Evaluation Report

Provision of Nutrition Education & Food to drought affected population in Tehsil Islam Kot, District Tharparkar

Contents

Chapter 1: Introduction.

Introduction to District Tharparker

The Tharparkar district derives its name from Thar and Parker. The name Thar is from Thul, the general term for the region sand ridges and Parker literary means "to cross over". It was earlier known as Thar and Parker district, but later became one word Tharparkar. Tharparkar District is one of twenty three districts of Sindh province in Pakistan. Its headquarters is at Mithi. It has the lowest Human Development Index of all districts in Sindh and comprises of a total area of 19,638 sq km (7,582 sq mi). Population of this area, as estimated by the 1998 census, is 955,812 people. But it is interesting to note that during the last 15 years there has been an exponential growth with the increase in population around 10 folds than the 1998 estimate. New villages (or commonly known as Goths) have sprouted near big establishments such as Umarkot and Mithi and other areas as well.

Project Rationale:

Tharparkar District is one of the districts of Sindh province in Pakistan. It is headquartered at Mithi. Of Pakistan's 130 districts, the district of Tharparkar ranks the lowest in the Human Development Index calculations for the nation's districts[1]. Any examination of the history of the region will demonstrate the high level of vulnerability of the residents to drought and the devastation caused by drought in the past. A report published by the Sindh Relief Department in 2012 mentioned that the area of Tharparkar had been continuously declared as drought calamity hit area in 1968, 1978, 1985, 1986, 1987, 1995, 1996, 1999, 2001, 2004, 2005, 2007 and as recently as 2012[2][3] .

The male – female ration of the population is 55% – 45% respectively[4], relatively higher male ratio than the national average of 48%. Whereas, the average household size is 5.6, which is lower than the national average of 7. During the last year, 2014, more than 500 children died due to malnutrition in the district. Resultantly, malnutrition became quite evident for human and animals alike. As per HAI – Pakistan assessment there is stunting prevalence of malnutrition in

[1] Haroon Jamal, Amir Jahan Khan, Trends In Regional Human Development Indices - Social Policy And Development Centre
[2] Provincial Disaster Management Authority, Sindh – Multi Hazard Contingency Plan 2013
[3] Caritas Pakistan, situation Report # 1
[4] http://www.pbs.gov.pk/sites/default/files/tables/District%20at%20a%20glance%20Tharparkar.pdf

children under the age of five in Sindh at 49.8 percent. Another survey reported anemia levels at 72.5 percent, while 40.5 percent children were underweight; anemia in pregnant and lactating women was estimated at 60.7 percent[5]. Women in Islam Kot are confronted with serious malnutrition problems. Furthermore, due to the current crisis it is not possible for most of the families to manage this on their own.

Traditionally, the economy of the district population depends on livestock. If a family requires cash for essential commodities or services, they trade-in or sell their animals to fulfill their requirements. The current Veterinary epidemic has wiped out most of their livestock and ability to sustain. The met office stated the reason of calamity is untimely and low rainfall, have caused domestic crop failure, coupled with outbreak of sheep pox epidemic in small livestock is associated with food insecurity and high number of deaths including children in Tharparkar. Therefore, any intervention intended to address nutrition issue, must also include the nutrition (fodder) for livestock as well.

After the detail need assessment, HAI-Pak proposed three major areas which were asking for the immediate attention of humanitarian actors. These were nutrition, water and fodder. So far HAI – Pak provided food/nutrition packs to 500 most vulnerable pregnant and lactating mothers. HAI is also installing 7 solar powered submersible water pumps with water tanks in 7 villages. However the nutrition sector requires immediate attention, not only in the area of direct provision but also to incorporate a participatory method to modify the behaviours as well.

Project Brief:

The **aim** of this project is not only to provide emergency support but also to provide sustainable long-term solution to the drought affected population. The support will enable them to get back on their feet economically and socially. The project is proposed; with an integrated approach, where nutrition packs will meet the immediate survival needs while the educational activities (through sessions and training) will address the root cause of their vulnerability.

Objectives of the Project:

- Provision of emergency support to 32,750 drought affected population in 15 villages[6] of Union Council Chachro, Tehsil Islam Kot, District Tharparkar

This will be achieved through the:

[5] Pakistan – National Nutrition Survey 2011, Pakistan Medical Research Council (PMRC), Nutrition Wing, Ministry of Health, Pakistan
[6] List of Villages Attached in Annexure

- Provision of nutrition packs to 500 Mothers /expected moms in 15 villages
- Conduct of 25 awareness sessions and trainings within a Union Council

Output

- Comprehensive baseline /end line survey have been completed
- Capacity building of 30 local community volunteers
- Provision of nutrition packs to 500 identified females
- 25 Awareness sessions on nutrition conducted

Outcomes / Impact

Outcome 1: Reduction in mortality rate due to malnutrition in 15 villages.

Outcome 2: improvement in nutrition intake and availability in the targeted area.

Introduction to study:

This ex-post evaluation is conducted to measure the achievements against the set outcomes and outputs of nutrition project in the targeted villages of District Tharparker. It is essential to see the impacts of project activities and implementation methodology, strengths and weaknesses. It is clearly mentioned in the project document that the ultimate purpose of nutritional food distribution and training was to reduce the mortality rate caused by malnutrition, though improving the nutrition intake among pregnant and lactating women.

