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Assessment of Village Health and Nutrition Day implementation – findings from a mixed method study in Odisha, India

Sanghamitra Pati[1], Abhimanyu Singh Chauhan[2], Subrata Kumar Palo[2], Prabhakar Sahu[3], Sandipana Pati[3]

Abstract

Introduction Maternal and child health and nutrition are challenges in developing countries like India. The Indian Ministry of Health and Family Welfare and the Department of Women and Child Development jointly launched a programme called Village Health and Nutrition Day (VHND) to deliver comprehensive health and nutrition services to pregnant women, lactating mothers, children (0-5 years) and adolescent girls. The aim of this study was to assess the quality of VHND, to analyse the need, awareness and satisfaction of beneficiaries, and to assess the status of necessary available instruments on site.

Methods To understand the process and perspective of the beneficiaries and providers, a cross-sectional study was conducted from April to June 2013. The methods were observation, in-depth interview, focus group discussions and questionnaires.

Results 30.7% of the potential beneficiaries participated in VHND. A severe lack of instruments was observed. Immunization, MUAC measurement and treatment of minor ailments of children were missing at all sites. Participants expressed difficulty in attending the VHND sessions regularly due to domestic objections, distance to the venue, no knowledge of the session date, time and place, lack of sitting space, prolonged waiting time and lack of medicine supply.

Conclusion Community leaders, local decision making bodies, regular supervision and monitoring can significantly contribute to improve the quality of services. Basic amenities and ensuring privacy of the beneficiaries should be ensured. Cultural appropriateness and accessibility factors need to be taken into account while selecting VHND session sites.

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About the AUTHORS

[1]Regional Medical Research Centre, Bhubaneswar, Indian Council of Medical Research.
[2]Indian Institute of Public Health, Bhubaneswar, India.
[3] Department of Health and Family Welfare, Odisha, India.

Contact:
Sanghamitra Pati
drsanghamitra12@gmail.com

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Introduction

Maternal and child malnutrition has remained a perpetual public health challenge in India (1-4). In order to address the challenge, various schemes have been implemented in India with limited success. After the launch of a National Health Mission (NHM), few new programs on maternal and child nutrition have been introduced and revamped. Village Health and Nutrition Day (VHND), is one such prominent maternal and child health care scheme, for the rural beneficiary (5).

VHND is being implemented jointly by the Indian Ministry of Health and Family Welfare (MoHFW) and the Department of Women and Child Development (WCD). The philosophy of designing the programme was to provide a platform for interdepartmental convergence in order to deliver comprehensive health and nutrition services through community involvement. The beneficiaries of the program include pregnant women, lactating mothers, children (0-5 years) and adolescent girls. The programme activities are primarily focused on early registration, identification and referral of high risk children and pregnant women. Additionally information on key health and nutrition topics are provided at the session site in an interactive manner (6).

The Services under the program are being delivered at the community level by the front line workers from MoHFW and WCD. These workers are supported by

the community members including Gaon Kalyan Samiti or Village welfare committee, Mothers Group, local administrative body Panchayat Raj Institution, and a Self Help Group. As per the programme guideline, the session should ideally be held in the Anganwadi Center every month. Anganwadi means "courtyard shelter" in Hindi and is managed by a group consisting of Auxillary nurse midwifes, Anganwadi workers, Accredited Social Health activists, and Anganwadi Helpers. An Anganwadi Center is either a primary health center, a sub center, or any physical infrastructure in the village. This setting is most convenient to target community to access and has facility to undertake all the activities and services mentioned in the VHND programme guidelines. On many occasions, anganwadi sessions may be held in school premises, community centers etc. The auxilliary nurse midwife and the Accredited Social Health activist are the frontline workers, working with the community with technical expertise related to knowledge on nutrition, immunization, reproductive health etc. The Anganwadi worker and Anganwadi Helper have key roles in operationalizing and mobilizing the community to attend the VHND sessions, while the other have supporting roles. Auxiliary nurse midwifes and Accredited Social Health activists are affiliated under MoHFW, while Anganwadi workers and Anganwadi Helpers are affiliated under WCD. Each session should be attended by designated supervisors from both MoHFW and WCD to provide supportive supervision. Two days a week (Tuesday and Friday) have been fixed for conducting VHND sessions across the state (7).

