Summer Training at
Jatan Sansthan, Udaipur

Nutritional Status of Children and Factors Affecting

By
Pragya Vishwakarma

Under the guidance of
Dr. Anoop Khanna

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 **Dr. Pragya Vishwakarma** has undergone summer training at Jatan Sansthan, Udaipur from 2nd April 2018 to 2nd June 2018.

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

I wish her success in all her future endeavors.

Dr. Anoop Khanna
Associate Professor
IIHMR University, Jaipur

(Col (Dr) Pramod Kumar)
for **Col.(Dr.) Ashok Kaushik** 22.6.18.
Dean (Academic & Student Affairs)
IIHMR University, Jaipur

1, Prabhu Dayal Marg, Near Sanganer Airport, Jaipur- 302029, Rajasthan, India.
Ph.: 0141- 3924700, 2791431- 32, Fax: 0141 3924738, E-mail: iihmr@iihmr.edu.in, Web.: www.iihmr.edu.in

Jatan

Jatan

Working with young people

5, Tirupati Vihar, Near Celebration Mall,
Bhuwana, Udaipur 313001 Rajasthan, INDIA
Ph: +91 9414162192
Email: jatansansthan@rediffmail.com, www.jatansansthan.org

Sr.No. 37/Internship/IIHMR/2018-19/28

June 01, 2018

To whomsoever it may concern

This is to be certified that Ms. Pragya Vishwakarma D/o Mr. G. D. Vishwakarma is a student of IIHMR Jaipur pursuing MBA in Hospital and Health Management. She completed her internship to understand the "Nutritional Status of Children and the Factors affecting it" in Jatan Sansthan for the period from 02/04/2018 to 02/06/2018:

This certificate provided to her on successful completion of her internship for above mentioned period.

We wish her a bright future.

(Dr. Kailash Brijwasi)
Executive Director

ACKNOWLEDGEMENT

The journey to become a wise and responsible professional doesn't concise to classroom learnings. The experience that I gained while working with Jatan Sansthan during summer internship acquainted me with the practical aspect of the course & implementation of the theory in the real field. Any accomplishment requires the effort of many people & this work is no different. My sincere thanks to all for taking me ahead in this journey.

I would like to extend my sincere & heartfelt thanks to Dr.Kailash Brijwasi, founder & present leader of Jatan Sansthan, for providing me an opportunity to learn & develop professionally.

I extend my regards to Ranveer Singh Shekhawat, Deputy Director & Rajdeep Singh Chundawat, Program Manager, for being constant support & guidance, & sharing their expertise & knowledge.

I am grateful to the entire team of Khushi Project, who inspired & helped me complete this project, directly or indirectly.

I also express my special thanks to Dr. Anoop Khanna for his guidance throughout the training period.

Last but not the least I thank my family for their constant support and for keeping me motivated throughout this journey.

TABLE OF CONTENTS

ABBREVIATIONS

AWC: Anganwadi Centre

AWW: Anganwadi Worker

AWH: Anganwadi Helper

ANM: Auxiliary nurse and mid-wife

CC : Cluster coordinator

ICDS: Integrated Child Development Services

SPSS: Statistical Package for Social Sciences

SAM: Severe Acute Malnourished

MAM: Moderately Acute Malnourished

JATAN SANSTHAN

Introduction

Jatan in Hindi means an effort. It also means energy, endeavour, diligence & perseverance.

Established in 2001, Jatan Sansthan is a not-for-profit organization working with rural & resource poor communities in the state of Rajasthan, India. Since then, Jatan has implemented various initiatives towards improving social & demographic indicators by working with youth groups. Jatan has worked on programs related to children, young people & women in the areas of health & education.

Vision

"Jatan envisions a society where people lead a healthy, safe and empowered life, free from all forms of discrimination."

Mission

- Jatan's mission is to empower communities by giving them spaces to freely express their concerns.
- Jatan aims to provide information that will enable communities to seek social and scientific solutions, so that communities can become their own agents of change.
- Jatan encourages active participation of youth in decision making, policy formulation and advocacy across various forums at national and international level.

Khushi Project

Objective – To strengthen the efficiency of Integrated Child Development Services (ICDS) Scheme, to improve health & well-being of the children of 0-6 years of age.

OBSERVATIONAL LEARNINGS

I) GENERAL FINDINGS ON LEARNING

Critical factors affecting the functioning of the Khushi Project as observed were:

- Manpower shortage.
- Lack of knowledge & inadequate working skills of AWW & AWH.
- Lack of awareness among families of children about -
    - importance of health & well-being of the children
    - services of anganwadis.

II) CONCLUSIVE LEARNING AND SUGGESTIONS

General findings mentioned above gives an idea about the shortcomings of the Khushi Project. Therefore, for the efficient working & effective results of the project I would suggest –

- Stringent recruitment process of the anganwadi staff.
- Better & regular training of the anganwadi staff.
- Scheduling of regular growth monitoring activities.
- Awareness campaigns for the rural populations.
- Promoting community participation.

PROJECT REPORT (KHUSHI PROJECT)

The goal of Khushi project is to improve the efficacy of Integrated Child Development Services (ICDS) Scheme to improve the health and well-being of children in 0 to 6 years of age group. Jatan Sansthan is one of the implementing partners of this project & therefore ensures that the overarching objectives of the project are implemented efficiently.

