Summer Training at
Save the Children, India, NSO, Gurgaon

Adherence and preference of Zinc supplement for Treatment of diarrhea

By
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Under the guidance of
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MBA Hospital & Health Management
2017-2019

Institute of Health Management Research
The IIHMR University, Jaipur
2018

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

IIHMR UNIVERSITY

CERTIFICATE

This is to certify that **Mr. Gangesh Gunjan** has undergone summer training at **Save the Children, India, NSO Gurgaon** from **3rd April 2018 to 3rd June 2018.**

The candidate himself completed the project assigned to him during summer training. His 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 him success in all his future endeavors.

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Save the Children
Bal Raksha Bharat

July 30, 2018

TO WHOM SO EVER IT MAY CONCERN

This is to certify that Mr. Gangesh Gunjan has completed Internship with Save the Children at Gurgaon Office from 03rd April 2018 to 03rd June 2018 with the Programme & Policy Impact team.

We have found Gangesh to be sincere in his work and a quick learner. We wish him all the best for his future endeavors.

For Save the Children, Bal Raksha, Bharat

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Society Registration Number:
S/51101/2004
FCRA Registration Number:
231660869
All donations are exempt
under 80G of I.T.Act (1961)

ACKNOWL EDGEMENT

I would take this opportunity to express my profound gratitude to our institute, Institute of Health Management and Research University, for providing us a platform to gain enough knowledge and skills in different aspects of Health Management.

I express my deep indebtedness to Dr Jatinder Bir Singh, Mr. Dushyant Mishra, Mr. Surendra Mehta and Miss Preeti Shoukeen, Save the Children, India, for their advice, support, encouragement and guidance throughout my training.

Sincere thanks to my respected mentor, Dr. S.D. Gupta for his support throughout the project. Without his guidance, this work would not have been possible.

Lastly, I wish to thank all those people whose insights and experiences have shaped the content of this report.

Gangesh Gunjan

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ABBREVIATIONS AND ACRONYMS

AC-ASHA Coordinator

ASHA-Accredited Social Health Activist

CHW-Community Health Worker

IHF-India Health Fund

MIS-Management Information System

NGO-Non-Government Organization

PHS-Public Health System

WHO-World Health Organization

WHP-World Health Partner

ANM-Auxilliary Nursing Midwives

ECCE-Early Childhood Care Education

EPP- Emergency Preparedness and Response Plan

AIDS-Acquired Immune Deficiency Syndrome

ORS-Oral Rehydration Solution

Zn-Zinc

WASH–Water, Sanitation, and Hygiene

SMC-School Management Committee

CG-Children Group

DRR-Disaster Risk Reduction

UNICEF-United Nations Children Integrated Children's Emergency Fund

BRB-Baal Raksha Bharat

Observational Learning

INTRODUCTION

Save the Children is a global non-profit organization which was founded in the year 1919. It is present in more than 80 countries and works to improve the lives of the most vulnerable children living there. At present, it is India's leading independent child rights NGO which is working for children in 19 different states of India. In India, it was started in the year 2008, and registered as 'Bal Raksha Bharat'. Since then, they have changed the lives of more than 10 million children. In the year 2017, Save the Children reached 2.27 million children.

Save the Children believes that every child deserves the best chance for a bright future and that is why, they are fiercely committed towards ensuring that children not only survive, but thrive. They run programs in the remotest corners of India and urban areas to provide quality education and healthcare, protection from harm and abuse and life-saving aid during emergencies to children.

The pioneering programs of Save the Children, address the needs of children, giving them a healthy start, the opportunity to learn and protection from harm. When crisis strikes, they are always among the first to respond and the last to leave. They are outspoken champions for children, ensuring their voices are heard and their issues are given top priority. Drawing on a century of leading expertise, they take on the toughest challenges facing the hardest-to-reach children, especially those unfairly excluded from the world's progress.

MISSION & VISION

Ninety years ago, a British social reformer, Eglantyne Jebb started a movement which evolved into a global phenomenon for the betterment of the most distressed children across the globe. Eglantyne Jebb, the founder of Save the Children, was driven by the belief that all the children – whoever they are, wherever they are – have the right to a healthy, happy and fulfilling life. She was of the view that change is within reach provided we have the courage, determination and creativity.

Save the children has been helping children get a happy childhood since 1919 and it is their decades of experience in improving children's lives which has helped them to set their mission and have a vision – all for the betterment of children.

Mission Statement

- To inspire breakthroughs in the way the world treats children, and to achieve immediate and lasting change in their lives.

Vision

- Build a world in which every child attains the right to survival, protection, development and participation.

One of the core focuses of Save the Children apart from working on the ground is Advocacy and influencing policy. Unless they continuously work with Government, National and International bodies to raise issues that need resolution or policies to bring the needed change, their work will not be complete. They spend funds collected where it is most needed, by spending in programs across India that help improve the health and education situation of children as well as take them out of child labor, child marriage, child pregnancies, abuse and emergency situations. They have a strong base of over 144,230 individual supporters who donate money. Apart from that, they have 35 corporate and 38 institutional supporters.

Save the Children works for and with children. It works for equality, equal education, equal nutrition, equal health, equal opportunities, gender equality, humanitarian situations and relief during natural disasters. They work mainly on four different themes, to achieve the objectives that they have set through their mission and vision. These themes are mentioned below:-

1. Child Health & Nutrition

Almost 50% of their work for children is done in the area of Health & Nutrition. In different states of India, they are working to improve the health and nutrition status of newborns, mothers, and expecting women with special focus on those coming from the most disadvantaged communities. Save the Children goes by the mantra that - No child is born to Die. That is why they have projects in several states of India which are aimed at increasing the chances of survival of children between the ages of 0-5 years, reducing malnutrition among them and improving newborn and maternal health. Through project 'Karuna', they could help malnourished children in rural Varanasi leave behind a life of malnutrition and

become healthy. In the urban slums of Delhi, they run Mobile Health Units which carry healthcare to the doorsteps of the urban poor.

