, potassium, and magnesium.

In the remaining half an acre, the farmers followed traditional cultivation practices of unabated use of Urea and DAP. Clearly, the parcel of land under PoP method had the better yield. Observing the success of this millet cultivation demonstration in 2019, an increasing number of farmers started to adopt sustainable practices of pearl millet cultivation. Rizwana, a women farmer beneficiary from Rohira village, reports, *"Intake of millets, which increased after we started growing them in our farmlands, improved digestion and provided better nutrition"*.

Azad of Rohira village adopts the scientific method of Pearl Millet cultivation

Improving farm livelihoods through the use of balanced fertilizers is one of the focus areas of Project Vriddhi supported by Nestle India and implemented by S M Sehgal Foundation since April 2019 in Rohira village. Until then, Azad, a farmer, and resident of Rohira, was not aware of fertilizers other than Urea and Di-ammonium Phosphate (popularly known as DAP) for improving his crops. He became interested to know more about scientific methods of farming after he saw some of his fellow farmers earning better returns through the use of improved Package of Practice (PoP) in their farmlands. This motivated him to adopt the scientific PoP demonstration for pearl millet cultivation in the summer of 2020 on 0.5 acres of his farmlands under the project.

Azad was provided training by the team on scientific methods of pearl millet cultivation using micro-nutrients like Ferrous Sulphate, K Mag, Zinc, Boron, among others. In addition to this, information on irrigation cycles, pest management, etc. was also given during the training sessions. Gradually, he saw that the crop in his demonstration plot looked much healthier, the grains are hardy and firmer with adequate moisture compared to the control plot of another 0.5 acres which had weaker grains.

At the end of the cropping cycle in September 2020, the demonstration plot produced 1.5 quintals more yield compared to the control plot. Before harvesting of the millet crop, Project Vriddhi team organized a field day for selected farmers of Rohira to study Azad's field as a model and analyze the differences in quantity and quality of the crop in experimental and control plots. The villagers who attended the field day were satisfied to see the results of the adoption of scientific farming practices and realized that the use of balanced fertilizers in farming could provide higher yields and better returns on their crops.

4. Motivating rural communities to adopt sanitation sensitive practices

The state of hygiene and sanitation in the intervention villages, before the initiation of Project *Vriddhi*, has been poor. This is because awareness about good hygiene and sanitation practices was not significant, lack of knowledge the prevention of diseases, and about consequences of their existing practices. Water logging was common across these villages because of the lack of functional wastewater disposal mechanisms; excess wastewater from households gets accumulated at many places within the villages. These places then act as breeding grounds for mosquitoes which can lead to diseases like Malaria and Dengue. The village pathways and roads also had garbage dispersed throughout adding to unhealthy surroundings.

Project *Vriddhi* adopted a two-pronged approach to improve the status of hygiene and sanitation in the intervention villages:

- (i) developing village infrastructure for improving the sanitation situation;
- (ii) promoting behaviour change on sanitation and hygiene among the village communities.

To address the problem of wastewater logging, soak wells/soak pits were constructed at critical areas of the villages for facilitating the establishment of cleaner surroundings. The

sanitation situation also improved in the intervention villages due to activities like transforming water chambers, rejuvenating ponds and refurbishing dysfunctional panchayat buildings that were earlier covered with dirt all around and also acted as dumping grounds for garbage disposal.

In addition to this, through this project, sanitation drives were organised to promote behaviour change in sanitation and hygiene-related practices. Such initiatives are periodically taken and continue even today. Community members in the intervention villages are oriented on the importance of clean surroundings and maintenance of good personal as well as community-level hygiene practices. Activities like village cleanliness drives, ward-wise sanitation awareness sessions are included as a part of this intervention. Regular awareness sessions emphasise improving daily hygiene, handwashing practices, food hygiene, the importance of toilet usage, and consumption of safe drinking water, among other activities to promote behaviour change among village communities towards adoption of improved hygiene and sanitation practices.

Also, the celebration of hallmark days like Swachh Bharat Divas was organized on October 1st in selected intervention villages every year. In 2022, 90 participants, including adults and children from Naharpur and Gabanspur participated in the event. Representatives from Public Health and Engineering Department, Integrated Child Development Services, Education, and Swachh Bharat Mission attended the event and made the participants aware on the importance of sanitation in their daily lives. Children were also engaged in a participatory activity where they were demonstrated how shaking hands could lead to contamination.

Such continuous engagement to promote behaviour change on sanitation in the intervention villages has led to considerable advancement of project objectives. Endline evaluation conducted after the completion of Phase 1 of Project *Vriddhi*

in Rohira village demonstrated a considerable improvement in terms of awareness generation and adoption of better handwashing practices, prevention from waterborne diseases through the use of safe drinking water and an overall increase in toilet usage, among others.