Methodology:

Qualitative and quantitative data was collected in the targeted communities against the set indicators. In the quantitative household survey 50 beneficiaries (treatment group) and 25 non beneficiaries (control group) were selected randomly from the targeted villages. The interview was conducted by a lady health visitor, who was trained before run the questioner in field.

Qualitative date was derived from the in-depth interviews of village leaders and activists as well village women. Focused group discussion was conducted with community activists, lady health visitors and health workers, which are involved in the health facilitation services for pregnant and lactation women.

Nutrition Framework:

Maternal nutrition refers to the nutritional needs of women during the antenatal and postnatal period (i.e., when they are pregnant and breastfeeding) and also may refer to the pre-conceptual period (i.e., adolescence). Maternal under-nutrition affects the health of both mothers and children and, as a result, has broad impacts on economic and social development. Undernourished pregnant women have higher reproductive risks, including death during or following child birth. Many women suffer from a combination of chronic energy deficiency, poor weight gain in pregnancy, anemia, and other micronutrient deficiencies, as well as infections like HIV and malaria. This guidance document is intended to help further an assessment and understanding of optimal maternal nutrition practices and, more importantly, support people who are working to translate optimal practices into feasible actions and programs for a given region. Maternal nutrition practices vary dramatically by culture, geography, social, economic, and other family and community factors. To develop effective behavior-change strategies and programs, it is essential to know local practices and how they impact maternal nutrition, and understand the motivations or barriers to more pro-nutrition practices (which are closer to optimal practices). This guidance presents the standard diet, understanding the general maternal nutrition context by using all readily available data and information, and developing research guides and tools.

1. Safe level of protein intake during pregnancy:

0.84g/kg/d – age 15–18, 0.89g/kg/d aged 11–14

For pregnancy add on:

- Trimester 1 – 1g/d protein and 375 Kj/d energy
- Trimester 2 – 10g/d protein and 1200 Kj/d energy
- Trimester 3 – 31g/d protein and 1950 Kj/d energy
- During lactation for adolescents add on:
- 19g/d protein and 2800KJ/d energy (WHO 2007)

2. Weight Gain Recommendations for Pregnancy[7]

Pre-pregnancy Weight	Recommended Total Gain

[7] Institute of Medicine. Nutrition During Pregnancy, 1990.

Category	Kilograms	Pounds
BMI < 19.8	12.5-18.0	28-40
BMI 19.8 to 26.0	11.5-16.0	25-35
BMI > 26.0 to	7.0-11.5	15-25

B MI = body mass index (weight in kg divided by height in meters squared, or kg/m2

3. Micronutrient Supplementation during Pregnancy and Lactation

Supplement	Timing	Dosage
Vitamen A [8]	During pregnancy: After the first trimester During lactation (after delivery):As soon as possible, but not later than 8 weeks after delivery	10,000 IU daily or a maximum of 25,000 IU weekly Single dose of 200,000 IU
Iron/Folate[9]	Prevention of anemia Anemia prevalence >40%: 6 months during pregnancy through 3 months postpartum Anemia prevalence ≤40%: 6 months during pregnancy Treatment of anemia Until resolved or a minimum of 3 months, then continue with prevention regimen	60 mg iron and 400 µg folic acid daily 120 mg iron and 800 µg folic acid daily
Iodine	Before conception or as early in pregnancy as possible in high risk areas where iodized salt is not available	Single dose of 400–600 mg (2 or 3 capsules

4. Recommended daily intake of six critical nutrients in pregnancy

Nutrient	Non-pregnant woman	Addition for pregnancy	Total
Protein (g)	50	+10	60
Folate (µg total folate)	180	+220	400
Calcium (mg)	800	+400	1200
Iron (mg)	15	+15	30
Zinc (mg)	12	+3	15
Iodine (µg)	150	+25	175

5. Diet plan for pregnant woman

Critical Nutrient	Foods of Animal origin (Per 100g edible portion or 3.5 oz.)	Foods of Vegetable Origin (Per 100g edible portion)
Protein (g)	Whole milk 3 g	Pulses 18 g Soya 35 g Ground

[8] WHO. Safe Vitamin A Dosage during Pregnancy and Lactation, 199
[9] UNICEF/UNU/WHO. Iron Deficiency Anaemia: Assessment, Prevention, and Control, 2001

	Dried milk 30 g Egg 13 g Fish 18 g	nuts 27 g Cereal 8 g
Folate (µg)	Broccoli, spinach, peas, nuts contain 100 µg/100g. All legumes contain 100 µg/100g raw, but is usually reduced to a fifth in cooking	Whole meal bread, oranges, beet root contain 50 µg/ 100 g
Calcium	Whole milk 120 mg Dried milk 300 mg Dried fish 3000 mg (when bones are consumed)	Beans and peas 100 mg Spinach 250 mg Soya bean 200 mg Millet 350 mg
Iron	Meat 3 mg Fish, dry 8 mg Eggs 3 mg	Green leaves 3 mg Millet 3 mg Maize flour 2 mg Beans, peas 5 – 9 mg
Zinc	Milk 0.4 mg Cheese 2.3 mg Meat 1.5 – 8.7 mg Fish 0.5 mg Eggs 1.3 mg	Potatoes 0.3 mg Lentils 0.77 – 2.8 mg Peanuts 3.2 mg Whole meal Bread 2.0 mg Maize flour 1.0 mg Rice 1.3 mg

