

**Assessing the Knowledge level of Anganwadi Workers on
Growth Monitoring and Counseling services under Integrated
Child Development Scheme (ICDS) in 5 Blocks at Panchmahal
district of Gujarat**

**Internship Training
at
Integrated Child Development Services
Department, Panchmahal
Women and Child Development Ministry, Gujarat**

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**Under the guidance of
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**Post Graduate Diploma in Hospital & Health Management
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TO WHOMSOEVER IT MAY CONCERN

This is to certify that Dr. Adish Kumar student of Post Graduate Diploma in Hospital and Health Management (PGDHM) from Institute of Health Management Research, Jaipur has undergone dissertation at Integrated Child Development Scheme, Government of Gujarat, 2014.

The candidate has successfully carried out the study designated to his during dissertation and his approach to the study has been sincere, scientific and analytical.

The internship is in fulfilment of the course requirements.

I wish him all success in all his future endeavours.



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સેક્ટરિયલ જ્ઞાન વિકાસ સેવા યોજના
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The Certificate is awarded to

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In recognition of having successfully completed his Internship at

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and has successfully completed his Project on

**Assessing the Knowledge level of Anganwadi Workers on Growth Monitoring and
Counseling services under Integrated Child Development Scheme (ICDS)**

He comes across as a Committed, Sincere & Diligent person who has a strong drive & zeal for
learning

We wish him all the best for future endeavours

Bhavnaben C Jidiya

District Programme Officer
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CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **Assessing the Current Knowledge Level of Anganwadi Workers on Growth Monitoring and Counseling Services under Integrated Child Development Scheme, Panchmahal, Gujarat** and submitted by **Dr. Adish Kumar** Enrollment No. **17-1283** under the supervision of **Prof. Barun Kanjilal** for award of Postgraduate Diploma in Hospital and Health Management of the Institute carried out during the period from **3rd February, 2014** to **30th April 2014** embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

Signature


Acknowledgement

Every successful story is a result of an effective teamwork, a team that comprises of a good coach and good team players. Likewise, this thesis report is no exception. This has been a meticulous effort of a group of people along with me. I want to take this opportunity to thank every one who has been a part of this report.

To start with, I wish to thank my mentor and guide Prof.Barun Kanjilal. He has been a constant source of encouragement with her valuable inputs about the dissertation. His timely advice helped me realize what was required to conduct the research and collect the data and helped me complete it in an effective baby.

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Preface

I started my internship with a vision in my mind so as to be able to learn about the practical aspects of healthcare delivery system on Nutrition in a more detailed manner. Hereby, I take this opportunity to express my deep sense of gratitude to all those who have been instrumental in successful completion of my internship.

Any accomplishment requires blessings and efforts of numerous individuals and this work is no exception. I thank god Almighty for giving me this great opportunity to study and learn at this prestigious organization and help me to implement my theoretical knowledge into practical aspect.

This report is my master thesis for the conclusion of my Post Graduate Diploma Program in Hospital and Health Management at Institute of Health Management Research, Jaipur. Moreover, it is also a conclusion of my internship at the Integrated Child Development Services, District Panchayat, Panchmahal, Gujarat. I really appreciated many people who helped me at the project.

The report comprises of my original work on assessing the Knowledge level of Anganwadi Workers on Growth Monitoring and Counseling services under Integrated Child Development Scheme (ICDS), Panchmahal District in Gujarat.

At last, I take immense pleasure to thank **Dr. S. D. Gupta** (*Director- Institute of Health Management Research*) and **Dr. Ashok Kaushik** (*Dean, Institute of Health Management Research, Jaipur*) for placing me in such an esteemed organization (ICDS) to undertake my dissertation program. I would thank **Integrated Child Development Services (ICDS), Gujarat** to provide me with an opportunity to work with them, where I gained basic knowledge about working of health system and its functionaries.

