Summer Training at
Khushi Baby, Udaipur

Impact of Khushi Baby on ASHA Workers in Udaipur District

By
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INSTITUTE OF HEALTH
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(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

CERTIFICATE

This is to certify that **Dr. Samiksha Sharma** has undergone summer training at **Kushi Baby, Udaipur** from **2nd April 2018 to 2st June 2018.**

The candidate herself completed the project assigned to her during summer training. Her approach to the project was sincere and proactive. This summer training is in partial fulfillment of the course requirement recommended for the award of MBA in Hospital and Health Management.

I wish her success in all her future endeavors.

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KhushiBaby

Sr. No. - 07/Internship/KB/2018-19/ June, 02, 2018

To Whomsoever it may concern

This is to be certified that **Miss Samiksha Sharma** from IHMR University Jaipur has attended the organization for her summer internship from 06/04/2018 to 02/06/2018 and has completed the term of internship.

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ACKNOWLEDGEMENT

This internship was the most enriching experience of my life. It has provided me with a very different prospective to look at issues at the grass root level. I learned about health care system in India & how a mhealth solution like Khushi baby can make revolutionary changes.

I would like to express my deepest gratitude to all those who provided me the possibility to complete this report. A big thanks to Ruchit Nagar, CEO at Khushi baby Mohammad Shahnawaz, COO at KhushiBaby, , Pawan Bhadoriya, Data Manager at KhushiBaby ,Md Sarfaraz Ambiya, Analyst lead, Vaidehi Supatkar, Design lead, Hamid Abdullah, Project Assistant at khushibaby , Dr Vijendra Banshiwal, Tech manager at KhushiBaby , Jitender Hayaran Policy Associate

Furthermore, I would also like to acknowledge with much appreciation the crucial role of my mentor at IIHMR University Dr. S.P Chatopadhyay for her handholding support and encouragement throughout the training program. Last but not least all the Khushi baby staff for helping and supporting me throughout.

Content table

ANM-Auxiliary Nurse Midwife	**MH**-Maternal Health
ASHA-Accredited Social Health Activist	**MO-** Medical Officer
AWW-Anganwadi Worker	**MSS**-Mahila Swasthya Shivir
BMO-Block Medical Officer	**NPW**- Non-Pregnant Women
BPMU- Block Program Management Unit	**NRHM**-National Rural Health Mission
CHC-Community Health Centre	**NUHM**- National Urban Health Mission
DH-District Hospital	**PH**-Public Health

DPMU- District Program Management Unit **HMIS**-Health Management Information System **HR**-Human Resource **IEC**-Information Education Communication **IRTS**-Integrated Referral Transport System **IT**-Information Technology **LHV**-Lady Health Visitor	**PHC**-Primary Health Centre **PIP**-Program Implementation Plan **PW**-Pregnant Women **SDH**-Sub-District Hospital (Civil Hospital) **SHC**-Sub-Health Centre **Kb –**Khushi baby

ABBREVIATION

Observational learnings

Section 1 ; Introduction

Khushi baby is an organization, which is working in the field of maternal and child health, in 5 blocks of Udaipur district of Rajasthan i.e. Sarada, Salumber, Gogunda, Jhadol and Lasadia.

Khushi Baby (KB) is a nonprofit organization on a mission to reduce infant and maternal mortality due to vaccine-preventable diseases in India.the technology comprises of a data-storing necklace that provides a two-year personal immunization record for children. It uses Near Field Communication (NFC) technology to send and receive information through a smartphone or mobile tablet. Data is synced to the cloud and displayed on a dashboard accessible to health officials.

This technology is meant to record and track immunization data of newborn babies across the country by digitizing information at the point of care. The health worker or Auxiliary Nurse Midwife (ANM) assigns a new necklace to every baby on the first visit to a vaccination camp. She then uses an NFC-enabled smartphone or tablet with the KB app to scan the necklace and register the baby by entering details like name, father's name, mother's name, date of birth, etc. She also enters the details of the vaccines the child has received so far. The health worker scans the necklace once again after entering the details so that the updated data is available to the parents as well.

When the health workers go back to block office or any place that has Internet connectivity, they upload the data on a cloud-based dashboard The Ministry of Health and other health officials can use that data to generate reports, view patient-specific information, see which vaccines were not given and why etc. This information can help them work on improving the system. The dashboard sends out voice calls to mothers' cell phones too. These calls are in local dialects. They carry educational messages about different vaccines and their importance. The calls also remind mothers about the next vaccination camp.

