

CASE STUDY

Women's Health and Nutritional Security through a Community Health Perspective - A Case Study of Poshan Vatika- Harit se Poshan Project (Plan India)

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ABSTRACT

In India, women's health, nutritional security, and reproductive well-being have emerged as critical areas of concern and attention. Recognizing their significance, a range of stakeholders—including the government, non-governmental organizations (NGOs), civil society, and international bodies such as the United Nations—have implemented various initiatives, policy programs, and legislative measures to address these challenges. This paper examines these issues through the lens of the Poshan Vatika – Harit Se Poshan project, which explores the intersections of health, nutrition, and empowerment from gender and community perspectives. As part of this initiative, an NGO conducted an experimental study involving the establishment of kitchen gardens in rural areas, with the objective of evaluating their impact on women's lives. Drawing on the findings of this study, the paper advocates for a collaborative community health perspective to effectively address women's health and nutritional needs while fostering empowerment at the grassroots level. By fostering the cultivation of diverse crops, the kitchen garden approach has not only improved nutritional intake but also supported family-wide benefits. Furthermore, the initiative contributed to sustainability by promoting environmental health through the establishment of approximately 5,000 kitchen gardens, enhancing biomass production, and encouraging the use of organic fertilizers. This holistic approach highlights the potential of community-based interventions in advancing both health and environmental outcomes, while reinforcing the broader goals of gender equality and social empowerment.

KEYWORDS

Health; Nutrition; Community Health; Collaboration; Policy Implications; Empowerment

INTRODUCTION

Gender equality, women's safety, workforce participation, and health and nutritional security are integral components of the Indian government's current development agenda. These issues are recognized as pivotal for achieving sustainable economic growth, social equity, and democratic governance. This focus is consistent with both national policy priorities and international obligations, particularly the Sustainable Development Goals (SDGs).⁽¹⁾ Among these, SDG 5 explicitly emphasizes the achievement of gender equality and the empowerment of all

women and girls. Adopted by the United Nations in 2015, the SDGs articulate a comprehensive framework of objectives to be accomplished over a 15-year period, guided by the principles of peace and prosperity for people and the planet (UN 2024). Rooted in a doctrine of global partnership, the SDGs call for collective action by both developed and developing nations to address interconnected challenges. These include the eradication of poverty, the promotion of health and education, the reduction of inequality, and the advancement of economic growth, alongside efforts to combat climate change and protect natural ecosystems,

such as oceans and forests. Additionally, the United Nations underscores the necessity of addressing the concerns of marginalized populations, highlighting the importance of equitable and inclusive redressal mechanisms.

Similarly, the Government of India has also undertaken a similar initiative to promote women's health, nutrition, agency, and decision-making powers. **The Poshan Abhiyan** - Jan Andolan is a political movement and policy driven by the state of India that has undertaken an initiative to plant vegetables, plants, and trees that benefit women in particular and the environment in general. Its slogan, 'Suposhit Kishori, Sashakt Nari' shows the importance of nutrition for young girls and its relationship with agency and empowerment. The Poshan Abhiyan initiative is based on the premise that growing one plant for a 'mother', shall help reduce diseases like anaemia, provide nutrition, improve technology, sensitize people, and protect the environment (Govt of India WCD 2020). (2) As a flagship program of the Government of India, it envisages enhancing the critical nutrition indicators for children aged 0-6 years, adolescent girls, pregnant women, and lactating mothers nationwide. The latest report of the Mission (released by Niti Ayog (2022) (3) on the program, along with highlighting its main achievements, such as reducing the prevalence of underweight children and raising awareness among women, also identifies persistent barriers to ensuring women's access to adequate nutrition. For instance, despite efforts to promote dietary diversity, only 19% of children between 6-23 months are reported to consume the minimum acceptable diet, implying similar challenges in dietary diversity for women. Furthermore, although 80% of women are informed about the importance of iron-folic acid supplementation during pregnancy, structural and economic barriers limit their access to a varied and nutritious diet (Niti Ayog 2022). (3)

Numerous non-governmental organizations (NGOs) in India have also implemented targeted initiatives aimed at addressing women's health and nutrition, particularly among marginalized populations. The Society for Nutrition, Education, and Health Action (SNEHA), based in Mumbai, Maharashtra, focuses on maternal and child health, adolescent well-being, gender-based violence, and the strengthening of public health systems. By engaging directly with vulnerable communities, SNEHA fosters capacity-building and sustainable changes in health-seeking behaviors among women. Similarly, the Centre for Health Education, Training, and Nutrition Awareness (CHETNA) is committed to enhancing the health, nutrition, and overall well-being of women, children, and young people in

marginalized communities. It also partners with government programs to enhance healthcare delivery and increase public awareness on critical health issues.