Despite VHND being operationalised in Odisha since February 2009, information on how the programme is being implemented in the state is sparse. Especially, the perspectives of beneficiary and providers regarding this programme have not been explored in depth, which constitutes an important knowledge gap.

The current study was undertaken to:

1. Assess the quality of services in the process of implementation of VHND
2. Analyse the need, awareness and satisfaction related to the services provided with this programme from beneficiaries' perspective,
3. Identify any demand and supply gaps related to this programme.

It is expected that the results obtained from this study will provide information regarding development of appropriate and timely interventions for process improvement.

Methodology

Study Design

A cross-sectional study was conducted from April to June 2013 using both qualitative and quantitative techniques for data collection. To obtain an in-depth understanding of process and perspective of beneficiaries and providers, a mixed method approach was therefore followed.

Study Setting

The study was conducted in Bolagarh in the Khorda district in Odisha. The district has a total population of nearly 1.8 million (8). Considering the time limits and financial constraints, and the exploratory nature of the study, it was decided to observe eight VHND sessions. All the scheduled VHND sessions April-May, 2013 were given serial numbers and eight sessions were randomly chosen by a blind-folded researcher.

Data collection

The data collection process comprised of observation of the session sites and documenting during the service delivery; interview of a sample of beneficiaries; focus group discussion with the providers.

Each of the eight VHND sessions were observed using a preformed checklist with themes such as facility infrastructure, basic amenities, service equipment and logistics. Attempt was made to assess the quality of service delivery and identifying the lacunae and good practices at the session sites. Further, the interaction process between beneficiaries and service providers as well as the communication between supervisors and front line workers were observed carefully.

During each of the observed VHND session, eight beneficiaries were selected by systematic random sampling. In case an attendee was not willing to participate, the next participant was selected from the list. Frontline workers made the list of all eligible participants in their respective village and comprised of pregnant women, children of 0-6 months, children six months to five years, lactating mothers, adolescent girls and mothers of under five years children. Altogether in this study, 64 beneficiaries were interviewed comprising 16 participants from each group namely Pregnant Women, Lactating Mothers, Adolescent girls and Mothers of Children under five years. Data were collected using pretested semi structured questionnaires. All the questions were asked in local language (Odia).

Additionally, Focus Group Discussions (FGDs) were conducted with the service providers to know the quality of VHND services and to identify any gap in the im-

plementation of the programme. Groups were set up consisting one of each of the workers; Auxiliary nurse midwifes, Anganwadi workers, and the Accredited Social Health activists. The groups consisted of between seven and eight service providers. The Focus groups were moderated with the help of a flexible topic guide given below (Table 1). The topic guide used is an open ended thematic guide to direct the discussions. The guide was designed to elicit the information and to follow a structured pattern, but is flexible to discuss the other issues arising during the discussion. The focus groups were moderated by the authors of the manuscript well versed with the Oriya language. Two authors moderated the session while one author made the sociogram of each group discussion. Sociogram and Voice recordings were transcribed and later translated for data analysis.

Table 1 Flexible Topic Guide

Sl. No	Topics discussed
1	Information on VHND
2	Beneficiaries of VHND and Target community
3	Services being provided in VHND session and key issues in service delivery
4	Problems in mobilization of beneficiaries to the session site
5	Level of support provided by the block health authorities and supportive supervision
6	Any innovations or good practices being followed in implementation
7	Challenges faced in implementation of VHND
8	Suggestions for improving quality of services in VHND

Data Analysis

The interviews were transcribed verbatim and translated to English. Qualitative data was analysed using 'frame work approach' (9). An initial coding of the transcripts was conducted by the senior researchers of the team. Any incongruence in axial and selective coding was resolved in consultation with the senior investigator. Broad thematic areas emerging from the data were identified and data was assigned to different themes through selective coding. The responses based on the codes were grouped under each theme and interpretation of the data was done and presented under different themes. The steps of coding and charting were done by using Atlas.ti version 9, qualitative data analysis software.