Section 2

When we started our internship, the organization also started their Endline survey. We got an opportunity to have an insight into how a survey is conducted. We learned nuts and bolts of survey procedure. From designing a questionnaire to analyzing the data.

- Before conducting a survey, questionnaire with a specific objective was framed.

  The questionnaire was made using software named survey CTO. I assisted in translating the questionnaire

- The questionnaire was tested many times before final launch.

- Team of surveyors was selected and trained for the survey. During the three day training schedule of the surveyors, supervisors were also selected from the team itself.

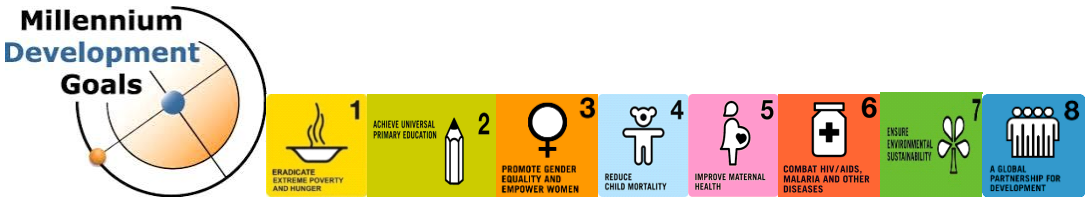
- At end of control Endline survey, surveyors were filtered. Those who had higher number of errors during data collection were dismissed. This step was taken to maintain quality of data collected.
- I assisted in preparing Endline indicator matrix.
- Assisted in editing surveyor manual.
- During our internship we also visited many vaccination camps held at Aanganwari and subcenters.

Section 3; SWOT analysis

Project Report

Introduction

The objective of the Indian Government's National Rural Health Mission (NRHM) is to strengthen the healthcare delivery system in rural India, with a focus on the needs of vulnerable, village populations. In 2005 the NRHM established a new cadre of community health workers called Accredited Social Health Activists (ASHAs) (Bajpai, 2011). ASHAs act as village-level, grassroots workers who link the community to the public health care system by addressing both supply and demand-side issues. ASHAs have three roles: (1) to create awareness on health and determinants; (2) to mobilize the community towards local health planning; and (3) to increase utilization of the existing health services (Fathima et al., 2015). ASHAs represent the cornerstone of NRHM strategy to address the millennium development goal on health related indicators in India (MoHFW, 2005).



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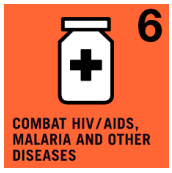


Rationale

The ASHA program has been evaluated in numerous studies. The 2011 assessment from the National Health Systems Resource Centre emphasized that while the ASHA program is now operating at scale and serves an integral role in the public health system; the ASHA's functionality and effectiveness can still be improved (Vedm et al., 2011). A further study found that the ASHA program increased immunization rates from 12-17%, but only in Indian states that give a focus to the program (Gopalan et al., 2012). Additional studies examined incentives, recruitment, roles and responsibilities, supervision, and training for ASHAs throughout India. The research emphasizes a need for stronger ASHA supervision and support, with clearly defined roles and responsibilities for all frontline health workers (Bajpai, 2011; Fathima, 2015; Singh, 2010; Rahman, 2010). Despite usefulness of these findings, only one study of those reviewed report on the ASHA's own views of their roles (Scott & Shanker, 2010). This specific study involved 25 interviews and 5 focus groups with ASHAs, health professionals and community members as well as over 100 hours of non-participant observation at public health centers. The research investigated contextual features of the ASHA program that are hindering the ASHAs' capacity to improve health outcomes and act as cultural mediators and agents of social change. The study found the ASHAs' payment remuneration system was inadequate, and that the hierarchical structure within the public health system "limited opportunities for meaningful communication across levels of status, seniority and income" (Scott & Shanker, 2010). The study concluded that progressive policy on community health worker programs must be backed up by more concrete institutional support designed to enable ASHAs to fulfill their roles.

Khushi baby is an innovative idea where black thread worn by babies in Rajasthan is turned into an effective tool to track their immunization record. The Khushi baby system is about a black thread, a plastic pendant with a near field communication chip and a mobile application. ANM assigns a new pendant to every baby on first visit to immunization camp.

Then she uses an NFC enabled tablet with KB app to scan necklace and register the baby. The data is stored on a cloud based dashboard. The health officials can use the data to generate reports and view patient specific information.