Problem Statement

Malnutrition among under-five children is a major public health problem in India. ICDS is one of the largest promotional nutrition program in India even after which 43% of children under the age of 5 are underweight.

Objectives

To accomplish the goal of Khushi project by:

- To assess the nutritional status of the child.
- To study about the factors affecting nutrition status of the child and find the association between them.

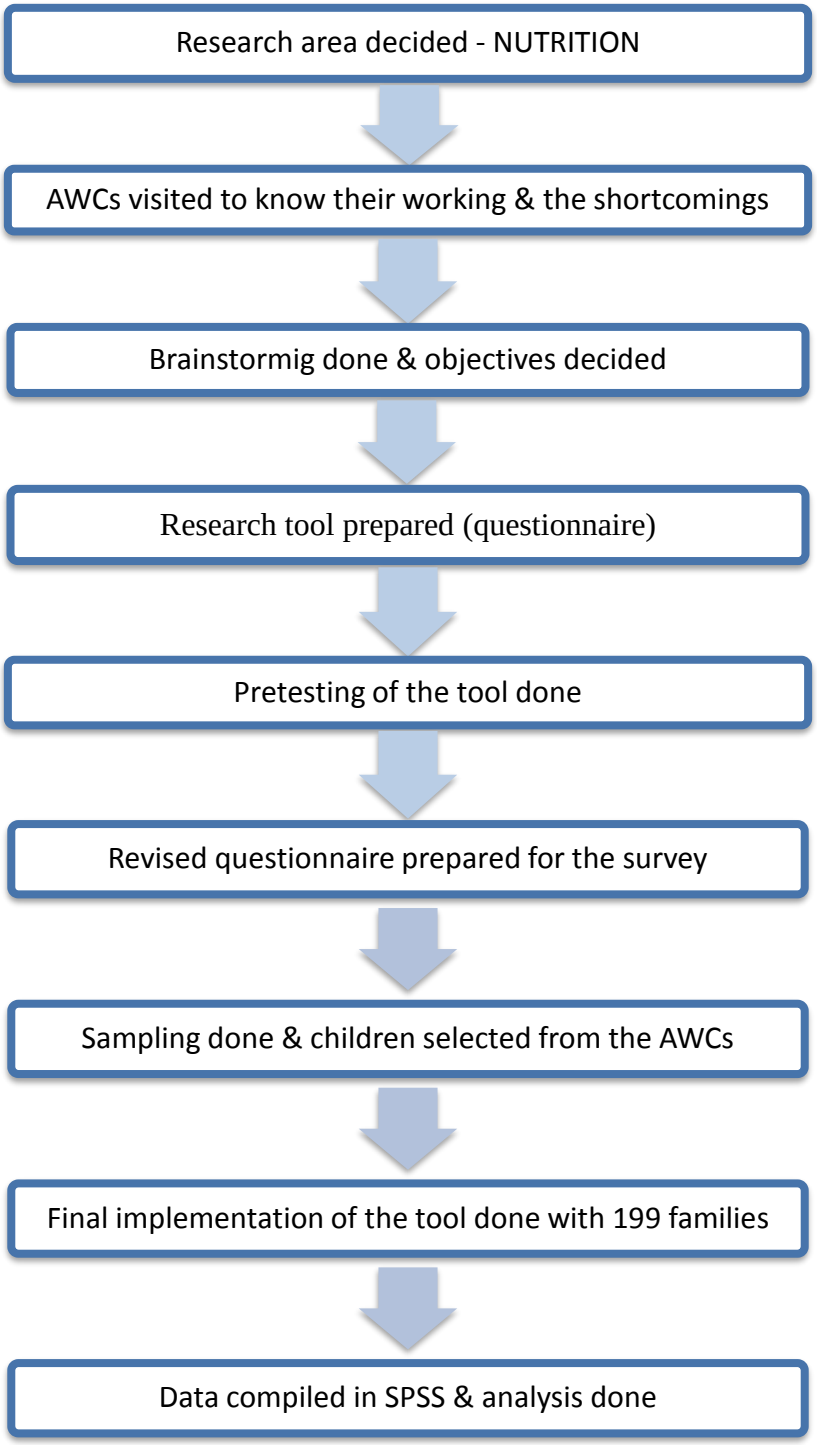
Rationale

ICDS even after being the largest promotion nutrition program for mothers and children in the world, is not able to cater all their needs.

Khushi project aims at strengthening the efficacy of the program.

It is the need of the hour to assess the loopholes of the project & find the solutions to it.

METHODOLOGY



DATA COLLECTION

Data collection was done by two ways: questionnaire (quantitative)

: focus group discussion (qualitative)

Case studies were also taken for the justification of the associating factors.

Study design : Analytical Cross-sectional

Sample method : Systematic Random Sampling

Sample area : 31 AWCs of Rajsamand, Railmagra & Khamnor Blocks

Sample size : 299 families

Duration : 2 months

The anganwadi covered were as follows:

RAJSAMAND	**RAILMANGRA**	**KHAMNOR**
• BORDA • MADRIGOLIYA • KERUT • TASOL • VASNI • PARVAT KHEDI • BORAJ KHEDA • DHAYLA • MUNDOL • MANDAWAAR	• KANHAKHEDA • LATHIYAKHEDI • RAGHUNATHPURA • SOPURA • PIPLI DODHIYAN • SANSERA • SAKRAWAS • BETHUMBI BHEEL BASTI	• CHOTA BHANUJA • BADA BHANUJA • KARAI • MACHIND • CHARON KI MADAR • SALODA 1 • SALODA 2 • KADO KA GUDA • KOSHIWADA • SIROHI KI BAGEL • DABUN • VALRA • FATEHPURA

DATA COMPILATION & ANALYSIS

Compilation:

Data compilation was done using the SPSS software (Statistical Package for Social Sciences). 300 families from Rajsamand, Khamnor and Railmangra blocks (100 each) were taken as sample. Block wise data entry was done in SPSS and later on, all was compiled as one common file.