Ethical considerations

After detailed explanation of the study, written consent was obtained from the participants. Participation was voluntary and confidentiality was maintained. The study was approved by the Institutional Ethical committee of Indian Institute of Public Health, Bhubaneswar. Institutional Ethical clearance number is 011/12/IIPHB.

Results

Observation of the session sites and service delivery

Out of eight VHND sessions observed, four were held in primary schools, three in the Anganwadi centers and one in a temporary structure constructed by Anganwadi worker. None of the session sites had permanent displays mentioning VHND dates. In five sites, sessions were held in pucca structure. Pucca is a term used in Indian settings referring to a concrete dwelling having permanent and solid infrastructure, a house with roof and adequate ventilation and lighting as well as sitting arrangements. Drinking water was available in all the eight session sites, while electric supply was available at only one session site. Frontline workers were present in all the VHND session sites while in two session sites Anganwadi workers were absent. In two sessions, supervisors were present and in another two sessions, members from the local administrative body, Panchayat Raj Institution supported the frontline workers. Good co-ordination among service providers were observed during the session.

In a majority of the session sites (≥ 75%) the following was available; adult and child weighing machine (for anthropometric measurements) stethoscope, blood pressure measurement instrument, iron folic acid tablets, deworming tablets, Oral Rehydration Solution, oral contraceptive pills, urine examination strip, mother and child protection cards. However, other logistics like taliquist paper, fetal stethoscope, antenatal examination table, height measuring tape, mid upper arm circumference (MUAC) tape, condoms, IFA liquid (Folic acid added to liquid iron), drugs for treatment of minor ailments were available in less than 50 percent of session sites.

Antenatal registration, per-abdominal examination, birth registration, counselling for breast feeding and IFA supplementation were being provided in all the VHND sites, while haemoglobin estimation (by Sahli method) and blood pressure measurement was done in 75% of the sites. Urine examination was done in only 25% sites and weight measurement of the moth-

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Table 2 Attendance of Beneficiaries

Beneficiary	Enrolled	Attended	Percentage of Attendance
0-6 months	65	38	58.4
6 months – 5 years	510	211	41.3
Pregnant Woman	74	48	64.8
Lactating mothers	64	30	46.8
Adolescent Girls	494	44	8.9
Total	1207	371	30.7

ers was done in 50% of the observed sites. Immunization, MUAC measurement and treatment of minor ailments of children were not being done in any of the sites. In three quarter of the sites, health topics were not discussed in the VHND session as per the calendar months plan.

Overall attendance of the beneficiaries was 30.7% (Table 2). Among different categories of beneficiaries enrolled for the session, maximum attendance was by pregnant women (64.8%) while least attendance was by adolescent girls (8.9%). Among different castes the proportional participation was least among the Scheduled Tribes beneficiaries (16%), followed by Scheduled castes beneficiaries (22%), while for others being 34% (10;11).

Beneficiaries Interview

Most of the beneficiaries expressed difficulty in attending the VHND sessions regularly owing to domestic preoccupations, distance of the venue, no prior knowledge about the session date, time and place, lack of sitting space, prolonged waiting time and lack of medicine supply. Even though willing, most of the adolescent girls and pregnant women found it embarrassing to get their health check-up done in a place with no privacy. Discussion on various health and nutrition topics was perceived to have lowest priority among the beneficiaries (Table 3).