With this in mind, objective of the study was to understand how the Khushi baby system has changed ASHAs experience about their work; including future prospective of providing ASHA workers with KB tablets .Specific focus of the study was to investigate how ASHAs workers has incorporated communication technology in the provision of immunizations and antenatal care

for women and children. In the study, qualitative methods were used to capture the voice of the ASHA and to gain a holistic understanding of their role as the primary liaison between rural healthcare providers and the communities they serve. Given the central role ASHAs are intended to play in India's health system, a deeper understanding of their experiences about KB system can help organization to take ASHA workers in the loop along with ANM and make healthcare delivery system of India stronger at grassroots level.

General objectives

How Khushi baby system has impacted work efficiency of ASHA workers in Udaipur district of Rajasthan.

Specific objective

1. How means of informing beneficiaries has changed means.

2. How Khushi baby voice calls for beneficiaries has helped in motivating and mobilizing community towards health services.

3. How KB pendant is working as a social catalyst.

Methodology

Study type

This study is a qualitative study to find out impact of Khushi baby system on ASHA workers and how Khushi baby system has improved work efficiency of ASHA workers. 3 components of Khushi baby system which are directly or indirectly related to work of an ASHA worker are;

- Khushi baby reminder voice call for mother
- Khushi baby reminder voice calls for ASHA

- KB Pendant (which act as a social catalyst)

Study area

This study was conducted in Udaipur district of Rajasthan, 4 blocks namely Gogunda, jhadol, salumbar and sarada were covered during the study. The district was selected as the KB's m-health project on child immunisation is ongoing here

Data collection

40 ASHA were interviewed. A close ended survey was conducted to collect information regarding; age, marital status, educational qualification, population served by them, number of years as ASHA, etc.

Interviewers were provided with an open ended questionnaire to gather information and clarifying questions were asked to get more precise information. Interviews were recorded, noted down in Hindi and then translated to English.

A, cross sectional study was conducted to analyze impact of Khushi baby system on population of ASHA workers. This qualitative study was conducted to get an in-depth understanding of their experience how Khushi baby. A convenient purposeful sampling was used to take sample of 40 ASHA workers. Final sample size was reached by theoretical saturation, when we were getting similar answers. Data saturation was reached after completion of 40 ASHA interviews.

Findings

Demographic characteristics

A total of 40 ASHAs were interviewed. The median age of ASHA was 35 year. All the respondents in this case were Hindu (100%). Average experience of 40 respondents was 8.8 years and average population served by 40 ASHAs was 1040.15.

Trend of education in the population is mentioned in the following table 1.

It can be seen clearly that educational qualification of the majority of the ASHA workers was 12th STD i.e. 37.50 %. Out the entire ASHA in sample size 35% were educated till 10th STD, 12.50% up to 8TH STD, 12.50% had a graduation degree and 2.50% had post-graduation degree.

Table 1 Education trend of sample size of 40 ASHAs.

Education level	Percentage	Total number
8th	12.50%	5
10th	35%	14
12th	37.50%	15
B.A	12.50%	5
M.A	2.50%	1

Figure1 ; Chart depicting trend of education level of ASHAs.

Data from the National Family Health Survey-III (2005-06) clearly highlight the caste differentials in relation to health status. Reduced access to maternal and child health care is evident with reduced levels of antenatal care, and complete vaccination coverage among the lower castes. Thus this data is also divided on basis of caste.

Majority of the respondents were schedule caste 37.5%. 32.5 % schedule tribe and 22.5 % were general.

Figure 2 ; proportions of SC, ST and General categories in sample size of 40 ASHAs.

Three major concepts emerged during this qualitative interview;

Concepts

Three major concepts that emerged during the interview are as following;

(1) Shifting trend in means of informing beneficiary.

(2) Shift in level of awareness about child immunization through Khushi baby voice calls.

Concept 1; Shifting trend in means of informing beneficiaries

Concept 1

In rural India, mobile handset penetration is much higher than TV. According to Telecom Regulatory Authority of India, currently there are 499 million mobile subscribers in rural India

ASHA workers usually walk from home to home to inform beneficiries about the camp. This is a tedious task in hilly regions of Salumber, Gogunda , Sarda and Jhadol which are surounded by Aravali hills . Informing beneficiers takes 3 to 6 hours per day on an average as reported by all the ASHAs. But with increase in access to mobile phones a shift is noticed in there approach during this qualitative study.

Twenty two out of fourty ASHA said they use both the means to inform beneficiaries.

मैं हर घर में दो दिन पहले सूचना देना शुरू कर देती हूँ . जिनके पास फ़ोन है उन्हें कॉल करके सूचित कर देती हूँ . जिनके पास फ़ोन नहीं है उनके घर जाना पड़ता है .(I inform each house mentioned in the due list two days prior to vaccination camp . Those who have mobile phones . I call them to inform. Those who do not have mobile phone or phone is with husband I visit them to inform about the camp.)