Their newly launched international project called 'Stop Diarrhea Initiative' will tackle diarrhea (the second biggest cause of death among the children of under-5 years of age) and related issues among the most vulnerable children in the urban areas of Bihar, Jharkhand, West-Bengal, Uttar Pradesh and Uttarakhand.

Following are the areas they work in:

- Child survival
- Newborn health
- Maternal health
- Nutrition
- WASH – Water, Sanitation, and Hygiene
- Health & Nutrition of children affected by emergencies and natural disasters.

In all of this, they work engage heavily with the local community. They also work with state and district level government authorities, school and anganwadi centers. The Community Health Workers (CHWs) they train and work with form the backbone of their healthcare initiatives.

2. Child Education

Education is a gift for life. Save the Children helps children to unlock their potential and realize their dreams. They believe that every child is extraordinary and can scale great heights if provided with the right learning opportunities. They ensure that all children, irrespective of their origin, are able to go to school, play, interact and learn with other children of their age.

In nine different states of India, they run programs to support the education of the most disadvantaged children of India in different ways. They counsel parents from humble backgrounds to send their children to school and assist them through the admission process. They train teachers to impart learning using child-friendly and interactive teaching-learning methods. They set libraries and infrastructure right, conduct computer and English classes, promote and facilitate extra-curricular activities and sports.

They work with the local communities to form Children Groups (CGs) and School Management Committees (SMCs) and work with them to ensure that they take accountability of the development of the children in their community and that even the most marginalized children in that area are sent to school and they stay there. They map out-of-school children and ensure their enrolment into formal schools in age-appropriate classes. In classrooms, they encourage and help children to undertake learning activities in groups.

In metros cities, they promote their own learning centers where children coming from the socially excluded communities are provided learning and/or after-school support. In Kolkata and Mumbai, they run Mobile Learning Centers which reach the doorsteps of the children. During emergencies, they set up Temporary Learning Centers and distribute education kits so that the affected children do not drift away from the path of education. In 2017, 184,000 children benefitted through their projects on education. Under the theme (intervention area) of education, Save the Children has their intervention on two different sub-themes:

- **Elementary Education –** The importance of school education lies in the fact that the children of today will become adult citizens of tomorrow. The growth and future of our country highly depends upon the quality of the present school education system. Unless opportunities of good education trail down to the grass-root level, the health of the nation and the future of the children will surely suffer. It is important to understand that the access to quality elementary education is the right of each and every child and Save the Children aims to continue working on this issue.

- **Early Childhood Care and Education (ECCE) –** One of the root causes of children dropping out from school and ending up as child laborers is the severe neglect of their vital early years that is from birth to the age of six. Save the Children, with their experience across India believe that working towards the provision of Early Childhood Care and Education is one of the best preventive strategies through preparedness of children in the age group 3 to 6 years with school readiness skills. They work with Anganwadi staffs and concerned government authorities to strengthen the pre-school component in Anganwadi Centers.

3. Child Protection

The Child Protection Program is a core sector of all the programs of Save the Children. Children pushed into child labor, children facing abuse in the community, children trafficked, children affected by a calamity or emergency situation – They work to protect children from different kinds of harms such as abuse, neglect, exploitation, physical danger and violence.

Save the Children works with the most disadvantaged local communities, sensitizing and educating them about the rights of children to help them understand that children are meant to be at school and not at work. They also form Children Groups through which they bring together vulnerable children in a community. They work very closely with these Children Groups and train them to identify and prevent cases of child marriage, child trafficking, child abuse and child labor.

Another major aspect of the work of Save the Children is to coordinate with the district and state level authorities to ensure right implementation of laws so that children in the area are

kept safe. For vulnerable children above 14 years of age, they organize skill-based vocational trainings like beautician courses, security guard training, etc. and prepare them for dignified employment opportunities. During emergencies and disasters, they set up Child Friendly Spaces where affected children find a safe and conducive environment to overcome the trauma.

Save the Children utilizes the child rights programming framework and keep in mind the cross-cutting themes of child participation, non-discrimination and best interests of children. Their child protection work focuses on four key 'evidence' groups:

- Children affected by disasters/emergencies and conflict, including Child Centered Disaster Risk Reduction (DRR).
- Child on move – child trafficking, street children, migrant children.
- Children involved in harmful work and
- Children with inadequate parental care including alternatives to institutional care.

4. Emergencies

Save the children has put in place an Emergency Preparedness and Response Plan (EPP) to guide all its employees and implementing partners while preparing for and responding to emergencies. Their goal is to mount emergency responses that are timely, at appropriate scale and scope, providing high quality programming, efficiently, effectively, safely and securely for the most vulnerable children and their families. Their aim is to increase preparedness of children and their families for emergency situations in the aftermath of natural disasters through child-centered and community-based approaches. They also aim to manage disasters better, minimize the impact of natural disasters to communities in disaster prone areas and build child-centered resilient communities.

Save the Children is committed to reducing children's vulnerability to emergencies, ensuring their right to survival and development after an emergency and providing the support they and their families need to quickly recover and re-establish their lives, dignity and livelihoods. The 'Every One campaign' launched in October 2009, reaffirms the central responsibility of emergency response in their fight to reduce child mortality.