Table 3 Responses of the beneficiaries (n=64)

Responses	Yes
Had Heard about VHND	42
Information about day & Place of session	48
Regular VHND sessions are done every month	52
Convenient time for the session is 8 A.M to 12	64
All the providers(ANM, AWW, ASHA) present during the session	60
Satisfied with the behavior of the providers	64
In favor of VHND session	63

Focus group discussions with the providers

At the discussions with the frontline health workers, we found that all were aware of their job responsibility and had knowledge of services supposed to be provided at the VHND session. Major concern raised was lack of suitable venue and basic amenities for a VHND session. VHND sessions were held at Anganwadi Centers, school premises and at club houses. All venues had poor infrastructure and lack of basic amenities. The result was a decrease in attendance of beneficiaries to the VHND sessions. Most of the participants perceived this to be a reason for low turnout rate of beneficiaries to the VHND sessions. They also added the poor involvement of members of the local administrative body, Panchayat Raj Institution as another reason compounding the low turnout. There was differential attendance by people of different castes owing to socio cultural taboos and caste barriers. For instance, in situations where VHND sessions were being held in a general caste locality, there was a low attendance by the beneficiaries of scheduled caste and tribe. Lack of privacy and proper examination facilities were quoted as major hindrance in doing health check-up of pregnant women and adolescent girls. Especially the mobilization of lactating women to the session and referral of high risk pregnant women were mentioned as key practical problems. Participants mentioned a status of inadequate medicine supply, difficulty in timely repair and replacement of instruments affected quality of services. Further, participants found it difficult to discuss the health topics at VHND sessions since beneficiaries were reluctant to stay for long due to lack of proper waiting place and snacks provision. Time constraint was cited as a problem to carry out all services as per guidelines.

Regular supervision by higher authorities was suggested as a useful means to promote beneficiary participation and improve quality of services. Further, provision of snacks to the beneficiaries while attending VHND session, organizing motivational activities like prize distribution, healthy baby show, increase in remuneration for referral of high risk pregnant women and advanced malnourished children were cited as a few key strategies for improving the beneficiary participation.

Discussion

Odisha is one of the States in India with low literacy and high infant mortality (12;13). The malnutrition prevalence of this state is among the highest in the country (14). Against this backdrop, VHND program was initiated with an aim to provide primary health care services to pregnant women, lactating mother, children under

five years and adolescent girls with the help of village level workers. Effective implementation of VHND is therefore important to address the issues related to nutrition, early identification of health problems and high risk individuals through focusing at different stages of the life cycle (adolescence, pregnancy, lactation, Under-5 children). The present study aimed to assess the quality of VHND implementation and identify demand and supply gaps if any. Low participation of the beneficiaries and suboptimal quality of services were the salient findings. Notable gaps identified were poor infrastructure, inadequate availability of logistics, minimal supportive supervision, and low involvement of community leaders/ the local administrative body Panchayat Raj Institution members in service delivery.

VHND program provides a community level platform for making different health services available and accessible to different categories of beneficiaries. To avail the maximum benefit of the services, commensurate utilization by the beneficiaries is the foundational requirement. However, during the present study, it was observed that the turnout rate of enrolled beneficiaries is very low, about one-third (30.7%). Knowledge of the facilities available at VHND session was low. 34 percent of the participants were not aware of the single facility. Findings are in congruence with an earlier study conducted in Odisha, where this percentage was 24 percent (15). Among different categories, the participation of lactating mothers and adolescent girls were the lowest. Both beneficiaries and providers mentioned poor infrastructure and amenities to be the main reasons for low attendance. Our facility assessment also observed the lack of privacy for examination, no waiting space, non-availability of basic amenities like drinking water, fan in the venue thus posing practical difficulties for the beneficiaries to participate and remain at the session site for the whole duration. Further, a majority of the health workers believed that inadequate availability of medicines at the session site discouraged the beneficiaries to attend, while some indicated less involvement of the community leaders as another contributing factor.

Surprisingly, we observed a limited awareness among the beneficiaries about the venue and time of VHND. One reason could be lack of permanent display board informing the date, time and place of the session. This is further compounded by low community mobilization owing to less involvement of members from Panchayat Raj Institution and deficient coordination between health workers and community leaders. As there is no regular and routine supervisory visit, neither health workers nor the local Panchayat Raj Institution members felt motivated for ensuring beneficiary mobilization. The impact of involvement of the Panchayat Raj Institution has already been documented (16;17). At the same time this also hampers timely and adequate provision of medicines and equipment for the sessions. Nevertheless, all these cumulatively result in a low beneficiary turn out rate. Moreover, the caste difference amongst the participants was another key observation. As quoted by the health workers, when the session is organized in an area dwelled by a particular caste, the people of other castes are reluctant to attend and share the same venue. However, we did not observe any mechanism in place for counselling the beneficiaries against this social barrier.