6. Amount of Food Offer[10]

Infants should be exclusively breastfed – i.e. receive only breast milk – for the first six months of life to achieve optimal growth, development and health. "Exclusive breastfeeding" is defined as giving no other food or drink – not even water – except breast milk. WHO recommends that infants start receiving complementary foods at six months (180 days) of age in addition to breast milk. Foods should be adequate, meaning that they provide sufficient energy, protein and micronutrients to meet a growing child's nutritional needs. It is essential therefore that infant receive appropriate, adequate and safe complementary foods to ensure the right transition from the breastfeeding period to the full use of family foods

Age	**Texture**	**Frequency**	**Amount at each meal**11
6–8 months	Start with thick porridge, well mashed foods Continue with mashed family foods	2–3 meals per day, plus frequent breastfeeds Depending on the child's appetite, 1–2 snacks may be offered	Start with 2–3 table spoonfuls per feed, increasing gradually to ½ of a 250 ml cup
9–11 months	Finely chopped or mashed foods, and foods that baby can pick up	3–4 meals per day, plus breastfeeds Depending on the child's appetite, 1–2 snacks may be offered	½ of a 250 ml cup/bowl

[10] World health organization, july 2013

11 ote: If baby is not breastfed, give in addition: 1–2 cups of milk per day, and 1–2 extra meals per day.

12–23 months	Family foods, chopped or mashed if necessary	3–4 meals per day, plus breastfeeds Depending on the child's appetite, 1–2 snacks may be offered	¾ to full 250 ml cup/bowl

Chapter 2: Findings

Impact of food package:

Eat at least one extra serving of staple food (285kcal) a day while pregnant and the equivalent of an extra meal (500 extra kcal) when breastfeeding

Current Practice:

Training sessions were conducted as a part of project regarding the ideal practices of food quantity needed during pregnancy and lactation. The communities in Tharparker facing acute food shortage and most of the women eat wheat along with locally available vegetables and "lassie" made of butter milk. Average women in the targeted areas use two meals daily consists of four wheat breads and two glasses of "Lassie" and pulses and vegetables twice in a week. If we calculate the calories of the above food it is about to 1380 calories[12] per women per day and the recommended requirement is 1800 to 2400 calories per day is necessary for a pregnant women.

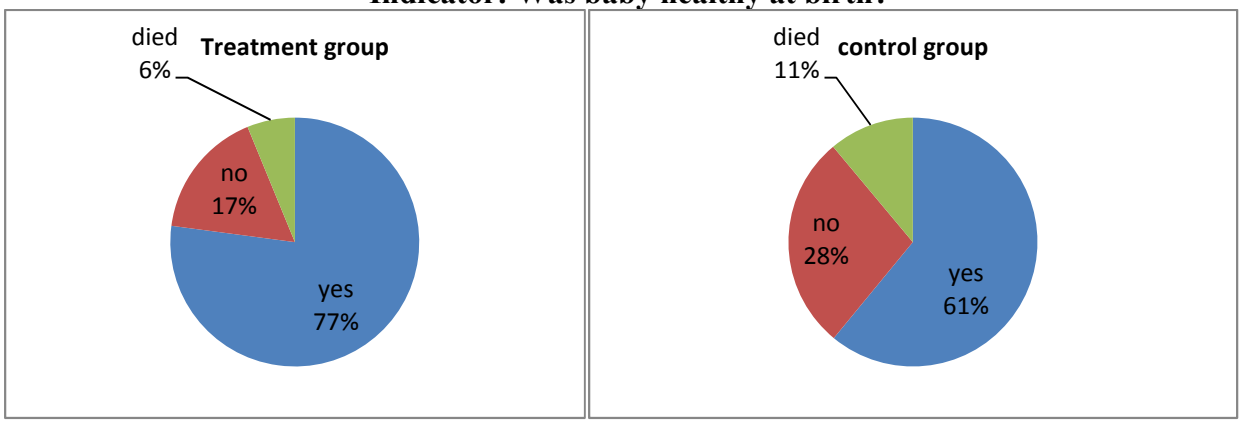
To minimize the adverse effects of food shortage situation in targeted areas the pregnant and lactating women were provided food packet which consist of 20KG wheat, 20Kg rice, pulses, iodized salt and a pack of micro nutrients. After six months we conducted a study to measure the impact this food package through comparison with the control group. It is commonly found in the targeted area that most of the children at birth become weak physically and due to food shortage among women these children also malnourished after birth to first six months. Following are the results of nutrition indicators of beneficiaries and control group.

Baby health at birth:

Health of the newborn child is depending upon the health of mother. Mostly malnourished mothers given birth malnourished child. Human Appeal provided nutritional food supplements to 500 pregnant and lactating women and compared the result of above indicators with non-beneficiaries.

[12] (Serving Size 1 slice (28 g) 69 calories, calories in Lassi per 277g(1 cup) is 230 calories, Calories In Darshana's Homemade Yellow Moong Dal. 118 calories, Amount Per 100 grams Calories are 65 in vegetables)

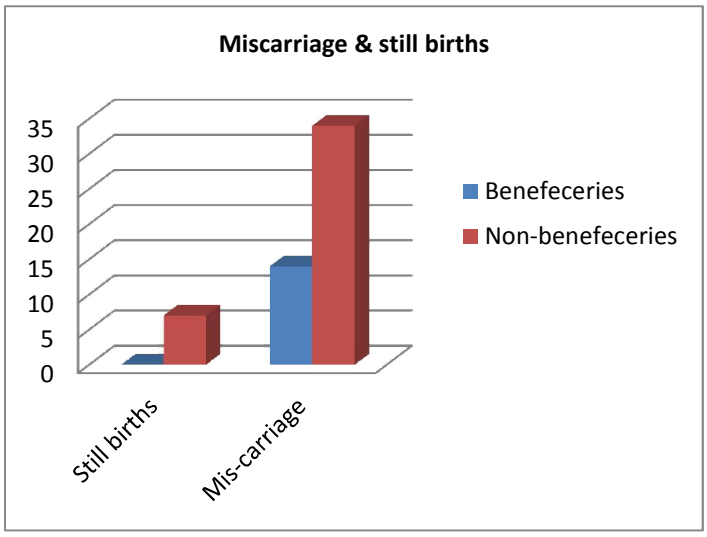
Indicator: Was baby healthy at birth?