Mode of data collection

Save the Children rely on both primary and secondary data. But, mostly they are involved in primary data collection mode. They collect primary data from pre-identified geographical intervention areas after every six months. For each four themes, they have a well structured summary format using which they collect data. Data collection and data entry is done either

by online mode on tablets or by offline mode using pen and paper. They have their own MIS which is called as BRISK (Baal Raksha Information System for Knowledge). All the collected data are compiled and stored in BRISK. It enables them to track even the individual beneficiaries.

Conclusive learning

It was a great opportunity for me to get trained at an organization like Save the Children where I could get an exposure of almost everything. I was there under the leadership of Dr. Jatinder Bir singh in the department of Monitoring, Evaluation & Research. My trainers there at NSO (National Support Office), Gurgaon trained me about the technicalities of their MIS called BRISK. It was a team of 4 people in M&E department, but all the four members were strongly connected which gets reflected in their work.

Limitations

Like all other non for profit organizations, the main limitation for Save the Children is the availability of funds. They depend highly on their donors. Though Save is a reputed and large organization, yet, they find themselves in the difficult situations at some point of time in implementing their projects. The worst drawback of this limitation what I feel is that instead of the most disadvantaged community, the donors become the top priority as stakeholder.

Recommendations

With less experience in public health sector, I do not find myself at a position where I can recommend for so many things. But, the only recommendation that I can give is that the bonding between the employees of Save the Children and the employees of partner NGOs could have been more transparent. Partners can be selected with little more caution.

Project Report

Adherence and preference of Zinc supplement for Treatment of diarrhea

Introduction

The seriousness of the threat posed by diarrhea can be imagined by the fact that diarrhea kills 2,195 children every day which is more than AIDS, malaria, and measles combined. Diarrheal diseases account for 1 in 9 child deaths worldwide, making diarrhea the second leading cause of death among the children under the age of 5. In India, the situation has gone beyond worse. 1 out of every 5 children who die of diarrhea worldwide is an Indian. Around 1,000 children die of diarrhea daily in India. According to a new global burden of disease study published in The Lancet Infectious Diseases journal, India and Nigeria are responsible for 42% of child deaths on account of diarrheal disease. Countries like Bangladesh and China with 60.4% and 71% reduction rate respectively, between 2005 and 2015 did much more to reduce child mortality from diarrhea. With over 100,000 deaths due to diarrhea every year among the children under the age of 5, India continues to record one of the world's highest rates of child mortality due to diarrhea.

Deaths from diarrhea in children under the age of 5 declined by 34.3% globally between 2005 and 2015, in India the rate of reduction was an even faster – 43.2% but India still continues to contribute the most child death due to diarrheal diseases. These deaths prove India's inability to achieve Millennium Development Goal (MDG) of reducing child mortality to 42 per 1,000 live births by the end of 2015.

Giving oral fluids using an Oral Rehydration Solution/Salt (ORS) saves children's lives, but does not seem to have any effect on the length of time the children suffer with diarrhea.

Zinc supplementation is a critical new intervention for treating diarrheal episodes in children. Recent studies suggest that administration of zinc along with low osmolarity oral rehydration solutions/salts (ORS), with reduced level of glucose and salt can reduce the duration and severity of diarrheal episodes among the children under the age of five for up to three

months. The World Health Organization (WHO) and the United Nations International Children's Emergency Fund (UNICEF), in collaboration with the United States Agency for International Development (USAID) and other experts recommend daily 10 mg zinc supplements for 10 –14 days for children in the age group of 2 – 6 months and daily 20 mg zinc supplements for 10 – 14 days for children in the age group of 7 – 59 months with acute signs/symptoms of diarrheal diseases to curtail the severity of the episodes and prevent further occurrences, thereby decreasing the morbidity considerably.

Despite the evidence of benefit, there has been little progress on both - the widespread introduction of zinc supplements along with low osmolarity ORS and the appropriate consumption of same as advised by the clinicians for the treatment of diarrhea. Following the 7-point plan agenda as advocated by the WHO and UNICEF, India has changed diarrhea management policies, but there is a gap between policy change and effective program implementation, with very few children currently being appropriately treated. Apart from making zinc supplements available in the community, the main challenge for the Indian public health system is to ensure that acute diarrhea affected children not only get to consume the zinc supplements along with low osmolarity ORS, but they consume them with appropriate dose just as advised by the WHO and UNICEF to get the best possible and sustained results.

Rationale

This study, about the adherence and preference of zinc supplements will help us to understand the real time situation of the effectiveness of the various ongoing intervention projects to reduce the incidences of diarrhea. There have been a lot of studies related to the coverage of zinc supplements within the most disadvantaged communities, but there are very few sources that tell us about the adherence (commitment) of the consumption as well as the preferential form of zinc supplements among the caregivers of children affected with acute diarrhea.

Two different forms of zinc supplements are being supplied in the urban slum communities of Delhi by the government – zinc syrup and zinc tablet. Irrespective of the form of zinc supplements available, the children affected with acute diarrhea are supposed to consume them appropriately as recommended by the WHO and UNICEF. But, the poor progress in the reduction of new cases of diarrhea among the children under the age of five years, suggest that though, there is a sufficient supply of zinc supplements along with low osmolarity ORS, yet, these are not being consumed as appropriate as recommended.

This study will provide the evidences of the pattern of consumption of zinc supplements by the children under the age of five years who are affected with acute diarrhea. The results of this study will provide an insight to the actual situation of the ground level reality which may help the policy makers to bring the necessary changes in the strategy and eventually help our children in preventing the reoccurrences of the episodes of diarrhea.

Research Question

What is the level of adherence (commitment), preferential form of zinc supplements, and reasons behind them among the caregivers of children under 5 years of age affected with acute diarrhea in urban slums of Delhi?

