A Community-based intervention of Preventing the spread of COVID-19 applying well-thought-out strategies in UP and Bihar

ABSTRACT:

BACKGROUND

Healing Fields Foundation (HFF), an NGO, used a model by equipping women from marginalized and poor communities to provide health intervention in 41 districts of UP and Bihar. The Community Health Entrepreneurs (CHE) received a 6-month health training followed by 6-month internship. As of 2018, HFF trained 4108 CHEs in Health training to work in their villages. During the Covid pandemic, 1133 CHEs received online COVID-19 training to control the spread of COVID-19infection.

METHODS

A one-group post-test design was adopted and both quantitative and qualitative methods were used for this participatory impact evaluation. A multi-stage sampling technique was used to select in the first-stage districts, second-stage villages and third-stage the target populations. The data collected for the quantitative surveys were on digital tools using an existing survey platform – KoboCollect and ethnographic guides for the qualitative data.

RESULTS

CHEs detailed education increased the Covid-related knowledge and practices of the community. They displayed technical skills in using infrared thermometers,and pulse oximeters and interpreting the results to take further action. They established 105 migrants Quarantine Centres, 85 Village-level Covid Care Isolation Centres, distributed ration-kits that impacted 9554 ultra-poor families, organized 1825 Covid vaccination camps benefiting over 30,000, used Gram Vaani numbers and 360 high-risk individuals were benefited.

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CONCLUSION

The CHE model controlled the spread of Covid infection at a time of need among the marginalized and poor communities in the intervention areas. This model is replicable and can be adopted by other NGOs with the required contextual changes. The community respected and valued the CHEs services and expressed the continued need for her services.

Keywords
COVID-19 prevention, Community Health Entrepreneurs, Women empowerment, Quarantine centre, Village-level Covid Care Isolation Centre

INTRODUCTION

Healing Fields Foundation[1] with its Head Office (HO) in Hyderabad started a community health programme initially with Community Health Facilitators in 2005 in Telangana and scaled up in other states in 2011 focused more in recent years in UP, Bihar and Jharkhand. Their flagship intervention in health was the Community Health Entrepreneurs (CHEs).

The Community Health Entrepreneurs

The key person working for the health and welfare of the marginalized and poor community is the CHE. The selection criteria for the CHEs were that they should be women, residents of the village, have good rapport in the community, aged between 21-45 years, having minimum education of 8th standard. HFF selected eligible women and offered CHE Health training and once they graduated, they were placed to serve as CHEs. This was context-based health training for six months by well-trained Training Coordinators (TC) using a well-developed manual. Following this, 6 months of internship was provided through which skills were developed to plan and carry out a wide.

Providers (BCP) with specific training on vitals. During the Covid pandemic, only 1133 CHEs with 664 and 469 from the states of UP and Bihar respectively were selected to intervene for Covid-19 response based on the availability of funds and their willingness.
As of 2018, HFF trained 4108 CHEs in Health training and as of 2020, 115 CHEs have been upskilled as Basic Care Providers (BCP) with specific training on vitals. During the Covid pandemic, only 1133 CHEs with 664 and 469 from the states of UP and Bihar respectively were selected to intervene for Covid-19 response based on the availability of funds and their willingness. They were able to receive online COVID-19
variety of essential healthcare projects in areas of health, hygiene, nutrition and sanitation.

These CHEs were monitored and supported by women who functioned as Field Coordinators (FC) with a minimum of 12th pass, good communication skills, previous work experience and local references. The Training coordinators had extensive Training of Trainers (ToT) with a well-developed curriculum and comprehensively prepared ToT manual which was for two weeks. This equipped them to conduct training for CHEs, FCs and other HFF staff periodically.

As of 2018, HFF trained 4108 CHEs in Health training and as of 2020, 115 CHEs have been upskilled as Basic Care training even during Covid and lockdown restrictions using smartphones.

The monitoring of the work of the CHEs was well planned with a monitoring app format covering all activities of the previous month which was to be filled and uploaded by each of the CHE. A daily update on every CHE's progress was made into a mobile app-based MIS. The MIS was reviewed by the internal MIS monitoring team at HO in Hyderabad on a regular basis.