Figure 3; ASHA who visit household vs ASHA who visit household & uses phone call to inform beneficiaries.

It can be seen in the chart above that number of ASHA workers who use mobile along with household visit is 55%. Those who visit households to inform beneficiaries is 45%.

One of the ASHA who had 12 year of experience said that,

पहले काफी मुश्किल होती थी . उन् घरों मैं जाने मैं जो मगरी पर बने है या हमारे घर से दूर है . उस्समे बहुत समय लगता था . अब हम जिन लोगों के पास फ़ोन है उन्हें कॉल करके बुला लेते हैं.

(Earlier it was very difficult for us to visit houses which were situated at odd locations, as this is a hilly region, some houses are situated on hills. It used to take lot of time. Now some people have phone so I call them to inform about the camp)

One of the ASHA workers from Gogunda block also mentioned that she informs all the population of her area via phone only.

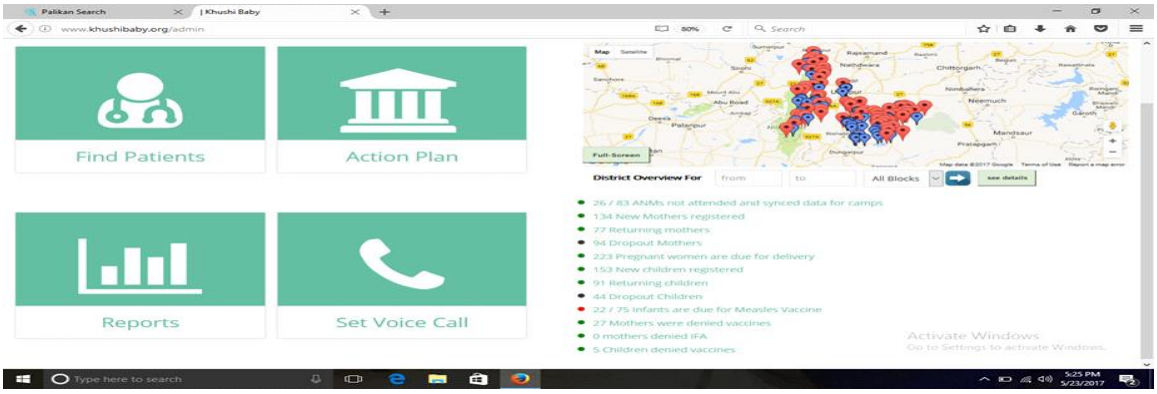
मेरे इलाके में पढ़े लिखे लोग जादा है. कॉल कर देने से हे आ जाते हैं. (most of the population in my area is well , i call them and they come for camp)

As found in the study all the 40 ASHAs under the study had mobile phones. But the number of smartphone user was very less. Only 12.5 % ASHA workers had smartphone and out of that only only 7.5% were using whatsapp. So it is quite evident that ASHA workers have access to mobile phones but they still lack access to internet connection and various others means of communication.

Concept 2 : Shift in level of awareness about child immunization through Khushi baby voice calls.

How automated voice call system works.?

ANM enters details of the mother in the application when she comes to vaccination camp. Phone number of the mother get registered in Khushi baby application. The data gets synchronized on cloud based dashboard along with other data. The dashboard holds information about camp schedules. System sends automated voice calls to the mother a day before camp day and on camp day in local dialect i.e. Marwari.



Dashboard Summary Reports Download Reports Search Settings Sign out

Voice Call Summary

Recipient type*	Rule type	Block	Date from	Date to	
Child	Due Vaccine	All Blocks	01/05/2018	31/05/2018	Submit

Due Vaccine Call Summary

Udaipur	Total SCs	Total MCHN Planed	MCHN Held	Due For Vaccination	Due	No Mobile	Returned	Have Mobile	Call Placed	Call Completed	Returned	Call Failed	Returned	Call No Answer	Returned	Other	Returned
All Blocks	85	295	235	Unregistered child	3002	1258	0	1744	1420	611	0	700	0	79	0	30	0
All Blocks	85	295	235	Due for penta 2	0	0	0	0	0	0	0	0	0	0	0	0	0
All Blocks	85	295	235	Due for penta 3	0	0	0	0	0	0	0	0	0	0	0	0	0
All Blocks	85	295	235	Due for measles	581	260	2	321	217	134	1	77	1	6	1	1	0
All Blocks	85	295	235	Due for measles booster	0	0	0	0	0	0	0	0	0	0	0	0	0

Showing 1 to 5 of 5 entries

Beneficiaries receive automated phone calls from Khushi baby system. These phone calls are reminder calls for;

- Pregnant mothers a day before camp & on camp day to get their vaccination done,
- Reminder calls a day before camp day & on camp day to take children for vaccination,
- Reminder calls to dropout mother and children,
- Reminder calls for Penta 1, measles and booster dose.