Objectives

- To develop an understanding about the commitment level (adherence) of community for appropriate consumption of zinc supplements as recommended by the WHO & UNICEF.

- To understand the preference of community for the available forms of zinc supplements.

Hypotheses

1. **Null hypothesis –** There is no preference in general and adherence for the available forms of zinc supplements.

2. There is a strong preference for a particular form of zinc supplement available in the community.

3. Preference for a particular form brings different levels of adherence for zinc supplements.

Methodology

- Two different urban slum areas each from North and South districts of Delhi were selected for the study.

- The households with at least one child under 5 years of ages who had diarrhea in the last one month but not in less than last 15 days were identified. (Recent cases with 14 days to complete the appropriate dose of zinc supplement were chosen in order to avoid recall biases)

- 50 households each from the slums of North and South districts of Delhi were selected on simple random technique out of the identified households.

- Mothers (preferably)/caregivers of the affected child were chosen as the respondents.

- 10-12 Community Health Volunteers (CHVs) from each districts were trained (training included Pilot Study) for the collection of data.

- Data were collected through personal interview from a well structured tool.

- **TOOL –** A well structured schedule with both open ended and closed ended questions were prepared for personal interview with the respondent.

- Data entry was done on a prepared template of excel sheet.

- Data analysis after transferring the compiled data was done on SPSS.

➔ *The tool used for the study is carried from the next page.*

Schedule for personal interview with respondent

1	Name of the district		
2	Name of the slum		
3	Household Identity		
4	Name of the respondent		
5	Age of the respondent		
6	Mobile number		
7	What is your religion?	☐ Hindu ☐ Muslim ☐ Sikh ☐ Christian ☐ Jain ☐ Buddhist ☐ Other (Specify)	1 2 3 4 5 6 88
8	What is your social group?	☐ SC ☐ ST ☐ OBC ☐ General	1 2 3 4
9	What is your marital status?	☐ Married ☐ Widowed ☐ Divorced ☐ Separated ☐ Unmarried	1 2 3 4 5
10	How many children under 5 years of age do you have in your family?		
11	What is your educational level?	☐ Illiterate	1 2

	10a. Boys (Age in months)	10b. Girls (Age in months)
1		
2		
3		

		☐ Can read & write	3
		☐ Up to primary	4
		☐ Up to middle	5
		☐ Metric/intermediate	6
		☐ Graduate/PG	88
		☐ Other (Specify)	
12	What is your main occupation?	☐ Labor	1
		☐ Domestic worker	2
		☐ Business	3
		☐ Service sector (Driver, Tailor etc)	4
		☐ Government service	5
		☐ Private service	6
		☐ House wife	7
		☐ Other (Specify)	88
13	Do you know what is Diarrhea?	☐ Yes	1
		☐ No ⟶ **Skip to Q.15**	2
		☐ Don't know ⟶ **Skip to Q.15**	99
14	If yes, then please tell us what happens in diarrhea?	☐ Loose, watery stools (3 or more times a day)	1
		☐ Pain in stomach region	2
		☐ Fever	3
		☐ Blood in the stool	4
		☐ Vomiting	5
		☐ Other (Specify)	88
		☐ Don't know ⟶ **Skip to Q.15**	99
15	If a person shows following signs/symptoms :- • Loose, watery stools for at least 3 times a day • Pain in stomach region • Blood in stool • Urgent need to have a bowel movement Then, can we call it Diarrhea?	☐ Yes	1
		☐ No	2
		☐ Don't know	99
16	How do you think can diarrhea be treated?	☐ Giving ORS	1
		☐ Home-made solution	2
		☐ Zinc supplement	3
		☐ Antibiotic	4
		☐ Other (Specify)	88
17	Has any child in your family had diarrhea in the last one month up to last 15 days?	☐ Yes	1
		☐ No (Interview gets terminated here)	2
18	If yes, what is your relationship with the child?	☐ Mother	1
		☐ Aunty	2
		☐ Father	3
		☐ Uncle	4
		☐ Other (Specify)	88

19	Please tell the age (in months) of the child.		19a. Boys (age in months) / 19b. Girls (age in months) 1 2 3	
20	For how many days the child had diarrhea?	☐ …….day(s)		
21	From whom and where did you seek treatment of diarrhea for your child?	☐ Health workers (ANM/ASHA) ☐ Registered Medical Practitioner ☐ Government dispensary/hospital ☐ Private hospital/clinic/doctor ☐ Traditional healer ☐ Home remedies ☐ No treatment ☐ Other (specify)		1 2 3 4 5 6 7 88
22	What treatment did you get? (Respondent may be asked to show the medicines/prescription to know if Zn syrup/tablet was given for the treatment if he/she is unable to explain. Interviewer may even show a sample of Zn supplement to know about its consumption.	☐ ORS ☐ Zinc supplement ☐ Home-made solutions ☐ I.V. fluids ☐ Other (Specify) * Interview gets terminated here if found that neither Zn syrup nor Zn tablet was given for the treatment after every possible verification/questioning.		1 2 3 4 88
23	Which form of Zinc supplement was given to the child?	☐ Syrup ⟶ **Skip Q.26 & Q.27** ☐ Tablet ⟶ **Skip Q.24 & Q.25** ☐ Both ☐ None		1 2 3 4
24	If syrup, how many tea spoons daily and for how many days was advised/prescribed? (Ideally, 1tsp = 5ml)	• ½ tsp daily — 1 • 1 tsp daily — 2 • 2 tsp daily — 3 • Don't remember — 99 • 1 time daily — 1 • 2 times daily — 2 • Don't remember — 99 • 14 days — 1 • Others (Specify) — 88 • Don't remember — 99		