Various variables were taken from the tool as parameters for assessment of nutritional status of the children and for meeting the objectives.

Analysis:

The analysis of data was done using SPSS software.

Two major tests were used-CHI-SQUARED test (nominal vs. nominal/ordinal variable)

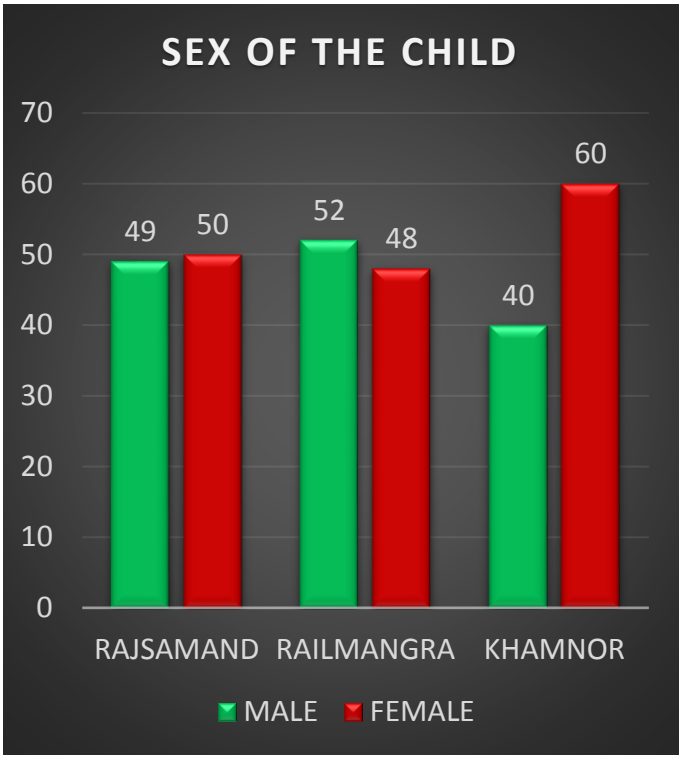
-ONE–WAY ANOVA test (nominal/ordinal vs. scale variable)

The analysis showed the frequency of children in SAM & MAM.

The analysis also revealed the association between:

- Nutritional grade & caste.
- Nutritional grade & annual household income.
- Caste & literacy status of the mother of the reference child.
- Nutritional grade & weight at birth.
- Nutritional grade & colostrum.
- Nutritional grade & pre-lacteals.
- Nutritional grade & number of children.
- Nutritional grade & interval between last two births.