METHODS

This impact evaluation assessed the effectiveness of the CHE programme before and during Covid-19 in the intervention areas of 41 districts with 23 in UP and 18 in Bihar and was given to external consultants.

Study population

A one-group post-test design was adopted and both quantitative and qualitative methods were used for this participatory impact evaluation. A multi-stage sampling was used with districts in the first stage, villages in the second stage and the target population in the third stage. The districts were stratified into effective, moderately effective and ineffective based on CHEs' performance indicators. The districts were selected proportionately from each category taking into account the geographical spread. One or more villages were selected from each district based on the number of CHE villages. The target groups were selected from these villages. Thus seven districts, four from UP and three from Bihar for the quantitative survey and 6 districts four districts from UP and two from Bihar were selected for the qualitative survey resulting in 13 districts out of 41 from UP and Bihar. As the intervention covered more villages in UP than in Bihar, the samples were also picked up proportionately.

The sample size was 29% for the selection of districts and 25% for the CHEs. This resulted in 284 CHEs, 693 community members and 427 mothers having at least one child aged 1-3 years for the quantitative survey. Questionnaires were administered among 8 FCs, 10 Senior Field staff and HFF leaders. For the qualitative survey, five FGDs were conducted with 56 CHEs, 6 with 103 community women, 6 with 61 adolescent girls, one FGD with 8 FCs and another one with 10 Senior Field staff. KIIs were held with one CHC Doctor, two Gram Pradhans, one ASHA and one VHN. Case studies were made with one CHE and with one CHE VCCIC.

Data collection

Interview schedules consisting of structured questions for each target group of community women, mothers with 1-3 year children and CHEs were designed for the respective surveys and questionnaires for the HFF staff. The data collected for the quantitative surveys were on digital tools using an existing survey platform - KoboCollect. Ethnographic guides were prepared separately to conduct the FGDs and KIIs with CHEs, FCs, Senior Field staff and other stakeholders focussing on the

relevant indicators. Both quantitative and qualitative methods were carried out among leaders, Field Senior staff and FCs by the consultants. sAn intensive training was given to 7 enumerators with 5 of them to collect quantitative and 2 to collect qualitative data.

Data analysis

The quantitative data collected through the Apps were accessed as Excel files. Statistical analyses were performed using the statistical software IBM SPSS Statistics Version 28.0. The jotted-down notes of FGDs and KIIs and information from electronic recordings were transcribed into written text, then themes were established and consolidated manually, and the respective results were attached with the corresponding indicators. The stratification based on the effectiveness of districts and the selection of sampled villages proportionately from each strata was considered as representative.

Statistics

Descriptive statistics was used to describe each of the variables used in the evaluation study preparing the frequencies, range, means and standard deviations. To test the significance differences in different parameters, student t-test was performed.

RESULTS

Many CHEs learnt to use smartphones for the first time and used them for online learning. The training covered the six messages of COVID-19: 1. Wear mask when going out. 2. Hand wash with soap and water for 30 seconds. 3. Sanitize when returning from outside. 4. Maintain social distance of 3 metres. 5. Clean surfaces inside house with lysol, phenyl, surf or soap. 6. Isolate yourself if you have symptoms suspicious of Covid-19. These messages were educated to the community and broadcasted through a mike attached to an auto rickshaw which went around in the village. These were called Dindoras. A majority of the CHEs were able to state more than 3 preventive measures which is an indication of considerable knowledge. Half of the CHEs knew 4 out of 7 major matters to be educated to the community.

The CHEs were equipped during the training with the skills needed for Covid-19 response. These included establishing QCs and VCCICs, early Identification, facility overview, patient care requirements, emergency medicines, breathing exercises, promoting prone position of breathing, monitoring temperature, monitoring oxygen saturation using the pulse oximeter, serious symptoms, facility requirements, patient protocols, infection control protocols, caregiver protocols and biomedical waste management. The need for isolation was known to around three-fourths of the CHEs and a similar proportion knew that isolation protects other members of the family. A majority of CHEs correctly Interpreted oxygen saturation below 92% as 'low' and that they have to be referred immediately. Three-fourths of the CHEs knew that the patient should be directed to lie on the stomach which is the correct answer. Almost all CHEs knew that when a symptomatic person has persistent fever for more than 7 days and breathlessness, then that person has

to be referred.