25	How many tea spoons daily and for how many days was actually given?	• ½ tsp daily — 1 • 1 tsp daily — 2 • 2 tsp daily — 3 • Don't remember — 99 • 1 time daily — 1 • 2 times daily — 2 • Don't remember — 99 • 14 days — 1 • Others (Specify) — 88 • Don't remember — 99	
26	If tablets, how many tablets daily and for how many days was advised/prescribed? (Ideally, 1tab = 20 mg Zn)	• ½ tab daily — 1 • 1 tab daily — 2 • 2 tabs daily — 3 • Don't remember — 99 • 1 time daily — 1 • 2 times daily — 2 • Don't remember — 99 • 14 days — 1 • Others (Specify) — 88 • Don't remember — 99	
27	How many tablets daily and for how many days were actually given?	• ½ tab daily — 1 • 1 tab daily — 2 • 2 tabs daily — 3 • Don't remember — 99 • 1 time daily — 1 • 2 times daily — 2 • Don't remember — 99 • 14 days — 1 • Others (Specify) — 88 • Don't remember — 99	
28	What were the reasons for not giving Zinc syrup/tablet to the child according to advised/prescribed dose?	☐ Not aware about the doses — 1 ☐ Child got cured earlier — 2 ☐ Child didn't show any improvement — 3 ☐ Products too costly — 4 ☐ Products not liked by the child — 5 ☐ Products not available — 6 ☐ Carelessness — 7 ☐ Side effects (specify) — 8 ☐ Products found expired — 9 ☐ Others (Specify) — 88	
29	Based on your experience (or opinion), which form of Zinc supplement would you prefer for your child?	☐ Tablet — 1 ☐ Syrup — 2 ☐ Any of the above — 77	
30	What are the reasons of your	☐ Availability (More easily available than the	1

	preference for tablets/syrup?	other form of Zinc) □ Price (More cheaper than the other form of Zinc) □ Taste (Better in taste than the other form of Zinc) □ Effectiveness (More effective than the other form of Zinc) □ Side-effects (Shows less side-effects than the other form of Zinc) □ Child like it more than the other form of Zinc □ Others (Specify)	2 3 4 5 6 88
31	Which form of Zinc you find easier/better to complete the exact prescribed dose?	□ Syrups ⟶ **Skip to Q.33** □ Tablets ⟶ **Leave Q.33**	1 2
32	If tablets, why not syrup?	□ It is difficult to measure the exact prescribed quantity of 10mg/20mg with a spoon. □ It is difficult to remember the number of doses administered. □ It is difficult to keep syrups away from the reach of children. □ It costs more than the tablets to achieve completely prescribed dose. □ Other (Specify)	1 2 3 4 88
33	If syrups, why not tablets?	□ It is difficult to remember the count of tablets consumed through the passing days. □ It is difficult to distinguish Zinc tablets from other tablets. □ It is not liked by the child more than the syrup? □ It is difficult to administer tablets to very young children. □ Other (Specify)	1 2 3 4 88

COMMENTS :-

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Data compilation

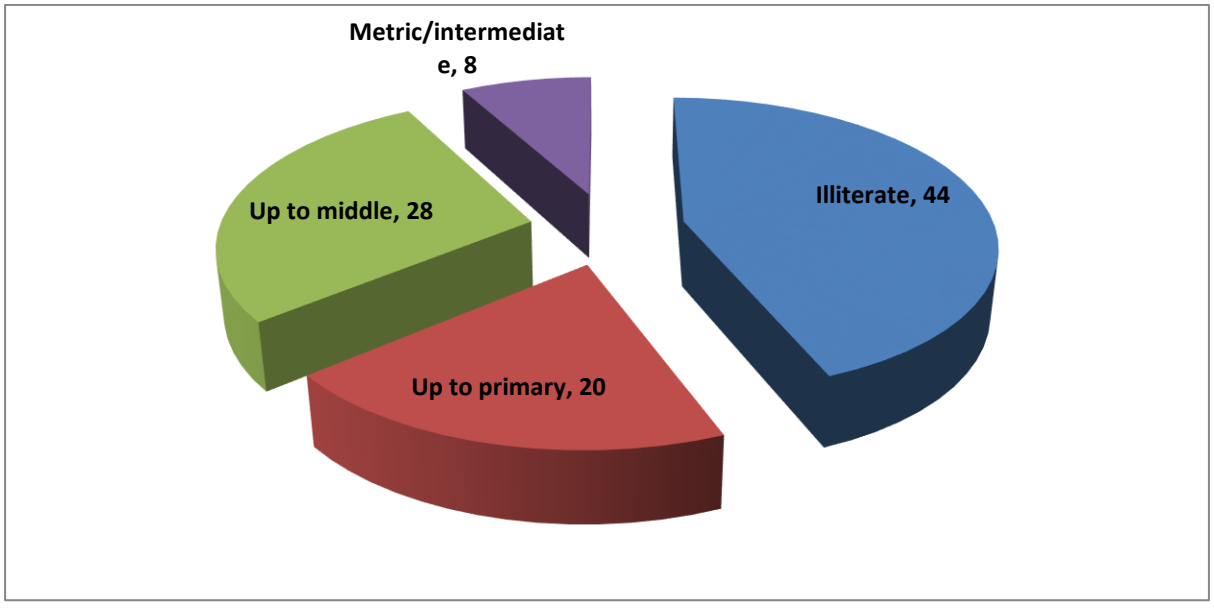
Data compilation is done on Microsoft Excel on which data entry template was formed according to the questionnaire tool.

Data analysis

Compiled data was transferred on SPSS software where data analysis was done. The study data collected was cleaned for consistency and the accuracy and validation was done through cross verification of the sample. The Tabulation plan was prepared for the analysis of the collected data and relevant comparative analysis of prescribed performance variables was done.