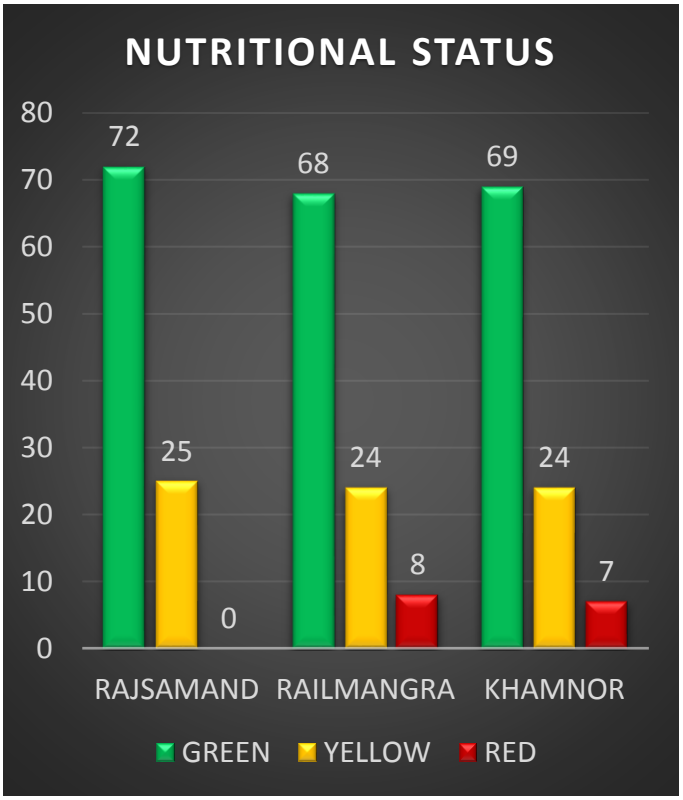
SURVEY RESULTS –



The frequency table signifies that out of all the children surveyed

Number of males were - 141

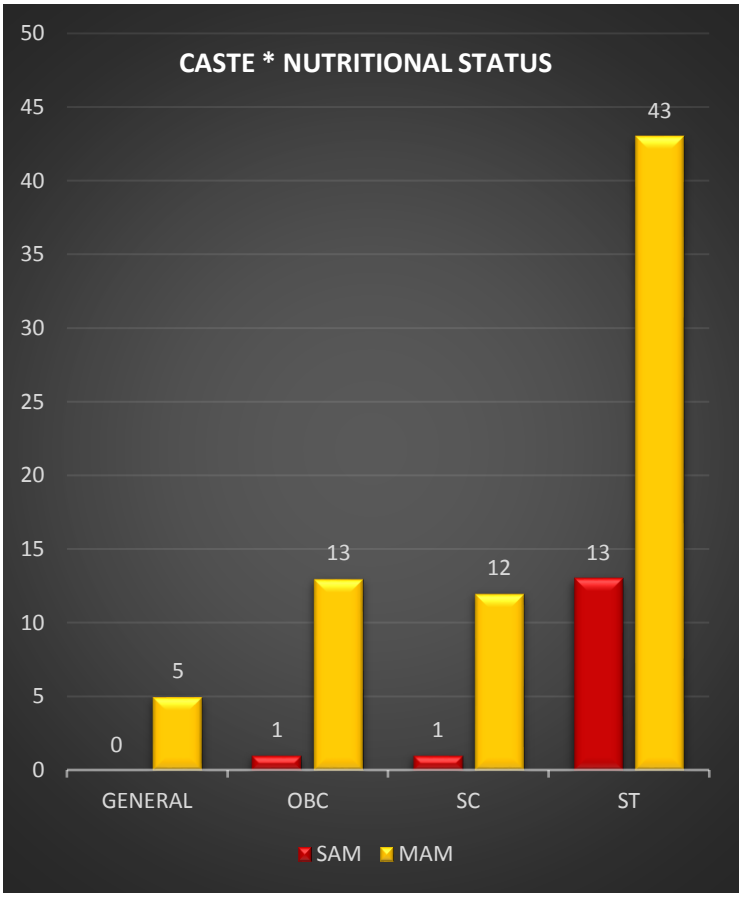
Number of females were - 158



Number of children in different nutritional grade were as follows:

GREEN	- 209
YELLOW	- 73
RED	- 15

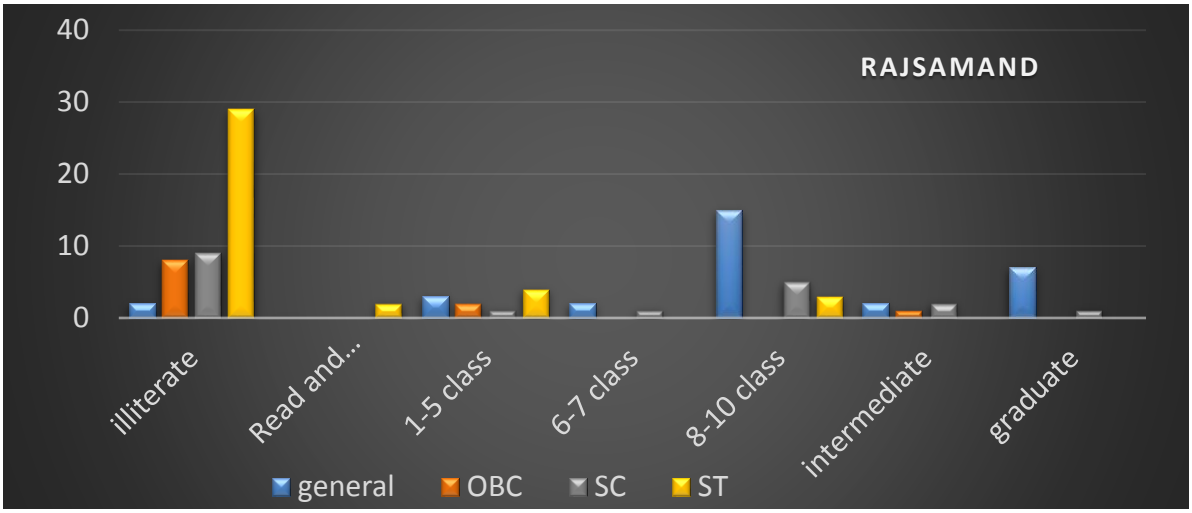
ASSOCIATION BETWEEN CASTE & NUTRITIONAL STATUS