Majority of beneficiary respondents reported the healthy child at birth, while 17% reported that the child was not healthy at birth which is less than the control group. The mortality rate is low in treatment group as compared to non-beneficiaries. On the basis of findings against the child health indicator it seems that through the provision of nutritional food the rate of morbidity and mortality can be reduced.

Miscarriage and still births:

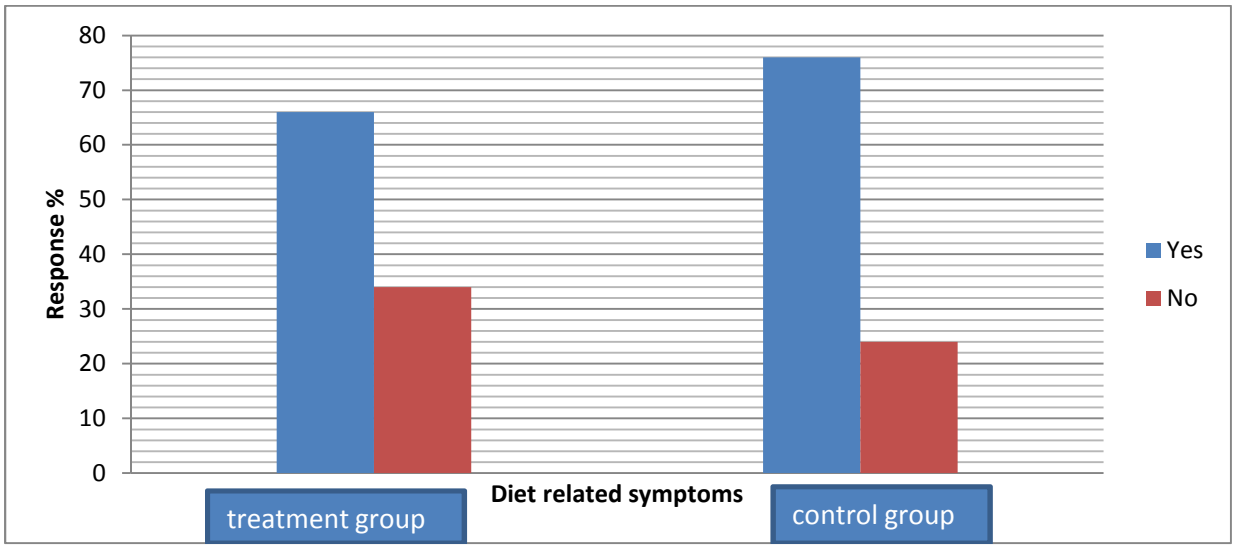
Still births and mis-carriage is common among women in the targeted area. It is reported by lady health workers and other health officials that the major cause of this issues is weak physical conditions of the women due to shortage of quality food. A majority of families in the targeted community has not any sustainable source of income. They mostly depend upon the livestock and seasonal crops. Women and children are severely affected by these situations.



The project was aimed to reduce the mis-carriage and still births in the targeted villages. The micro nutrients were provided for the period of six months to 500 women in 15 villages. The results shows, that the rate of mis-carriage is 14% among treatment group as compared to control group which is 34 % three times more, while the still births among beneficiaries are 0% as compared to non-beneficiaries which is 7%.

Diet related symptoms:

Diet is most important factor for mother and child health. The low quantity and quality diet leads towards many diseases and weakness to expected mothers. Some common symptoms like nausea, vomiting, diarrhea, fever, loss of appetite, sores in mouth, constipation, hurt burn and bloating appears when these women faced diet shortage. Human Appeal provided micro nutrients and food the expected mothers and lactating women to minimize the diet deficiency. The survey results depict a little positive impact on these women. Comparison of beneficiaries and control group is as follows.



This is one of the most important indicators to measure the progress against food provision to beneficiaries but it is not much encouraging. After the in-depth interview the facts appears that the food provided only for women but it was not used by women alone but also other family members. In some village a very little portion was used by subjected women and a huge portion was utilized by children and elders.

Knowledge and practices

Knowledge about pregnancy care:

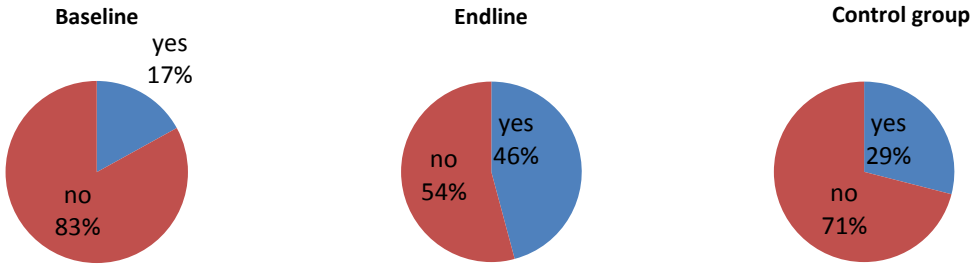
The demographic data shows that the 100% beneficiaries of the project were illiterate and living in the far flung areas of district Tharparker. The income level of beneficiaries is also discouraging. The data shows that 60% beneficiaries are prevailing under lowest household income category. Following graph shows the average household income among respondents.