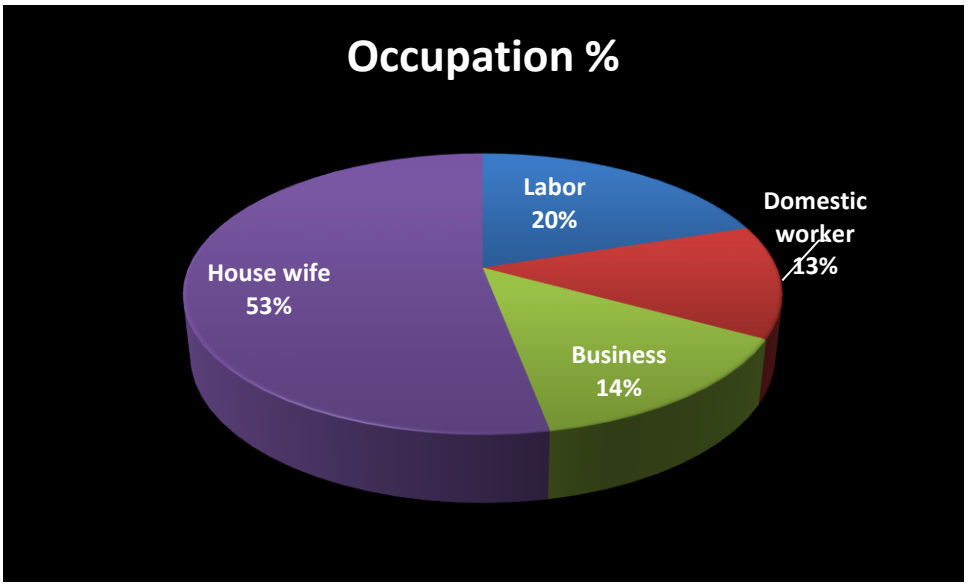
Interpretation

- **Maternal Education (Literacy)**



The study conveys the literacy level and the maternal education of all the 100 mothers interviewed in both the South and North districts who use zinc for the treatment of diarrheal episodes for their children. The education level of the mothers having the children less than five years of age is considered to be an important factor which has been ignored quite often. Various studies have linked it with the health status of the children. The above figure clearly shows that almost half of the respondent mothers are illiterate. A very strong inference can be drawn from this data that the level of education determines the quality of administration of Zinc supplements by mothers. More the level of education of mothers, better will be the administration of drugs.

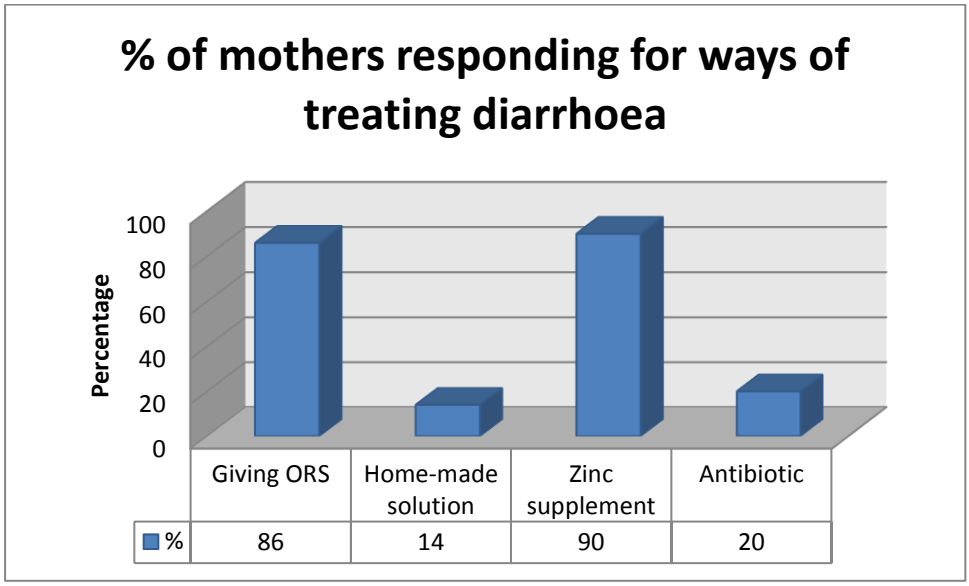
- **Occupation**



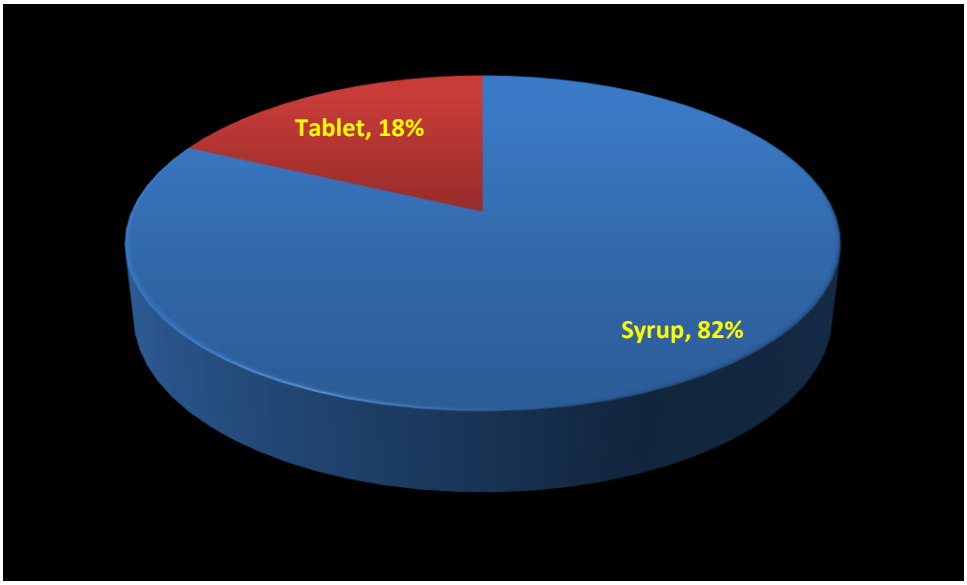
Almost 50% of the mothers were found to be home makers. They were looking after their children and other household duties whereas, 27% of them were working in private sectors and the rest were engaged in labour work.