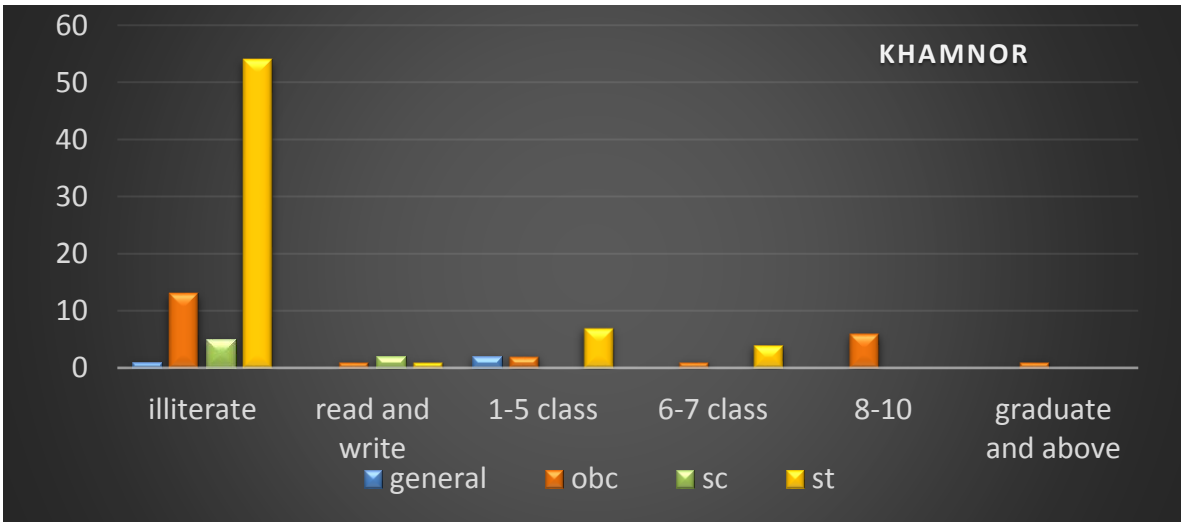


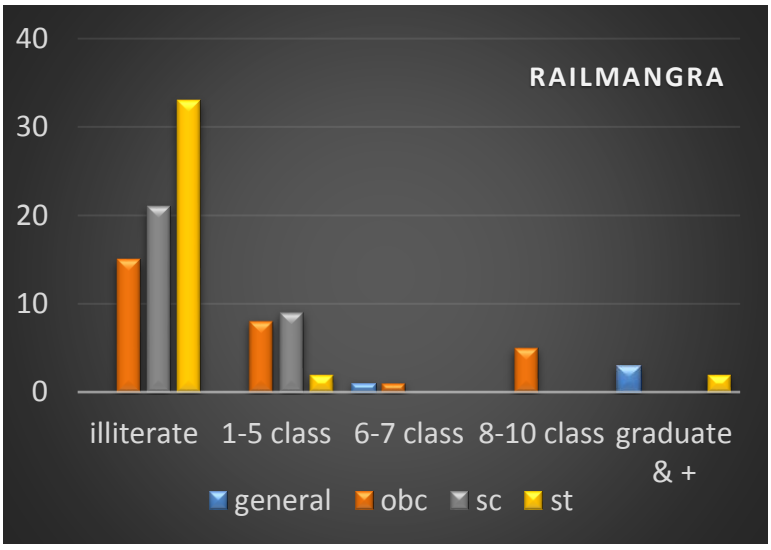
General	MAM : 05 SAM : 00
OBC	MAM : 13 SAM : 01
SC	MAM : 12 SAM : 01
ST	**MAM : 43** **SAM : 13**

Maximum number of SAM are in the ST category.

ASSOCIATION BETWEEN CASTE & LITERACY STATUS

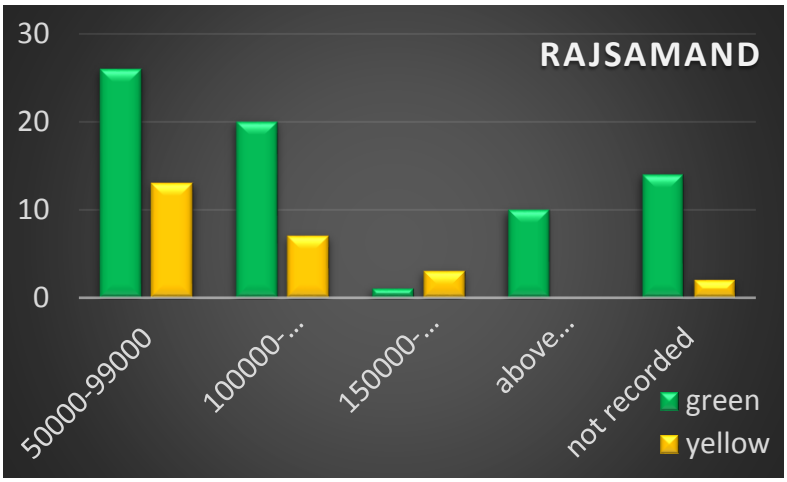




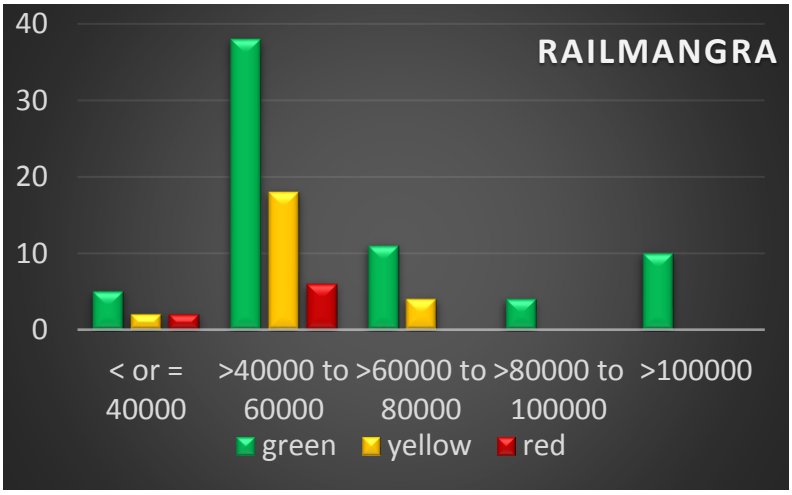


The comparison suggests that the non-literates fall more in ST category.