Timely and adequate availability of logistics and equipment is integral to ensure quality services in any health program. However from the study it was noticed that in none of the sites, measuring tapes were available thus leading to incomplete nutritional assessment. In a majority of the sites, examination table and basic medicines for minor ailments were lacking, resulting in low quality service delivery as well as low attendance by the beneficiaries. These findings are in line with the earlier studies done at VHND sessions in Uttrakhand, India (18).

Services like early registration of the pregnant women, per-abdominal examination and IFA supplementation were being provided in all the sessions while haemoglobin estimation, blood pressure measurement, weight measurement, urine examination for albumin of pregnant women were not done in many of the sessions. As blood pressure and weight measurement, urine examination for albumin are early identifiers of high risk pregnancy, there is a risk of missing out on some of those women with urgent need for referral. Studies from other parts of India have highlighted similar findings (15;19). Limited evidence exists regarding training and supervision of health workers for provision of integrated outreach. A dialogue on integrated outreach services provided under India's National Rural Health Mission program reported that health workers were not fully aware of services to be offered and lacked appropriate skills to deliver the package of additional services, such as family planning (20).

A component on Nutrition Health Education and Demonstration (NHED) is incorporated into each VHND session to impart knowledge and awareness among the beneficiaries (21). However, we observed that in three quarters of the session sites this was not being followed. The beneficiaries declared that even though being interested to learn, it was difficult

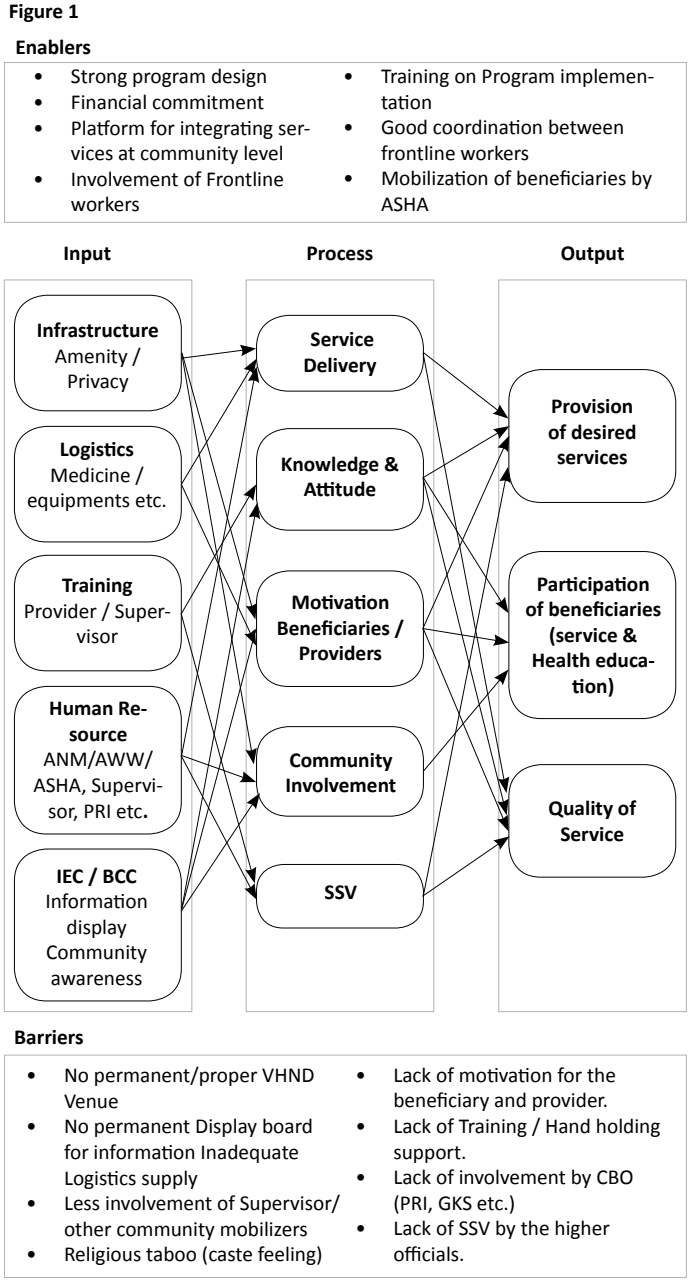
for them to wait till the end of the session because of time constraint as they also had to take care of domestic work. Some also expressed that non availability of waiting space in the venue and absence of any refreshment (snacks, tea) arrangement makes it difficult to wait for the NHED session. The health providers were of the view that with limited human resources, they were over occupied to deliver other VHND services and hardly found any time to carry out the educational activity. They also felt the lack of waiting space and refreshment as major barrier for women to wait through NHED session. Conducting and attending NHED was found to have the lowest priority both among health workers and beneficiaries respectively. This needs timely attention and intervention as nutrition education is a key factor for fostering healthy nutritional practices. Considering the time constraint with the beneficiaries as well with health provider, developing visual aid and printed material with key messages which are easy to understand can be distributed during the VHND session or prior to that. This may contain photo stories, dos and don'ts etc. through graphics so that the beneficiaries with minimal education status can easily comprehend the message. Also, funds from local panchayat can be utilized to addressing the issue of refreshments etc.