- **Awareness about the treatment of diarrhoea**

Awareness about the treatment of diarrhoea among the mothers is quite satisfactory. Almost every mother told that ORS and Zinc supplements are used for the treatment of diarrhoea for children less than five years of age. 20% of the mothers interviewed also said about the use of antibiotics. A very small percentage of respondent mothers i.e. 14% said that they use home-made sugar-salt solution for the treatment of diarrhoea.



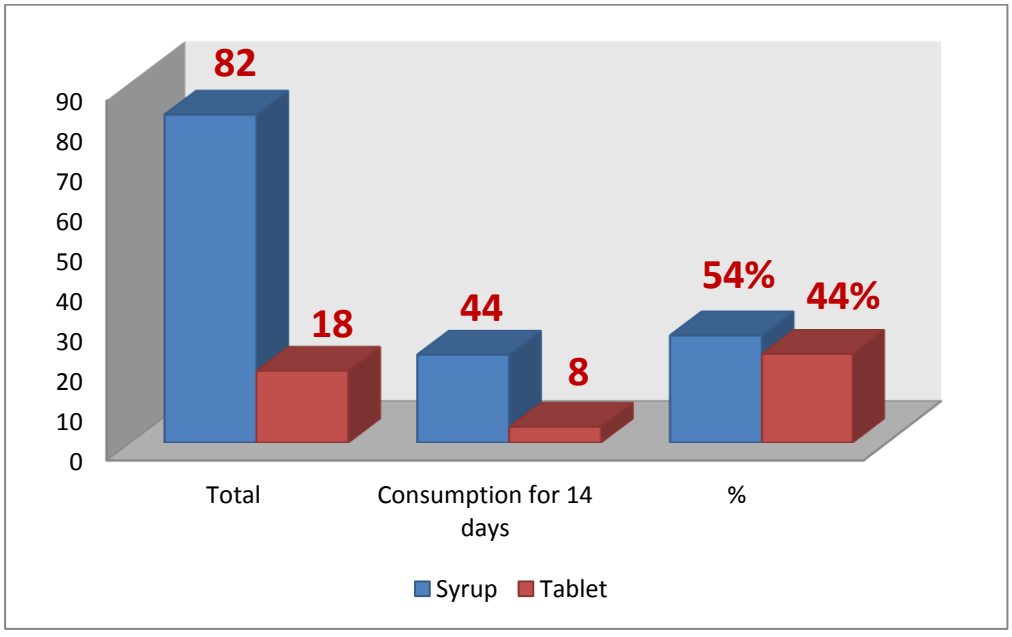
- **Form of Zinc supplement given for the treatment**



The above figure clearly shows that 82% of the total respondent mothers were given Zinc supplement in the form of syrup for the treatment of their child, while, a very small group of mothers which is 18% were given Zinc tablets for the treatment of their child.

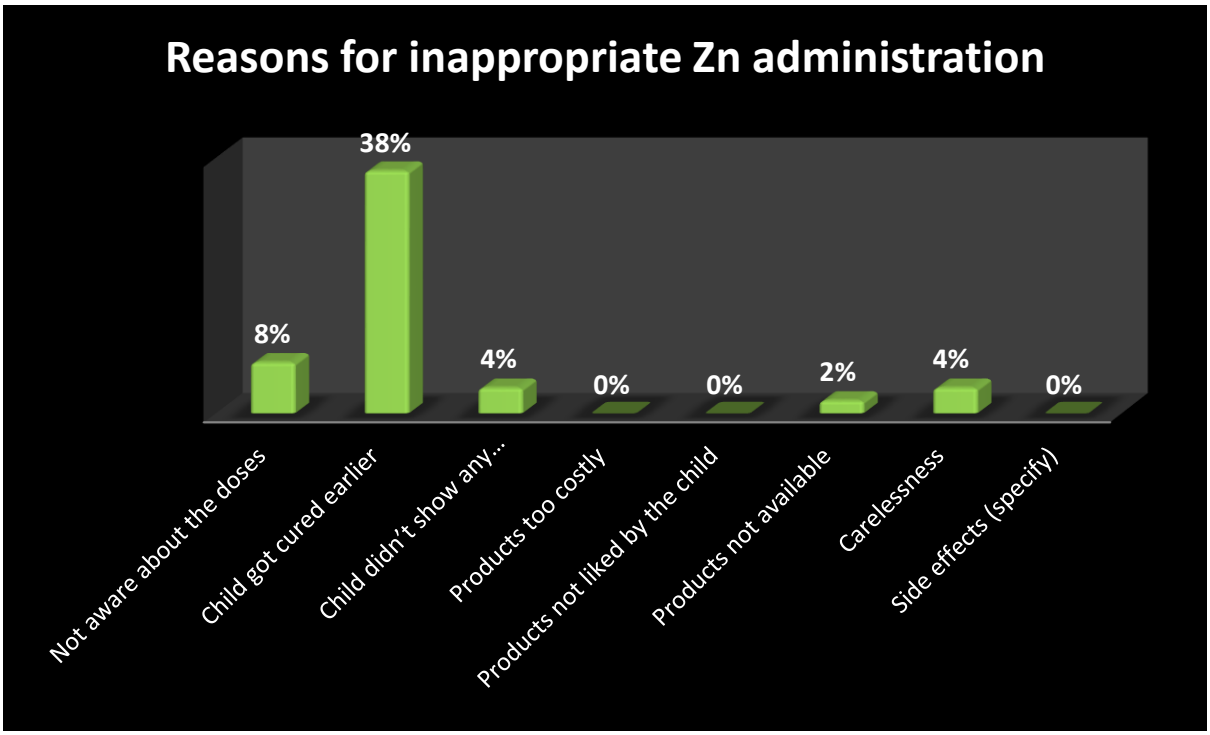
- **Consumption of Zinc supplements as appropriate as prescribed for 14 days**