Before they attended the training on COVID, almost all CHEs informed that they did not have the skill to attend meetings through Zoom, use pulse oximeters, prone position skills, organise Covid vaccination camps, establish migrant quarantine centres, prepare Isolation centres and work with the government staff. Similarly, a majority of them had not used smartphones or used infrared thermometers to take temperature. After the training on COVID, little less than half of them rated that they had gained each of the skills 'Well' and another similar proportion gained each skill a 'Little' and still a few of them lack each of the skills. This was a great achievement on the part of HFF through the inputs of online training and monitoring resulting in the outputs of knowledge and skills of the CHEs.

The outcome of the intervention reflected in the community to prevent the spread of Covid infection. A majority of the community respondents were able to say the preventive measures of COVID. Home care isolation of symptomatic individuals should be isolated in a separate room was known to little less than half. Three-fourths knew that a 3-metre distance should be maintained, more than a quarter said that meals should be kept outside the room, and more than a third indicated that a doctor should be consulted and provide medication. Almost all reported that these health education-related facts on COVID were taught by CHE followed by ASHA. All the adolescent girls were able to list the preventive measures for COVID. Almost half of them knew that a person with a fever and or cough should be isolated at home.

During the COVID pandemic, CHEs had to suddenly change their roles from their health education topics to COVID-related topics. It started with giving education on COVID to the community, establishing migrant QCs, establishing VCCICs and distributing of masks and sanitisers. Almost a third of them said that working with government staff and distributing ration kits for the vulnerable were the other changes in roles in their work.

Earlier women were bound by societal norms and patriarchy all their lives. At the start of the program, most women were accompanied by their husbands or mothers-in-law and came in gunghat[2] or a veil covering their face. By the time they graduated, they not only had a voice but were established as leaders and agents of change in their community. These women were empowered through various training given by HFF which enhanced their freedom, autonomy and confidence. More than 80% of the CHEs informed that autonomy in moving out of home for community services, participating in village discussions and the confidence they had in performing community activities were poor before the CHE training.

After this training, each of these freedom, autonomy and confidence levels have improved from 'Poor' to either 'Moderate' or 'Good'. After the training on COVID, there was a further increase with more than half and almost three-fourths of CHEs indicating that in each of these aspects of freedom, autonomy and confidence, their rating was 'Good'.

Boldness, courage, willingness to work for others and counselling skills have increased among CHEs over a period after receiving the initial health training and subsequent Covid training. Almost half of the CHEs, have improved in boldness and courage, willingness to work for others and counselling skills and rated as 'Good' after the basic CHE health training, which was found to be statistically significant ($z=6$, $P<0.0001$), ($z=4.4$, $P<0.0001$) and ($z=4.9$, $P<0.0001$) respectively. Each of these skills was further increased to more than half the CHEs (62%, 55.6% and 58.8%) who rated 'Good' after Covid training. There was a significant ($z=2.3$, $P=0.0213$) increase in the percentage of CHEs who rated as 'Good' in their boldness and courage, it was not significant in willingness to work for others ($P>0.05$,NS) and was less significant ($z=2.1$, $P<0.05$) in counselling skill after Covid training. The 'willingness' to work in the community was less probably because of the fear of the disease Covid-19.

Quarantine Centres: When the lockdown was announced with little warning, trains and buses were frozen across India. Millions of stranded migrant workers resorted to dangerous means of transport, Healing Fields intervened by providing 45 buses and 2,475 migrants benefitted and also coordinated with District Magistrates in home districts and the Disaster Relief Agencies in the destination states to ensure a smooth journey. This was followed by arranging QCs to receive migrants who were returning from other states to UP and Bihar[3].