- Pregnant women gets monthly general ANC check up reminder.
- Pregnant women gets genral IFA tablet reminder.
- Mother gets a general breastfeeding information.

(Refer table given below for english transcript)

These voice call increases awareness among mother about regular health checkups at camp. these voice calls also help to mobilize community towards health facilites, reaching out the margnilized group of our society. These voice calls help ASHA workers indirectly , as it eases their task of councelling and motivating mothers.

Most of the ASHA who were interviewed reported that these phone call has increased awareness of community especially mothers about vaccination. One said that, now they consider vaccination as an important affair as they are getting regular call reminders for the same. Earlier it was very difficult for ASHAs to convince beneficiaries and get them to the camp.

One of the ASHA worker said ,

पहले हम कैंप के एक दिन पहले सभी को बोलते थे , फिर सुबह भी जेक बुलाते थे, ताकि वो टीकाकरण के लिए आयें . फिर भी कुछ महिलाएं नहीं आती थीं . लेकिन अब हम गहर पे बुलाने जाते हैं तोह महिला बताती है फ़ोन आया था. अब महिलों को पहले की तरह पकड़ पकड़ कर नहीं लाना पड़ता . समझाना आसन हो गया है.

(Earlier we used to inform them a day before camp and then visit their home early morning to make sure that they do come to camp. Still some of them used to miss camp even after repeated

counseling and visits. But now when we visit them beneficiaries do tell us about Khushi baby phone call reminders. Now it is easy for us to convince them.)

While analysing the data, reponses of ASHA workers about the khushi baby phone call reminders were clubed into positive and negatives. Where positive response signifies ability of khushi baby voice call reminders to increase level of awarness among the community about ANC, immunization, breastfeeding and IFA tablet reminder. Negative response signifies that there was no change in level of awareness of the community despite getting regular khushi baby call reminders. Chart given below compare positive and negative impact.

Figure 4: Positive and negative responses of the whole sample size of ASHA workers.

As it can be seen the chart given above number of positive responses is more than the negative responses. Positive responses were 42.50%. Negative responses were 32.50%.

Though impact of Khushi baby voice call is significant in motivating beneficiaries and increasing level of awareness among them, but still some of the tribal population don't turn up at

camp until ASHA visit their home in person as reported by most of the ASHAs. One of the ASHA worker quoted that,

गमेतियों को समझाना बड़ा ही मुश्किल है. कॉल उन्हें आते हैं . लेकिन कोई असर नहीं है . उन्हें घर जाके हे लाना पड़ता है (Its very difficult to convince gameti population for vaccination. They get call but still we have to visit them to get them to camps).

The bar graph given below shows that neagtive responses are more in tribal and schedule caste population and almost null in general population. If take a look at the demographic charecterstics of the population we can see that general population is less in number. Still percentage of positive reponses are quite high i.e 31%. And negative reponses were zero. On ther otherhand negative responses in SC population is 53% and negative responses in ST population is 46%.

Figure 5 Positive and negative responses of ASHA workers , of SC, ST and General category.

One of the challenges is high negative responses in SC and ST population. Majority of this population are Gameti tribes. Most of the ASHAs reported that it is difficult to deal with this tribal population.

One of the ASHA worker said,

गमेतियों को समझाना मुश्किल है. टीकाकरण के लिए उन्हें कई बार घर जाके बुलाने पर भी नहीं आते . कहते है टीकाकरण के बाद बचे को बुखार आ जाता है, या हाथ पर गाँठ बन जाती है . समझाना मुश्किल हो जाता है.घर से पकड़ पकड़ के लाना पड़ता है. (Its very difficult to get gamete tribe to vaccination camps. They don't come to camps because their child gets fever after vaccination or a nodule)

Recommendations

As it can be seen that use of mobile phone is increasing among ASHA workers. In future tablets can be provided to ASHA workers also to strengthen health system at grassroots level.

Favorable factors for this recommendation are educational qualification of ASHA workers. Most of the ASHA workers have passed 12th STD. All the ASHA workers had phone. But only 12.5% had smart phones.7.5% use whatsapp. Only 5% have ever used a computer.

The application and tablet should keep the preferable language as hindi, as it was found during the study that most of the ASHA workers save contact in their phones in Hindi.