Improving Sanitation Practices in Sihri village

Water-logging on the streets of Sihri was a common sight, due to the poor drainage system in the village. This was a major cause of concern and severely degraded the quality of life of the local people. The root cause of the issue was that the natural drainage system was destroyed because of unplanned infrastructural activities. Nestle India and S M Sehgal Foundation initiated the project *Vridhhi* in May 2022, which undertook capacity building and awareness generation on good practices of hygiene and sanitation in this village. As part of this initiative, a Village Development Committee (VDC) was formed, where monthly capacity-building sessions were conducted and the members were made aware of various project activities including sanitation, and cleanliness, among others; along with the pivotal role of the members in various aspects of village development.

During the World Water Week, a village-level interface program on WASH was organized on 1st September' 2022, where Government officials from Public Health and Engineering Department (PHED), VDC members and the local people participated to discuss the village's waste management issues. The meeting the very next day, the PHED team sent cleaning personnel to Sihri to clean the entire village. The awareness generated through discussions during "World Water Week" event created a positive environment in the village, resulting in the community's wholehearted support towards the cleaning team of PHED. There was a visible impact of this cleanliness drive due to the cleaning of the drainage system that was once filled with garbage causing water-borne diseases, and cleaning

of roads, among others. Villagers of Sihri were delighted to experience cleaner surroundings after a long time.

Project *Vridhhi* thus aims at bringing about behavior change in rural communities through inculcating good practices in hygiene and sanitation. Due to the holistic training and education offered by the project, the community members remain enthusiastic to continue with their waste management initiatives showing ownership of their village and community infrastructure.

Village Development Committee leads behaviour change on Sanitation in Gabanspur

Gabanspur is a village situated at a distance of just 3 kilometers from the headquarters of Punhana block, yet it had an extremely poor sanitary condition. The streets were strewn with trash and animal feces, to the extent that it was challenging for the community to move around throughout the year, most particularly during the monsoon season as the water from the blocked drains flooded the roads. The lack of proper sanitary infrastructure and a lack of awareness about the importance of cleanliness were the primary reasons for these poor conditions in the village. As a part of Project *Vridhhi*, a Village Development Committee (VDC) was established to oversee the implementation of various development initiatives.

In a capacity-building sessions of VDC group, Lukman, one of the participants, raised his concerns about the grievous sanitation conditions faced by the community, which makes life especially difficult for the women. The VDC group then collectively planned and launched a door-to-door campaign to educate the villagers about the importance of cleanliness.

As a result of the dedicated efforts of the VDC members and other members of the community, Gabanspur has undergone a transformation in this scenario. The garbage that had previously littered the sides of houses was removed, and the

drains have also been cleaned. The VDC has now taken over the responsibility of overseeing and maintaining the sanitation infrastructure in the village, to ensure that the residents of Gabanspur continue to have clean and safe living conditions. This shift in Gabanspur is a testament to the power of collective action and the importance of proper sanitation practices in promoting the well-being of a community.

One of the community members mentioned,

"Before the sanitation initiative by project Vriddhi, the filthy environment in the village had become almost intolerable for us. It was a common sight to see people defecating in the open. Now everyone has become more aware of keeping their surroundings clean and hygienic."

Conclusion

The effectiveness and success of the partnership between Nestle India and S M Sehgal Foundation lie in its transformational approach towards holistic village development. The real essence of this partnership can be witnessed in their aligned vision of community-led development. The partnership transcends a merely transactional relationship and extends to long-term commitment towards addressing the needs of the local communities thereby creating lasting socio-economic changes in selected villages of Nuh district, Haryana. The emphasis on ensuring the long-term sustainability of the outcomes from Project Vriddhi, is assured by empowering the village communities to take an active role during and after the project execution is over. Such a unique and collaborative approach is the hallmark of this thriving partnership.

A successful and inclusive rural development project requires a multi-stakeholder approach. This include corporate agencies, not-for-profit organisations responsible for on-the-ground implementation, local government councils, and village communities. It is well established that triggering long-

term socio-economic changes takes time and therefore, such behaviour change in local communities calls for continuous engagement. Years, lack of inclusive participation cannot be erased in a short span, especially in an already prevailing backward socio-cultural setting in the villages of Nuh district, Haryana. In addition, unavoidable factors like delays in elections of local representatives can lead to temporarily dysfunctional gram panchayats and suspension of development work such as road construction or drainage infrastructure improvement, in the project villages.

To summarize, Project Vriddhi's success highlights the importance to design innovative, locally affordable, and community led solutions to target long-lasting and sustainable changes related to nutrition and sanitation practices in the rural areas that needs attention.

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