In villages where there was a sizable number of returning migrants, CHEs and HFF staff engaged Gram Panchayat leaders to convert the village school or pan chayat buildings into a QC with access to a clean toilet, provision for water, mattresses, a sanitation kit with toothpaste, brush, body soap, washing soap, towel, bucket, mug and mask for fifteen days duration. A total of 105 QCs were set up in twenty-even districts and 3505 persons benefitted from these QCs. After observing that migrants were experiencing severe depression, HFF facilitated the mental health helpline 'Let's Talk' and trained CHEs to counsel individuals needing support and facilitate access to the helpline. Community participation and support was ensured when Village Health Monitoring Committees were organised by 1059 CHEs as the Village Health Sanitation and Nutrition Committees promoted by the government could not be revitalised.

Village-level Covid Care Isolation Centre: During the next wave of the pandemic, the villages where it was spreading fast were identified and 85 VCCICs were planned and established, which functioned in 26 districts, benefitting 730 persons. These catered to those with no isolation facility in their homes, patients whose families could not afford isolation or were mildly ill and who were afraid to go to the hospital. They provided breakfast and the other meals were to be provided by the family or other means. Here temperature was monitored with an infrared thermometer, oxygen saturation was monitored with a pulse oximeter, patients were educated on breathing exercises and prone position when required, given surgical and cloth masks and provided clean and safe water, and

access to doctors through teleconsultation and tele counselling for mental health.

CHEs worked with SHG members and other village health workers in selected districts in HFF areas of operation to identify the ultra-poor and the vulnerable and provided them with ration kits once in 15 days 3 times during the three waves of the pandemic to meet their nutritional needs which impacted 9554 families. They were also facilitated access to get their rice and wheat from the government ration shops.

Covid vaccination was another area where the CHEs were involved in a big way and many faced challenges in motivating the community members to take vaccinations as some were afraid that they would become impotent (Infertile) while some demanded a 'bond' letter to live. They overcame ignorance by educating the community with some CHEs by broadcasting messages through 'dindoras'. Some CHEs had to motivate by taking both doses of the vaccines first and some had to show the vaccination certificates. Some told the community that what was free now may cost later. They organised 1825 vaccination camps in the villages. Over 300,000 Covishield vaccinations were facilitated. Many CHEs reported that they were able to have vaccination coverage of their entire village which was confirmed in the community surveys. Almost all of the community women and men informed that they were vaccinated with 89.5% having had two doses.

An IVR-enabled platform named as Gram Vani was available as part of the services to Covid patients. This platform was used to educate Panchayat Presidents. It also had a quick test to determine if a person was high risk and using this feature 360 high risk individuals in villages were identified. Some women participating in FGDs felt that this could be used for even other diseases effectively.

Getting evaluative feedback from the CHEs and the community members it was clear that the services provided during the Covid pandemic were unique and useful for the community. The community valued CHE services and had great respect for her. Almost all knew their CHE by name. The CHEs themselves recognised this close relationship with the community and the manner in which they respected her. Two-thirds (68.3%) of them informed that the people came to her for any help and one-third indicated that they took her advice on issues related to health. But what made them feel recognised by the community women and men was that they respected her by welcoming her and talking to her pleasingly and many addressed them as 'Madamji'. Almost all communities expressed that there was a continued need for the services of the CHE and that she should continue her work even after the Covid pandemic is over.

One of the unique features of the CHE programme was the activities planned to ensure the sustainability of this programme. They had the possibility for earning an income through the different services they rendered which made it possible to improve the quality of their l

ife. The incentives that the CHEs receiv--ed were for the promotion of kitchen gardens, committee meetings attended, health education sessions, data being filled, ration distribution, helping in setting up quarantine centres, setting up isolation centres, organizing health camps and different types of surveys. Part of it was based on the money received from carrying out project activities which is not sustainable. The other part was by selling to the community some essential health products such as sanitary napkin pads, phynol, soaps, etc. Many more approaches are being tried through the telehealth program.

A majority (82.6%) of the CHEs who reported that they did not have income before they became CHEs, reduced to 2.1%. Those who were earning Rs. 1000-5000 increased from 9.9% to 57.2%. This is a significant increase in their monthly income.