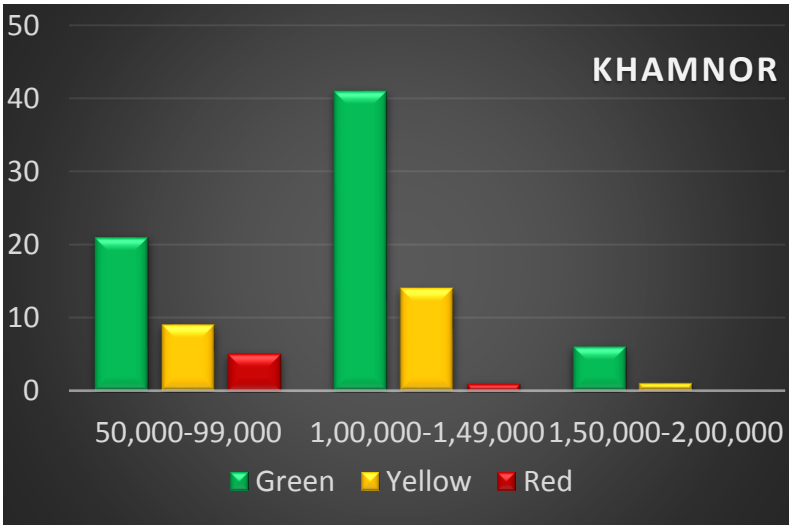
ASSOCIATION BETWEEN NUTRITION GRADE & INCOME



This graph shows that children of yellow nutritional grade belongs to the families of low income group.



This graph shows that all the children of red nutritional grade belongs to the families falling in the income group of less than 60000 p.a.



This graph shows that higher income group families does not have children of red nutritional grade.

ASSOCIATION BETWEEN NUTRITIONAL GRADE & OTHER FACTORS

NULL HYPOTHESIS	TEST USED	P-value	RESULT	INTERPRETATION	PLACE		NUTRITIONAL STATUS		
							GREEN	YELLOW	RED
There is no relation between nutritional status of child & weight at birth.	CHI-SQUARED TEST	0.000	H_0 rejected	Low birth weight hampers the nutritional status of child.	Relmangra	WEIGHT AT BIRTH			
						< 2.5 kg	38.5%	38.5%	23.1%
						≥ 2.5 kg	78.4%	18.9%	2.7%
There is no relation between nutritional status of child & child fed with colos-	CHI-SQUARED TEST	0.023	H_0 rejected	Feeding of colostrum is beneficial to the child.	Khamnor Rajsamand	COLOSTRUM GIVEN			
						YES	76.9%	15.4%	7.7%
						NO	54.3%	40.0%	5.7%
There is no relation between nutritional status of child & pre -lacteals given.	CHI-SQUARED TEST	0.003	H_0 rejected	Pre-lacteals affects the nutritional status of the child.	Relmangra	PRE-LACTEALS			
						YES	25.0%	58.3%	16.7%
						NO	73.9%	19.3%	6.8%
There is no relation between nutritional status of child & number of children.	CHI-SQUARED TEST	0.000	H_0 rejected	More number of children to parents affects the nutritional status of their child.	Rajsamand	NUMBER OF CHILDREN			
						1	90.0%	10.0%	0.0%
						2	89.1%	10.9%	0.0%
						3	52.6%	47.4%	0.0%
						4	37.5%	62.5%	0.0%
						>5	20.0%	10.0%	0.0%

FOCUS GROUP DISCUSSION –

Following topics were covered during focus group discussion.

1. Awareness about Anganwadi services.
2. Breastfeeding
3. Immunization
4. Interval between children
5. Initiation of complementary feeding.

- *The replies for questions are shown in graph.*

INTERPRETATION

It is evident that the huge number of respondents were unaware about the services provided by the anganwadis.

Even the use of take home rations and the immunization was unknown to maximum number of respondents.

Many respondents were unaware of the ideal time for the complementary feeding.

CASE STUDY 01

(NUTRITIONAL STATUS * NUMBER OF CHILDREN & INTERVAL BETWEEN BIRTHS)

NAME : MAINA (name changed) SEX : Female CASTE : ST

DOB : 15/02/2017

AGE : 1 year 3 months (1.25 yrs)

NUTRITIONAL STATUS : RED in growth chart

PHYSICAL APPEARANCE : Brown hairs

: Unable to stand by herself

FAMILY DETAILS :

	SEX	RELATION	DOB/AGE	OCCUPATION	HABITS
TOSHI	F	Mother	32	Labour	Tobacco-chewing
LADU	M	Father	40	Labour	Tobacco chewing & smoking, Quit drinking 4 years back
KESA	F	Sister	8/12/2003		
HEMA	F	Sister	19/02/2006		
NARBDA	F	Sister	01/01/2009		
NARYI	F	Sister	05/12/2011		
ARI	F	Sister	30/11/2012		
MAARI (DIED)	F	Sister	23/11/2014		
MAINA	F	Reference child	15/02/2017		
UDAL	M	Brother	21/04/2018		

- FAMILY SIZE – 11 members (In-laws stays along with the family)
- FAMILY INCOME – Rs.45000 p.a.
- Family belongs to BPL category (financially very poor).
- MOTHER – 32 Yrs., illiterate.
- Has 7 daughters (1 died), in hope of a male child.
- Delivered 3 daughters (1 died) within a span of 5 years.
- Not adopted any family planning methods yet.
- Both the parents are daily wage labourer.
- Eldest daughter takes care of the younger ones.
- BREAST FED only for 3 months (frequency – 8-10 times a day) as the mother conceived again.
- Mother's weight during pregnancy-46 kg and Hb level-7.4 gms
- Mother was given blood units due to low hemoglobin content.