SUKARYA prioritizes reproductive health, maternal care, education, and nutrition services, complementing these efforts with initiatives to enhance livelihood opportunities and promote social empowerment, thereby adopting a holistic developmental framework. The Akshaya Patra program, one of the world's largest mid-day meal initiatives, provides nutritious meals to over 2 million schoolchildren daily across India in partnership with the government. This program not only addresses child nutrition but also promotes school attendance and education.

The case study of this paper is a significant initiative, the *Poshan Vatika – Harit Se Poshan* project, a collaborative effort by 2 NGOs- Plan International (India chapter) and Elios Health Care . This transformative initiative focuses on advancing women's health and nutritional security through an integrated and participatory approach. Together, these programmes illustrate the diverse strategies employed by NGOs to tackle health and nutrition challenges in India, underscoring the importance of collective action and cross-sectoral collaboration.

POSHAN VATIKA-HARIT SE POSHAN

Introduction to the Project

Poshan Vatika-Harit se Poshan initiative is being conducted by Elios Health Care and Plan International (India chapter) and implemented across six districts of Bihar and Jharkhand in its first phase, namely *Saran, Vaishali, Samastipur, Muzaffarpur, Khunti and Hazaribag*, and aimed at improving women's health and nutritional security in the regions. The kitchen garden initiative served as a dynamic platform for empowering rural women by providing them with space where they used their traditional knowledge systems to foster important changes. The project aimed that the availability of space and agency to grow one's food could translate into benefits such as income generation, skill improvement, better health, nutrition, and environmental sustainability. The initiative engaged 5117 women from impoverished households, organised into 500 HARIT groups of 10 members in each group, enabling them through capacity building and training to grow their food such as seasonal and local green leafy vegetables and fresh fruits, reducing their dependency on market-bought produce. The easy availability of fresh and healthy food is exhibiting positive impact on food security, health outcomes, autonomy, and decision-making. It is also enhancing possibilities of sustainable livelihood opportunities, improve

household savings, and socio-economic well-being. The ability to choose and decide on food and nutrition, through the project, is augmenting the agency of women farmer to transform their lives and improve their family and community's well-being.

The end-line survey undertaken by the project evaluated the outcomes of the interventions across various parameters such as improvement in nutritional status of the 5000 participant households assessing the household's consumption patterns and dietary diversity. The end-line report measured the extent to which the production of home-grown vegetables and fruits has reduced the participants' reliance on market produce, culminating in multiple benefits. The survey also assessed how the agency to produce and consume organic and fresh fruits and vegetables, led to the empowerment of rural women as active decision-makers responsible for food production, managing household finances, and leadership within the self-help community groups. Finally, the survey identified the barriers encountered during implementing the project such as water access and pest control, and provided insights into future opportunities for scaling up the initiative. The major part of the project was to attempt to look at women as active change-makers in the areas of family, nutrition, health, food security, and sustainable livelihood.

Field Observations of the Project

Field data and observations from the initiative highlighted significant improvements in the lives of participating women. Findings from the end-line survey demonstrated notable progress compared to baseline data, indicating the initiative's effectiveness. One of the key outcomes was an increase in women's awareness regarding the types of vegetables required to meet their nutritional needs. The initiative not only enhanced awareness but also empowered participants to cultivate nutrient-rich vegetables and fruits that contributed to improved health and nutritional outcomes.

As part of the project, the team distributed high-quality, multi-variety seeds of nutrient-dense crops such as spinach (Palak), sponge gourd, radish, brinjal, cowpea, cucumber, and amaranth. Comprehensive training sessions were conducted to educate women on the nutritional benefits of these crops, the importance of dietary diversity, and the cultivation techniques necessary for sustainable gardening. Participants also received guidance on essential practices such as ensuring efficient irrigation, which is critical for successful

cultivation. Overall, the initiative facilitated both knowledge transfer and practical application, fostering improved health and nutritional security among the women involved.