CHEs invested their income earned through health livelihood activities to improve their quality of life. More than two-thirds of the CHEs recorded in the survey that they have invested in the education of their girl children. Almost two-thirds have invested in nutrition, one-third in sanitation, more than a quarter in the construction of toilets and more than a quarter in clothing. The other investments informed were soak pit construction (16.2%) and their children's marriage (14.4%). More than half of the CHEs have expressed their satisfaction with the CHE support and health livelihood activities as 'very good' and little less than half rated it as 'good'. Lack of family support faced by the CHEs within the family was reported by 14.1% and outside the family by 14.8% when they agreed to take up the training and the COVID-related services.

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In future, if there is a pandemic like COVID affecting the villages, how well were they prepared to face it? The CHEs vocalized by saying, "First of all, we will obtain the knowledge about the pandemic, then we will serve accordingly". "We will work as effectively as it was done for this pandemic". "We will first get to know the disease, its pattern of transmission and its required treatment, after that we will educate the community about the same and take up the process of caring". "Without fear, we will face the challenges and serve the community; like Covid pandemic. We will create awareness in the community with appropriate messages, refer infected people for better treatment and care and link with the government health system".

Lessons learnt: COVID has taught HFF important lessons and has opened several avenues for the marginalized and poor women to expand their skills and support the communities. The women quickly adapted to digital tools and were able to receive online training and report on mobile applications. Every act and service of CHEs depended solely on the effectiveness of the role played by each CHE. The impact was found to be less in those villages where CHEs effectiveness was moderate or poor. Increasing the health livelihood activities of CHEs motivated their commitment to the services. Knowledge and skill through trained persons using behaviour change curriculum played a vital role. Monitoring and less turn-over among staff also was a very important factor that would contributed to programme effectiveness.

Challenges faced by HFF: When one CHE left because of genuine reasons replacing another CHE was a debatable issue as it needed training as well as experience and this weakens the effectiveness of the services. Similarly, when one FC or a well-trained Training Coordinator left the job for varied reasons, replacing another was again a challenging task for monitoring and the administrative leadership.

CONCLUSION

The CHE programme is a replicable model and can be adopted by other NGOs with the required contextual changes. The CHE program enhanced the behaviour of the community, improved their health-seeking behaviour, accessed the health services, availed the government benefits and enlightened the women's outlook. CHEs coming from the same marginalised and poor community were empowered with tremendous technical skills, elevated their boldness and courage, willingness to work for others and counselling along with displaying their ability, freedom, autonomy, and confidence and improved their self-respect in their society. The community received their health services at a time of need through various strategies. There emerged a unity along with the government workers, other stakeholders and the HFF workers.

DISCUSSION

Structurally, India has one of the best-planned healthcare delivery systems spanning the whole country. However, functionally there are many gaps and limitations especially when it gets down to the most peripheral reaches in the rural areas. Arvind Kasthuri [4] has very aptly listed five essential gaps or challenges to health care in India. They start with a lack of awareness of health behaviour of the community, a lack of available services in the community, a lack of access to the available services, inadequate health human resources with a lack of accountability of the staff employed to carry out this service, and alternative services that are not affordable. [4]. Providing effective health care delivery for the poor and marginalized populations, especially among rural populations in different states of India has been an ongoing process promoted both by the government and Non-Government Organizations.

The first successful well-documented health workers at the community level in India was what was promoted in the seventies by the Aroles in Jamkhed in Maharashtra[5]. (Perry and Rohde 2019). Based on this experience and following the successful barefoot doctor model of China, India introduced the Health Guide scheme in 1977[6]. (Strodel and Perry 2019). Around the same time Christian Medical College, Vellore introduced the Part Time Community Health Workers[7] and the Family Care Volunteers (FCV) [8,9] in their community health programmes.

The CHE model of healthcare delivery promoted by the HFF has been well recognised within the country and globally[10]. It is a unique model among

NGOs. It is almost identical to the ASHA delivery system. This is probably why earlier there was suspicion and conflict between these model of the government health care two cadres of health workers with Covid wiping off these and making them work together.
The volume of work carried out by the CHEs has been enormous both in health care delivery as well as in COVID-19 care and prevention. One significant inter Healing Fields - HFF. (2024, August 21).

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