- Maina was born with low birth weight (< 2.5 kgs).
- At the age of 8 months, Maina suffered from a severe fungal infection behind the ear (due to improper hygiene)and was referred to Dariba CHC.
  She was taken to the CHC but as the practitioner was not available they took medication from a local pharmacist.
  Condition got better after taking medicines.
- RECORDED WEIGHT & MUAC of last 4 months.

	JANUARY 2018	FEBRUARY 2018	MARCH 2018	APRIL 2018
WEIGHT (kg)	5.3	5.5	5.95	6.00
MUAC (cm)	11.4	11.5	11.6	11.4

- Recently, child was referred to MTC (Malnourishment Treatment Centre) as she was underweight.
  But the family refused to go, giving an excuse that who will take care of other kids.
- The child suffered from cough & fever last month for which the family adopted traditional medication.
- Eating habits – 1 roti a day, biscuit & milk.
- Though the child is below 3 yrs of age but still she is brought to AWC to have nutritional supplements.
- Toilet is present at home but not in use.

CASE STUDY 02

(NUTRITIONAL STATUS * INTERVAL BETWEEN BIRTHS)

NAME : KUSUM GAMETI
SEX : Female
CASTE : ST
DOB : 27/08/2016
AGE : 2 years 7 months (2.58 years)
NUTRITIONAL STATUS : RED in growth chart as well as by MUAC tape
PHYSICAL APPEARANCE : Very weak and thin
: Unable to stand by herself

NAME	SEX	RELATION	AGE	OCCUPATION
REKHA	F	Mother	20	Housewife
DEEPAK	M	Father	22	Labour
X	M	Brother	5	
y	F	Sister	4	
KUSUM	F	Self	2.58	

- FAMILY SIZE – 9 members (Staying with her mother).
- Family belongs to BPL category (financially very poor).
- Living in a rented house.
- MOTHER – 20 Yrs., illiterate.
- Early child marriage : mother's age- 15 years; father's age- 17 years.

- Faced **domestic violence** at in-laws, came to live with her mother during pregnancy.
- **Three sisters** of Rekha **married together** to save money spent for marriage.
- Adopted family planning method after birth of Kusum.
- The other two children aren't allowed to live with mother; live with grandmother.
- All of the three children were born by **caesarian operation.**
- Interval between subsequent births less than 3 in each case.
- Mother didn't avail ANC services due to work load and frequent migration.

- Kusum was born with low birth weight (< 2.5 kgs) i.e. =1.62kgs
- Kusum was born a month ago of what was expected (**pre-mature child**)
- Was not fed with colostrum, breastfeeding initiated after 3 days
- Was admitted to special born care for treatment. Weighted 1.49 kgs even after treatment

Present weight-	9.60kgs
Present height-	90cms
MUAC tape	15.3cms

- The child suffered from cough, fever, diarrhea, went to Khamnor. No prescription for malnourishment was given
- Eating habits: 2-3 bites of roti a day, khichdi & goat's milk
- Didn't receive THR as they aren't enrolled at Dabun anganwadi
- Toilet absent
- Recently, the child was referred to MTC (Malnourishment Treatment Centre) by cluster coordinator as she was underweight to which the family initially refused to go, but agreed after insisting

RECOMMENDATIONS AND CONCLUSION

According to the research conducted, following recommendations can be taken into consideration:

- The maximum number of SAM children fall in the category of ST, therefore necessary work should be done to update their status.
- Literacy status of the respondents directly relates to the nutrition of the reference child hence awareness about the need & importance of education should be spread.
- Family planning methods must be promoted among rural population.
- Aware rural population about the ideal interval time between two births.
- Aware mothers about the importance of exclusive breastfeeding for the proper nutrition & health of the children & also the ideal time for complementary feeding.
- Aware people about the benefits of the anganwadi services.

REFERENCES:

Jatan sansthan mission and vision retrieved from:

http://jatansansthan.org/I

Information about ICDS retrieved from:

http://www.icds-wcd.nic.in/

Information about Khushi project retrieved from:

https://csrrajasthangov.in

ANNEXURES

ANNEXURE 01

- Three teams were made of 3 members each for data collection from 3 blocks.
- Blocks given were Rajsamand, Railmangra & Khamnor.
- The teams worked under the guidance of block & cluster coordinators.
- Case studies were taken to justify associations shown through analysis.
- The names of the designated people are as follows.