Income Category		Frequency	Valid Percent
Valid	No income	5	10.4
	0-1000 PKR	15	31.2
	1000-3000PKR	5	10.4
	3100-5000PKR	20	41.7
	5100-7000PKR	3	6.2
	Total	48	100.0

The above table shows that almost 100% beneficiary households were living under the poverty line, if we consider the $2 the minimum daily wage/income. So the income and education are highly correlated and has causal relationship and the knowledge and practices of healthcare are highly dependent on these two variables.

In the targeted villages the majority women were unaware about the pregnancy care. They even not had known about the impact of nutritional food and the hygienic preparation of local food upon the health of baby and mother. Here we compare the baseline and control group data to measure the impact of training and awareness session conducted by Human Appeal in the targeted villages.

Knowledge about pregnancy care:

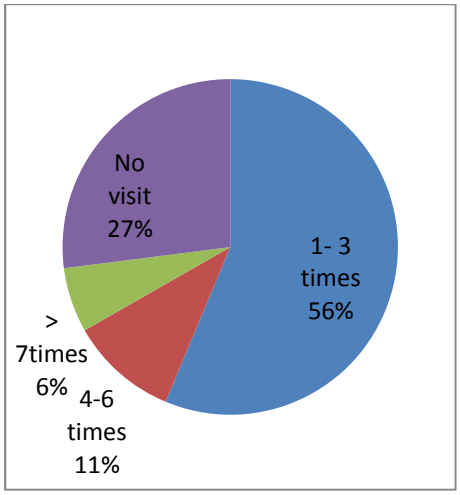


It is quite clear from the above graphs that the training and awareness sessions with these vulnerable women were beneficial in terms of knowledge transfer. At least the subjects are able to know the health effects of carelessness during pregnancy. Majority i.e 74% of respondents said that they got this specific knowledge after attending this session.

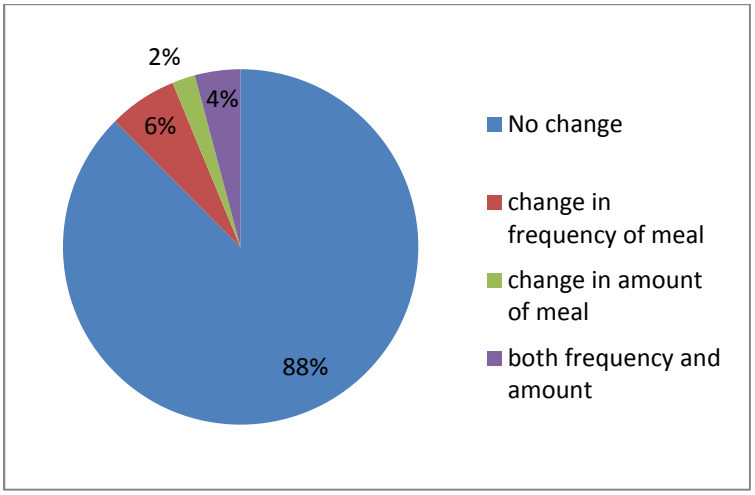
To measure the extent of knowledge application our team conducted in-depth interviews with subjects and other family members as well included quantitative in survey tool, but the results

were quite discouraging. Most of the women (beneficiaries) took this knowledge not more than words. They do not practice this knowledge to minimize the hazards for their new born children as well themselves. Following are the results of some relevant attributes.

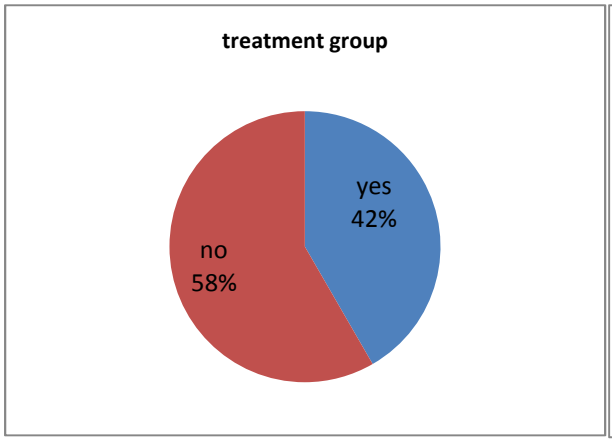
Hospital visits

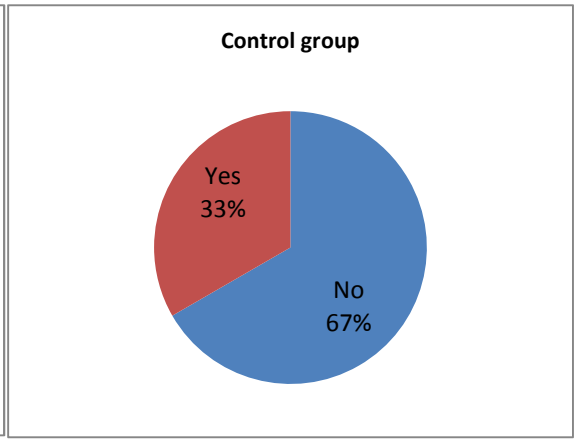


Change in food intake



Reduction in workload during pregnancy





The above variables are important for mother and child healthcare. Regular visits to hospital or clinic is highly recommended by MNCH specialists. Additional food plays important role during pregnancy for mother and child. The first two indicators are highly dependent on income, access to health care facility and education/awareness. This was important to know why women were not attending hospitals and taking additional food during pregnancy when they know the importance of these two attributes. FGD, s and in-depth interviews unlock the facts that most of