The baseline report showed that only 2.7% of the participants disclosed that their family has either faced or is currently facing nutritional deficiency diseases. Of the 2.7% of participants who admitted to experiencing nutritional deficiency-related diseases, the study observed a few recurring patterns. Loss of Blood/ Anaemia was the most significant health issue reported by individual family members. Many mothers complained that their children did not have an age-appropriate weight, and their children were very lean and slim. This might be an indication of malnutrition. Physical weakness among the participants and their family members was commonly reported. Further, the participants reported falling sick regularly. This might indicate a poor immune system due to a lack of nutrition. Lastly, some of them reported suffering from and receiving treatment for tuberculosis. The end-line survey showed that the kitchen garden initiative was able to change this narrative. The participant households of the project revealed that the availability of better food through the initiative led to significant improvements in their family's overall health and well-being. About 38% of participants reported that their family's overall health had improved, with fewer complaints of weakness, fatigue, and frequent illnesses. Access to fresh, pesticide-free produce contributed towards boosting the immune system, particularly among young children and pregnant women.

The baseline survey revealed that approximately 56.3% of respondents reported infrequent consumption of fresh fruits and vegetables in their routine diet, citing various socio-economic challenges that hindered their ability to provide a nutrient-rich diet for their families. However, data from the end-line survey indicated a significant shift, with approximately 97% of households reporting changes in their dietary practices to include fresh vegetables in their daily meals. This substantial improvement can be attributed to the widespread adoption of the Kitchen Garden initiative across six districts, which facilitated easy access to organic, fresh produce.

Baseline data also indicated a reliance on locally grown, seasonal fruits and vegetables, which limited dietary variety for most households. In contrast, the end-line survey showed that the kitchen garden initiative enabled households to overcome these limitations by producing and consuming a broader variety of nutrient-dense vegetables, including spinach, bottle gourd,

pumpkin, and okra. The production of organic green leafy vegetables, in particular, played a crucial role in addressing nutrient deficiencies. This initiative thus underscores the potential of localized, sustainable interventions to enhance dietary diversity and improve nutritional outcomes among vulnerable populations.

The end-line survey report also highlighted that approximately 37% of the households started selling surplus produce in the local markets, generating an income somewhere between INR 500-1500 per month. While the initiative initially focussed solely on improving household consumption patterns, the sale of surplus produce accrued to an additional benefit as it provided the participants with livelihood and income generation opportunities, enhancing the household's socio-economic status and well-being and providing economic empowerment to women. Women now have a greater agency as active earning members of the family to participate and take control of the family's decision-making process concerning consumption and finances. An insight offered by one of our participants, Rekha Devi from the Muzaffarpur district of Bihar, explained: 'I never thought I could sell vegetables, but after my kitchen garden started producing more than we could eat, I began selling the extra in the local market. Now, I earn enough to buy school supplies for my children.'

Critical Reflections

Kitchen gardening is not just an ancient practice in India but also prevalent in many countries, capable of offering various benefits to the people associated with it. It is a sustainable approach to accessing micronutrient-rich food, particularly for impoverished households. The practice is instrumental in combating food insecurity and enhancing nutritional diversity. They serve as a dynamic platform for empowering rural women by providing them with a space to use their traditional knowledge systems to foster important changes. The availability of space and agency to grow one's food can translate into benefits such as income generation, skill improvement, better health, nutrition, and environmental sustainability. (4) Women have always been associated with providing food for themselves and their families. The practice of kitchen gardening brings them to the forefront of decision-making and control. Kitchen gardening worked as a tool to empower smallholder women farmers and promote gender equality in terms of nutrition, food security, and health.

The Poshan Vatika project showed how different organizations can collaborate to provide benefits to marginalized sections of society. The project aimed at six districts and various self-help groups such as Jeevika and frontline workers (ICDS Workers, Health Workers) became the key focal persons in reaching out to the beneficiaries. The local stakeholders such as block officials, PRI members including gram panchayat head and ward members, and schoolteachers, assisted in organizing meetings in villages and identifying the vulnerable families within the block, panchayat, village, and ward. Self-help groups emerged as a dynamic catalyst for rural development in India, embodying the principles of collective action and empowerment. The self-help groups are small, primarily comprising 10-15 women, and play a crucial role in addressing the multifaceted challenges faced by rural communities. From fostering economic resilience to social cohesion, these groups have become integral to the development landscape of rural India. Data from the end-line survey of the Poshan Vatika project revealed that these groups served as a platform to create maximum engagement, disseminate information, provide support, and ensure success in promoting knowledge, particularly among women, thereby enhancing the overall kitchen garden initiative. Being a part of community groups enhances women's empowerment and active participation in community activities. This led to maximum engagement and success rate in promoting the needs of nutrition and overall enhancing the kitchen garden initiative.