It is very important to consume zinc supplements, either zinc syrup or zinc tablets for continuous 14 days for best results according to the guidelines suggested by the WHO. Every respondent mother was prescribed to administer Zinc supplements to their child affected with diarrhoea for continuous 14 days. But, only 54% of mothers who gave Zinc syrup to their child completed the prescribed dose of 14 days and 22% of the respondent mothers who gave Zinc tablets to their child completed the course of 14 days.

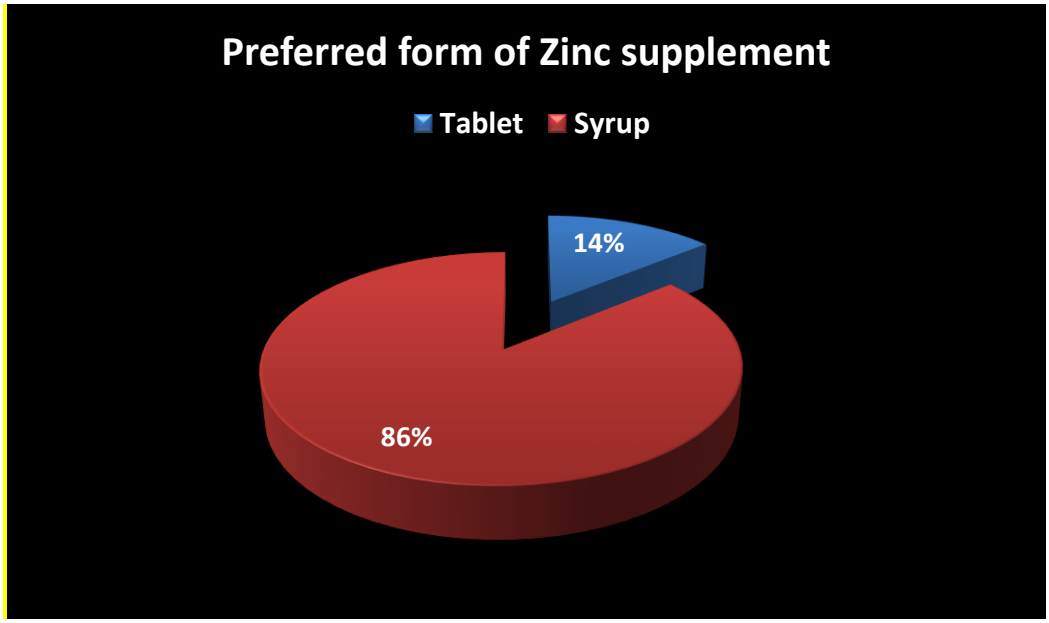


- **Reasons for not giving Zinc syrup/tablet to the child according to the prescribed dose**

The data related to the reasons behind not administrating zinc supplement as appropriate as prescribed, shows that most of the respondent mothers stopped giving zinc syrup/tablet to their child once the child recovered from diarrhoea. 38% of the total respondent mothers said that they stopped giving zinc supplement to their child after the child got cured, 8% of them did so because they were not aware of the exact prescribed dose while very of them discontinued the administration of zinc to their child because it didn't show any positive effect in their child's health. Below is the graph that shows complete picture.



- **The form of Zinc supplement (syrup or tablet) preferred by the respondents based on their experience**



Recommendations

Based on this whole study, the following recommendations can be drawn –

- The supply of Zinc syrup should be provided to the Anganwadi Workers (AWW) and ASHAs who are the foot soldiers of any program related to extending services to the beneficiaries and therefore, the first point of contact with mothers and other community members for providing health, nutrition, and other related services to children less than five years of age.

- The development of simple Information, Education and Communication (IEC) materials to generate awareness among parents about the use of zinc and the creation of detailing materials like visual aids, posters, leaflets, height charts and dosage stickers etc. can be used for educating parents regarding zinc treatment for the prevention and the management of diarrhoea.

Conclusion

This small study clearly depicts that Zinc supplement in the syrup form is more acceptable by the community to complete appropriately prescribed dose of zinc for

continuous 14 days for the treatment of diarrhoea as compared to Zinc in tablet form. There are various reasons for inclination of community towards syrup form of the zinc. Availability of Zinc syrup at government facility and child's preference for zinc syrup more than the tablets because of its taste are few of such reasons.

The prime objective is to treat children less than five years of age from diarrhoea, so that overall under-5 age child mortality gets reduced, especially due to diarrhoea. Diarrhoea not only leads to poor health but it is also one of the important reasons behind malnutrition. Stunting growth is the form of malnutrition which is caused by diarrhoea. So, by treating diarrhoea, we are not only getting reduced child mortality but also the reduced number of children suffering from malnutrition. Better health in turn, also helps in controlling out-of-pocket expenditure.