the women do not go to hospital because they cannot afford hospitalization and other medical expenditures. They got traditional treatment from local old women and during any complication they do use locally available herbs. Access to hospitals and availability of specialized staff is another major reason. Most of the villages are located in far-flung areas and transport is only available during a specific time period especially in morning to after noon and this is the peak time of women engagement in house work. Women who come from remote areas to tehsil headquarter hospital mostly complain the unavailability of doctors and specialized staff.

As per the above graph of food intake majority of women know the importance of additional food intake during pregnancy but the other attribute which is about practice shows that majority use the routine food. The major reason is food shortage due to low agriculture productivity (bajra) which is reported 40KG per acre this year which is not even equal to cost. The main cause of low productivity is the low rainfall which was not as per crops requirements. As it is calculated in the first chapter that a women in targeted village take average 1300calories per day and the requirement is 2400 to 2800 per day at different stages of pregnancy. Another important component is low cash income. The families have not power to purchase food for all family members. Mostly mothers and to some to extent fathers, sacrifice their food for their children. Mother is more vulnerable because she eats after serving food to all family members and sometimes she slept hungry when get nothing in her share after serving whole family.

Reduction in work load is a key factor which protects women from many complications. This variable is dependent upon the household members and women itself. After getting awareness about the importance of workload reduction a reasonable portion of women i.e 42% practice it

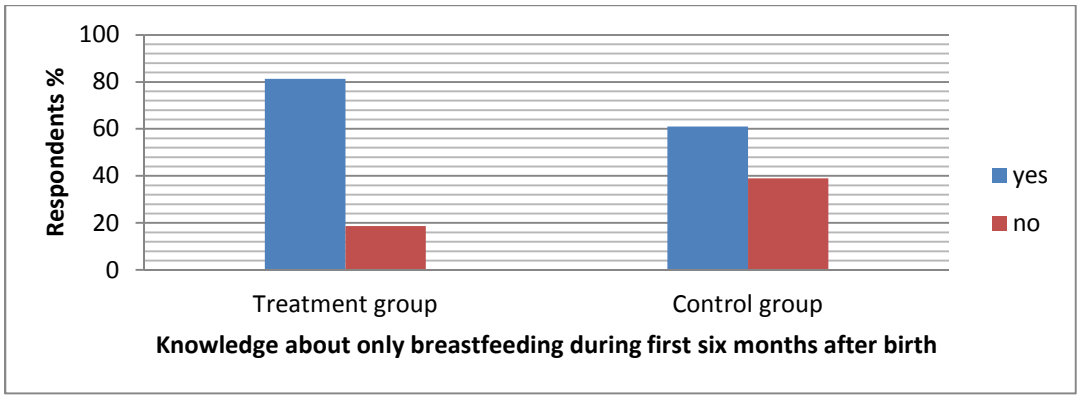
which is more than the percentage of women from control group which is 33%. A major portion do not reduced the workload because their husbands and other family members do not help them during the pregnancy as well the unemployed husbands and other family members are additional burden for them. They have to put additional efforts to serve their husbands and other family members as these are patriarchal societies and young women are more oppressed than older ones.

Breast feeding practices:

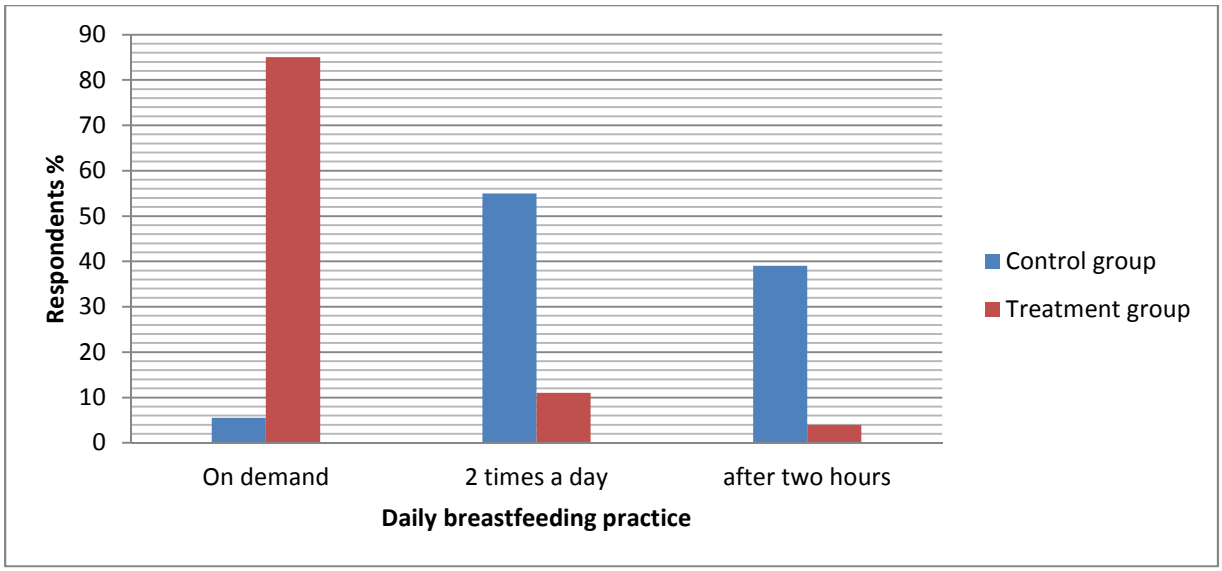
Breast milk provides the ideal nutrition for infants. It has a nearly perfect mix of vitamins, protein, and fat -- everything your baby needs to grow. And it's all provided in a form more easily digested than infant formula. Breast milk contains antibodies that help your baby fight off viruses and bacteria. Breastfeeding lowers your baby's risk of having asthma or allergies. Plus, babies who are breastfed exclusively for the first 6 months, without any formula, have fewer ear infections, respiratory illnesses, and bouts of diarrhea. They also have fewer hospitalizations and trips to the doctor.