The project also showed that creativity in existing conditions can lead to positive results that can impact the lives of marginalized populations. The project noted that the majority of participants did not actively separate the kitchen waste to produce compost. However, the participants had access to some space that they could utilize for the kitchen garden initiative. Most of the spaces were found to be lying vacant or unutilized. These spaces varied between the minimum size of 10 *dismal* to 1 *kattha* and were found to be suitable for Kitchen Gardening. This available space was used by the project to establish kitchen gardens. The participants were also encouraged to use old utensils and other containers available in their houses to grow food items such as herbs. Participants also used vertical farming techniques in their households as a method to grow produce. Vertical farming was used in the kitchen garden project as an innovative method that allowed the use of limited spaces like the door top, walls, etc., to grow food products. It developed as a creative

way to engage with kitchen gardening in limited spaces. The engagement with creative forms of production reflected the tendency towards sustainability and a commitment that the project had towards better use of available resources that do not negatively impact the environment.

One of the potentials of the project lies in its embeddedness in a community health perspective. A community health perspective emphasizes the collective well-being of populations through the promotion of equitable access to resources, education, and services that address critical determinants of health. (5) The initiative exemplifies a community-based approach to tackling malnutrition and improving dietary diversity among marginalized populations. Baseline data indicated that a significant proportion of households (56.3%) faced barriers to accessing fresh fruits and vegetables due to socio-economic challenges, resulting in limited nutritional intake. The end-line survey, however, demonstrated a notable improvement, with 97% of households integrating fresh vegetables into their daily diets. This shift underscores the effectiveness of localized interventions in addressing structural barriers to nutritional security.

Moreover, the initiative facilitated a transition from reliance on seasonal, locally available produce to the cultivation of diverse, nutrient-rich crops, such as spinach, bottle gourd, pumpkin, and okra. This not only enhanced dietary variety but also addressed nutrient deficiencies prevalent in the community. By providing training and resources, the initiative empowered participants with knowledge and skills, fostering self-reliance and sustainability. Such community-driven health initiatives align with public health objectives by improving health outcomes, reducing inequalities, and promoting resilience, thereby contributing to the broader goals of social equity and sustainable development.

Further, the initiative has demonstrated its potential to address critical nutritional challenges faced by marginalized households. Baseline survey data highlighted that 56.3% of participants rarely consumed fresh fruits and vegetables in their regular diet due to socio-economic barriers, which contributed to poor nutritional outcomes within their communities. However, the end-line survey showed a significant transformation, with approximately 97% of households reporting an increased incorporation of fresh vegetables into their daily meals. This improvement reflects the initiative's role in enhancing access to nutrient-rich foods at the community level.

The baseline findings also revealed that households predominantly depended on locally grown, seasonal fruits and vegetables, which restricted dietary diversity and limited nutrient intake. The Kitchen Garden initiative effectively addressed this limitation by enabling families to cultivate a wider variety of nutrient-rich crops, such as spinach, bottle gourd, pumpkin, and okra, within their own backyards. The production of organic green leafy vegetables has particularly contributed to reducing nutrient deficiencies, fostering better health outcomes. By empowering communities to adopt sustainable gardening practices, this initiative not only improved individual household diets but also strengthened collective health and resilience against malnutrition.

Possibilities and Potentialities Towards a Community Health Perspective

The project represents a sustainable and community-centered approach to improving access to micronutrient-rich food, particularly for impoverished households. This practice serves as a critical intervention in addressing food insecurity and enhancing dietary diversity. The project under analysis highlights the transformative potential of such initiatives in shifting consumption patterns and improving the nutritional status of rural households. Beyond nutrition, these initiatives empower rural women, bolster financial stability, and promote community health through the localized production, distribution, and consumption of nutrient-dense vegetables.