Supportive supervision plays a vital role in successful implementation and bringing quality improvement through on job training, onsite supervision. Significance and effectiveness of supportive supervision is well documented from the other health programmes (22;23). While each VHND session should ideally be supervised by designated health officials, in reality it was found to be happening rarely. This has multifold effect across all levels contributing to low beneficiary participation, inadequate logistic supply, incomplete service delivery, deficient basic amenities and insufficient community involvement (Figure 1). Our study emphasizes on developing a systematic supportive supervision inbuilt into the VHND program. Similarly, the role of the community leaders is very important in mobilization, assisting the service providers and support each VHND session. However, our study found limited involvement of community leaders as gathered through direct observation and health worker interviews. This could be due to low perceived importance of VHND among these individuals. Proper coordination with the community leaders and making them understand the importance of the programme should be considered.

Limitation

The present study being exploratory in nature was conducted in limited settings with a purposive selection of number of VHND session being surveyed. The limited settings and the selection process, as well as a response rate on 30% limits the generalizability of the study. But when held up against the onsite observations, the authors believe the responses and the 30% response rate offers a useful insight into the VHND, which is considered valuable for the overall assessment and for future studies. Also, the study has a qualitative research component that gives opinions, experiences and thoughts of the participants. The findings can give trends that cannot be subjected to formal statistical testing including the p values or correlations. Additionally, researcher bias and subjectivity are commonly understood as inevitable bias in this type of research.

Figure 1



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Conclusion and Recommendations

Despite being implemented for more than seven years with considerable resource investment, the programme has not yet achieved the desired outcome. Intermediary lacunae like improper infrastructure, unavailability of instruments and equipment, lack of adequate and continuous medicine supply, less involvement of the Panchayat Raj Institution and other community members and inadequate awareness among the beneficiaries are the major hindrances. Therefore, efforts need to be directed to fill these operational gaps. Especially, involvement of community leaders and local decision making bodies along with regular supportive supervision and monitoring appear to be important drivers to improve the quality of services. Priority should be given to provide basic amenities and ensuring privacy of the beneficiaries. Provision of food and refreshment at the session site, could augment beneficiary participation. Cultural appropriateness and accessibility factors need to be taken into account while selecting Village Health and Nutrition Day session sites.

Compeeting interest

None decelared

Contribution Details

SmP planned the study and provided overall guidance.
ASC designed the data collection tool and performed the qualitative data analysis.
SKP undertook data validation and quantitative data analysis.
PS collected the data and SpP edited the manuscript.
All authors contributed to writing the manuscript.

Please see link to

Annexure 1 Operational Framework VHND
Annexure 2 Facility Survey Checklist VHND

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