Importance of breastfeeding was an important component of training conducted by Human Appeal. The motive was to transform knowledge, best practices and benefits of breastfeeding for newly born child and mother. The micro nutrients provided by Human Appeal were also helpful to promote breastfeeding habit and breast milk among subjects.

Following graphs shows the comparison between treatment group and control group regarding current breastfeeding practices.

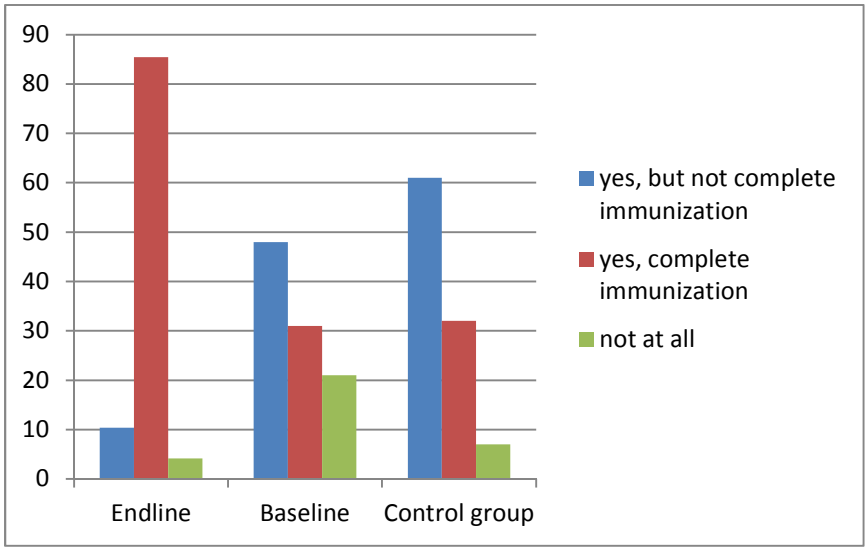


Current practice of breastfeeding:



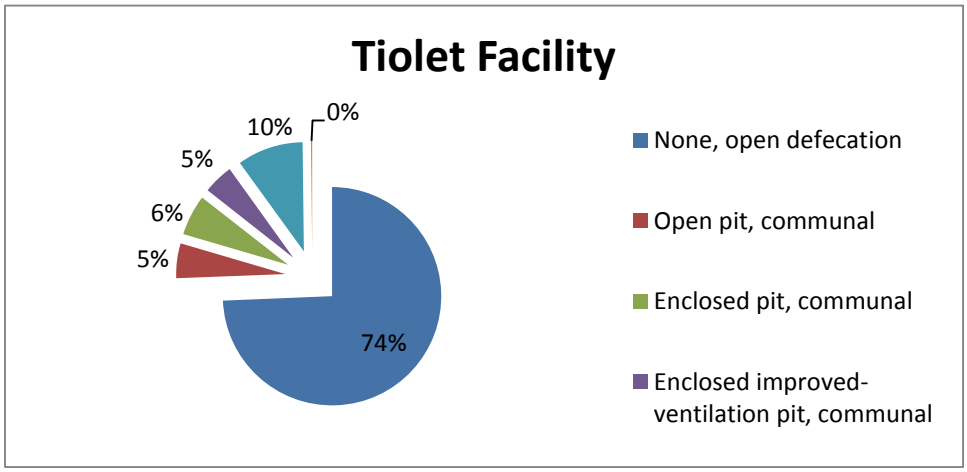
The graph one shows that majority of respondents both from treatment and control group had basic knowledge of breastfeeding importance during the first six months after birth and with regard to practices almost 85% respondents give breast milk to child on demand from treatment group while only 4% do the same practice from control group.

Immunization:



Complete recommend immunization protect the newborn child from various chronic and viral diseases. Due to lack of information and misconception mostly the communities in Tharparker avoid immunization. During the training session participants women were motivated for vaccination as well its importance was highlighted for securing the life of children. The graph depict that in the baseline only 30% respondents were completely immunized their children as compared to end line which is 85%, quite encouraging.

Sanitation and hygiene:



Sanitation and hygiene are vital determinants of mother and child health. The unimproved sanitation and hygiene make the people vulnerable to diseases and the cost of treatment for these diseases increase the poverty rate. Diarrheal diseases are the most serious of the diseases that result due to poor sanitation and hygiene. In Tharparker most of the children wards in civil hospital are occupied by children affected by water and sanitation borne diseases. According to a survey conducted by Human Appeal majority of population in Tharparker do not have toilets.