Importantly, the project emphasizes women's roles as central to fostering change, advocating for equal decision-making opportunities within traditional household structures and advancing gender equality. By addressing the specific needs of women from marginalized communities, the initiative fosters inclusivity and responsiveness to diverse social contexts. This integrated approach not only enhances the agency of women but also positions them as active contributors to community resilience. Women participating in kitchen gardening are not merely cultivating food; they are driving community transformation and laying the foundation for healthier, more equitable, and sustainable futures. This model underscores the importance of integrating gender-sensitive strategies into community health initiatives for long-term impact.

Women's nutritional security, reproductive health, maternal health, and protection from violence require robust community engagement to foster awareness and integrate indigenous practices with positive intervention strategies. These efforts

necessitate a comprehensive approach, particularly within policy analysis paradigms, where NGO-government partnerships have been identified as among the most effective mechanisms to address women's health challenges in India. (6) These partnerships leverage the complementary strengths of both entities—NGOs bring grassroots access, adaptability, and expertise in specialized areas, while governments provide resources, institutional capacity, and a policy framework. This synergy enables a coordinated response to the multifaceted health needs of women, particularly those in marginalized communities.

Such collaboration highlights the importance of aligning mainstream policy frameworks with alternative, community-driven strategies, ensuring that diverse socio-economic and geographic contexts are accounted for. By integrating the scale and infrastructure of government programs with the targeted interventions of NGOs, these partnerships can build an inclusive, responsive healthcare system capable of addressing the complex realities faced by women. Importantly, this approach reaffirms women's health as a central priority, fostering substantive changes through sustainable, participatory strategies. These efforts not only tackle immediate challenges but also contribute to systemic reforms that advance equity and social justice for women, particularly within marginalized populations.

CONCLUSION

Women's health and nutrition cannot be viewed as isolated factors; they are intricately connected to a range of social, economic, and environmental determinants that affect not only women but also their families, communities, and even broader state-level outcomes (7). As such, prioritizing women's health has become a critical area of focus. Various organizations have undertaken initiatives to promote gender equality, each offering unique approaches to address these interconnected issues. It is essential to recognize and commend the significant contributions of non-governmental organizations (NGOs) at the grassroots level, working tirelessly to tackle these challenges.

This paper has evaluated the Poshan Vatika-Harit Se Poshan project from the perspective of assessing its impact on the lives of women in the region. The project aims to promote health benefits and nutritional security through the innovative use of kitchen gardens. In this respect, it is showing notable positive signs in addressing health concerns among women, particularly pregnant and lactating mothers, as well as young children. By fostering the cultivation of diverse crops, the kitchen garden

approach has not only improved nutritional intake but also supported family-wide benefits. Furthermore, the initiative contributed to sustainability by promoting environmental health through the establishment of approximately 5,000 kitchen gardens, enhancing biomass production, and encouraging the use of organic fertilizers. This holistic approach highlights the potential of community-based interventions in advancing both health and environmental outcomes, while reinforcing the broader goals of gender equality and social empowerment.

The Poshan Vatika project exemplifies the power of collaborative, action-oriented change in addressing complex health and nutrition challenges. Its success underscores the importance of multi-stakeholder involvement, where the combined expertise and resources of various actors contribute to meaningful outcomes. Self-help groups and community-based organizations play a crucial role in ensuring effective project delivery, especially when specialized non-governmental organizations (NGOs) implement them. The state, on the other hand, can provide essential resources and support, enabling NGOs to better access and address ground-level realities.

The project's achievements are particularly notable in the context of five thousand marginalized participants across 103 villages in two of India's most underdeveloped states, Bihar and Jharkhand. The significant improvements in health and nutrition among these communities highlight the transformative potential of localized, community-driven interventions. Despite its relatively small-scale implementation, the Poshan Vatika project has demonstrated impressive sustainability and impact, raising important questions about the broader implications of scaling such initiatives nationwide.

As the success stories from this project continue to inspire change, they offer valuable insights into the potential for large-scale replication, especially in rapidly growing economy like India. These initiatives are not just vital for improving women's health and nutrition but also for fostering broader community empowerment, sustainability, and resilience.

AUTHORS CONTRIBUTION

All authors have contributed equally.

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There are no conflicts of interest.

DECLARATION OF GENERATIVE AI AND AI ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

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