NAME	DESIGNATION	EMAIL ID	CONTACT NO.
Dr.Kailash Brijwasi	Director	kailash@jatansansthan.org	9414162192
Ranveer Singh	Deputy director	ranveer@jatansansthan.org	9694088222
Rajdeep Singh Chundawat	Program coordinator	rajdeep@jatansansthan.org	9928773107
Usha Chaudhary	Head researcher	usha.chaudhary@jatansansthan.org	7018679716

ANNEXURE 02

The tool (questionnaire) that was used for data collection & survey is as follows:

QUESTIONNAIRE

Q.1 Area/Village:

Q.2 Name of the AWC:

Q.3 Name of the AWW:

Q.4 Name of the interviewer:

General Information:

Q.5 Name of the reference child:

Q.6 DOB:

Q.7 Age of the reference child:

Q.8 Sex:

1. Male
2. Female

Q.9 Weight at birth:

1. Less than 2.5kg
2. Equal and greater than 2.5kg
3. Not recorded

Q.10 Present weight:

Q.11 Present height:

Q.12 Nutrition grade of child:

1. Green
2. Yellow
3. Red
4. Don't know

Q.13 No. of children:

1. 1

2. 2
3. 3
4. 4
5. 5
6. More than 5, _____

Q.14 Birth order (nth child ?) :

1. First
2. Second
3. Third
4. Fourth
5. Fifth and above

Q.15 Interval between last two births:

Q.16 Name of the respondent (parent):

Q.17 Age:

Q.18 Literacy status:

1. Illiterate
2. Read & write
3. 1 – 5 Class
4. 6 – 7 Class
5. 8 – 10 Class
6. Intermediate
7. Graduate & above
8. NA

Q.19 Occupation of child's father:

1. Agricultural labour
2. Other labour
3. Owner Cultivator
4. Land lord
5. Artisan
6. Service

7. Business
8. Others
9. NA

Q.20 Occupation of child's mother:

1. Agricultural labour
2. Other labour
3. Owner Cultivator
4. Service
5. Business
6. Housewife
7. Others

Q.21 Household annual income: _____

Q.22 Caste:

1. General
2. OBC
3. SC
4. ST

Q.23 Family size:

1. 1 -4
2. 5 – 9
3. ≥ 10

Q.24 Type of house:

1. Kutcha
2. Semi Pucca
3. Pucca

Q.25 Source of drinking water:

1. Open Well
2. Tube Well
3. Tap

4. Handpump

Q.26 Sanitary Latrine:

1. Present and in use
2. Present and not in use
3. Absent

Q.27 Undergone ANC check up:

1. Yes
2. No

Q.28 If yes, total number of ANCs:

1. One
2. Two
3. Three
4. Four

Q.29 If no, then why?

1. Not aware of the need
2. Loss of wages
3. No faith
4. No ANC held in the village
5. Timings are not convenient
6. Place is not accessible
7. Others

Q.30 Received IFA tablets:

1. Yes
2. No

Q.31 Place of delivery:

1. Home
2. Institutional delivery

Q.32 Child given pre-lacteals:

1. Yes
2. No

Q.33 Child fed with colostrum:

1. Yes
2. No

Q.34 If no, reasons for discarding colostrum:

1. Child could not suck
2. Difficult to digest
3. Not good for health
4. Others

Q.35 Time of initiation of breast feeding after delivery:

1. Within 1 hr after birth
2. After 1 hr and within 24hr
3. Between 1 to 3 days
4. After more than 3 days

Q.36 Reason for the same:_____

Q.37 Feeding practices:

1. Solely breast fed
2. Breast fed+ water
3. Breast fed+ complementary feeding

Q.38 Age of initiation complementary feeding:

1. Before 6 months
2. At 6 months
3. After 6 months

Q.39 Foods generally included in home made foods: (multiple responses)

1. Cereals & Millets
2. Pulses & legumes
3. Green Leafy Vegetables

4. Other Vegetables
5. Fruits
6. Milk & milk products
7. Eggs
8. Flesh foods

Q.40 Do you know what baby mix is?

1. Yes
2. No

Q.41 Do you receive/bring baby mix from anganwadi centres?

1. Yes
2. No

Q.42 If yes, how often?

1. Weekly
2. Biweekly
3. Monthly

Q.43 If no, why not?

1. No awareness
2. No use
3. Anganwadi centre too far
4. No one came to give
5. Others

Q.44 How do you use baby mix?

1. For feeding the reference child
2. Consumed by all family members
3. Fed to the cattle
4. Sell it off
5. Not using it at all
6. Others

Q.45 Did your child receive immunization?

1. Yes
2. No

Q.46 Any Illness in last 15 days:

1. Yes
2. No

Q.47 If yes, which?

1. Fever
2. Diarrhoea
3. Cough
4. Other _____

Q.48 According to you, what all services are provided by Anganwadis? (multiple responses)

1. Health check-ups
2. Immunization
3. Pre-school education
4. Nutrition supplementation
5. For referrals
6. Don’t know

ANNEXURE 03

Focused group discussion conducted had following questions:

1. What do you know about anganwadi services?
2. Do you think that anganawadi services are required ?
3. Is their any change you want in present anganwadi services?
4. What do you know about breastfeeding?
5. What is the optimum time that a child should be breastfed to?
6. Do you breastfeed your child when you are ill?
7. Till how many months is the child solely breastfed?
8. What should be the interval between two children?
9. Do you know the nutrition status of your children?
10. How frequently do you receive/bring THR from AWC?
11. Is it important to get your child immunized?
12. What are the timings of different vaccinations to be given to your children?

THANK YOU

SUBMITTED BY: DR.PRAGYA VISHWAKARMA

ROLL NO.627 SECTION- B

MBAHM22

EMAIL ID : pragya.j17@iihmr.in

: pragya8811@gmail.com

CONTACT NO. : 9953597029

: 8839940130