It is found that majority of households do not have toilets and they use open space for defecation which is around their houses. Tharparker is a sloppy region and the villagers install hand pumps in at most low altitude space around their houses. It is reported by village leaders that excreting faeces of human being mixed with drinking water and caused various diseases.

It is found from that malnutrition is not the only reason of child morbidity and mortality but poor sanitation and hygiene practices also contribute to hazards. A majority of population do not wash hand before and after mealing and after defecation. Majority even take bath once in two weeks. For winter season most of the children do not have proper dress to protect them from cold and chest diseases.

This was the mandate of training session to aware the women and communities about the importance of sanitation and hygiene for the health of children, mothers and other counterparts of society. The end line results depict that this training could not change the behavior of communities regarding the use of toilets but to some extent the targeted women changed hand washing behavior.

The baseline data reflect the pre training situation and depict that 37% of women fall under the category of "mostly not" when we asked the question about hand washing and at the end line this ratio decrease to 15% at the same category. Same like 22% women were falling under the category of "sometimes" and this ratio increased up to 31%. The situation is quite good with respect to regular hand washing with and without soap if we compared it with baseline and control group. 41% women were washing hands regularly as per the baseline data and this ratio increased up to 54% in end line and from the control group 33% respondents are washing their hands regularly.

Key findings:

1. Shortage of nutritional food is the major cause of morbidity and mortality among children. The communities in Tharparker facing acute food shortage and most of the women eat wheat along with locally available vegetables and "lassie" made of butter milk. Average women in the targeted areas use two meals daily consists of four wheat breads and two glasses of "Lassie" and pulses and vegetables twice in a week. If we calculate the calories of the above food it is about to 1380 calories[13] per women per day and the recommended requirement is 1800 to 2400 calories per day is necessary for a pregnant women. The food and nutritional supplements provided by Human Appeal was only for the pregnant and lactating women but in most cases it was used by whole family members. Due to this the impact of food distribution is nominal. As per the findings there is small difference in food related indicators among control and treatment group for example mortality rate in treatment group is 6% and control group 11%.
2. The demographic data shows that the 100% beneficiaries of the project were illiterate and living in the far flung areas of district Tharparker. The income level of beneficiaries is also discouraging. The data shows that 60% beneficiaries are prevailing under lowest household income category. Almost 100% beneficiary households were living under the poverty line, if we consider the $2 the minimum daily wage/income.
3. It is quite clear from the above graphs that the training and awareness sessions with these vulnerable women were beneficial in terms of knowledge transfer. At least the subjects are able to know the health effects of carelessness during pregnancy. Majority i.e 74% of respondents said that they got this specific knowledge after attending this session.
4. After getting awareness about the importance of workload reduction a reasonable portion of women i.e 42% practice it which is more than the percentage of women from control group which is 33%. A major portion do not reduced the workload because their husbands and other family members do not help them during the pregnancy as well the unemployed husbands and other family members are additional burden for them. They have to put additional efforts to serve their husbands and other family members as these are patriarchal societies and young women are more oppressed than older ones.

[13] (Serving Size 1 slice (28 g) 69 calories, calories in Lassi per 277g(1 cup) is 230 calories, Calories In Darshana's Homemade Yellow Moong Dal. 118 calories, Amount Per 100 grams Calories are 65 in vegetables)

5. Majority of respondents both from treatment and control group had basic knowledge of breastfeeding importance during the first six months after birth and with regard to practices almost 85% respondents give breast milk to child on demand from treatment group while only 4% do the same practice from control group.
6. During the training session participants women were motivated for vaccination as well its importance was highlighted for securing the life of children. The findings depict that during the baseline only 30% respondents were completely immunized their children as compared to end line which is 85%, quite encouraging.
7. It is found from that malnutrition is not the only reason of child morbidity and mortality but poor sanitation and hygiene practices also contribute to hazards. A majority of population do not wash hand before and after mealing and after defecation. Majority even take bath once in two weeks. For winter season most of the children do not have proper dress to protect them from cold and chest diseases.
8. The baseline data reflect the pre training situation and depict that 37% of women fall under the category of "mostly not" when we asked the question about hand washing and at the end line this ratio decrease to 15% at the same category. Same like 22% women were falling under the category of "sometimes" and this ratio increased up to 31%. The situation is quite good with respect to regular hand washing with and without soap if we compared it with baseline and control group. 41% women were washing hands regularly as per the baseline data and this ratio increased up to 54% in end line and from the control group 33% respondents are washing their hands regularly.
9. In the targeted village the average age of girl's marriage is 15 year which is quite alarming. In the age of 16 most of the girls give birth to first child and average girls given birth three to four children at the age of 21. Acute poverty is one of the reasons of early marriages in Tharparker. Mostly parents reduce their economic burden by marrying the girls. Due to early marriage girls faced many problems like complications in reproduction and other health issues.

Recommendation:

- Food package should be provided as per the requirement of whole family along with a sufficient micro nutrients supplement for pregnant and lactating women to maximize the effects of nutritional food on mother and child.
- Malnutrition is not the only reason of child morbidity and mortality. Unclean water Poor sanitation and hygiene practices have major contribution in mother and child diseases. Along with nutrition community WASH should be considered as an important contributor to reduce the diseases.
- There is no concept of population welfare and control in the targeted areas. Women have no right to decide about the birth of children. Average young family in targeted villages has five to six children with a gap of eight to twelve months and they have no source of income to feed their children and their mother. There is huge need of awareness regarding the early marriages and family planning.