Dr. Adish Kumar

April 2014

Contents

DISSERTATION REPORT	
Title of the study	
1.1 Abstract	13
1.2 Introduction to the Study.....	15
1.3 Background of District Panchmahal	17
1.4 Literature review.....	18
1.5 Rationale for the Study.....	19
1.6 Research Question.....	19
1.7 Objectives	19
1.8 Specific Objectives	20
1.9 Methodology.....	20
1.9.1 Study Period	20
1.9.2 Study Design	20
1.9.3 Study area:.....	20
1.9.4 Study Group.....	20
1.9.5 Tools applied.....	20
1.9.6 Data Collection.....	21
1.9.7 Data Analysis.....	21
1.9.8 Ethical Consideraton.....	21
1.10 Finding and Analysis	21
Conclusion	32
Suggestion	32
References.....	33
Appendices	34

List of Tables

Table No	Content	Page No
1	Table below shows the distribution of Anganwadi Center at Block Level	17
2	Table below shows the knowledge of Anganwadi Workers regarding the services provided under ICDS at Anganwadi Center (n=120)	20

List of Figures

Table No	Content	Page No
1	Knowledge of AWWs regarding the principle followed by ICDS to track malnourishment in children	21
2	Knowledge of the Anganwadi worker regarding the weight gain by children per month (n=120)	23
3	Relationship between work experience of AWW and the knowledge about weight gain of children at specific age	24
4	Salter Scale used at Anganwadi Center	25
5	Working Condition of Salter Scale	26
6	Electronic Weighing machine introduced at Anganwadi Center	
7	Knowledge of the Anganwadi worker regarding Electronic weighing machine (n=120)	
8	Knowledge of the Anganwadi worker regarding WHO Growth Chart (n=120)	
9	Relationship of work experience and interpretation of WHO growth chart by AWWs	

Abbreviations

ANM	Auxillary Nurse Midwife
ASHA	Accredited Social Health Activist
AWC	Anganwadi centre
AWW	Anganwadi Worker
AWH	Anganwadi Helper
BCC	Behavior Change Communication
CDHO	Chief District Health Officer
CDPO	Child Development Project Officer
CMTC	Child Manutrition Treatment Center
DO	Data Operator
DIO	District Information Center
DPC	District Programme Coordinator
GoI	Government of India
ICDS	Integrated Child Development Services (ICDS)
IEC	Information education and communication
IFA	Iron and folic acid tablet
IMR	Infant Mortality Rate
IPCCD	Indian Public Health Standards
IYCF	Infant and Youbg Child Feeding
KSY	Kishori Shakti Yojana
MDG	Millenium Development Goals
MMR	Maternal Mortality Rate
MUAC	Mid-Upper Arm Circumference
NCV	Nutrition Community Volunteer
NFHS	National Family Health Survey
NFPSE	Non Formal Pre-School Education
NGO	Non-governmental organizations
NIC	National Information Centre
NHED	Nutrition Health and Education
NRHM	National Rural Health Mission
NPAG	Nutrition Programme for Adoloscent Girls
NV	Nutrition Volunteer
PHC	Primary health centre
PSE	Pre School Education
PRI s	Panchayati Raj Institutions
RDD	Regional Deputy Director
SEAR	South East Asian Regions
SPSS	Statistical Package for the Social Sciences
UNICEF	The United Nations Children's Fund
WCD	Women and Child Development
WHO	World Health Organisation

List of Appendices

Annexure 1: List of people interacted during Internship

Annexure 2: Questionnaire in English

DISSERTATION REPORT

Title of the study: Assessing the Knowledge level of Anganwadi Workers on Growth Monitoring and Counseling services under Integrated Child Development Scheme (ICDS) in Panchmahal district of Gujarat.

1.1 Abstract

Introduction: Growth monitoring consists of routine measurements to detect abnormal growth, combined with some action when this is detected. It aims to improve nutrition, reduce the risk of death or inadequate nutrition, help educate carers, and lead to early referral for conditions manifest by growth disorders. As Anganwadi Worker invest time in this activity, evidence for its benefits and harms was sort. Growth monitoring is one of the important functions of AWWs, for which they should be sufficiently trained.

Background of Study: Growth monitoring has unique and as yet, incompletely applied potential for promotion of child health and nutrition and is an educative tool for the mother with regard to child feeding, appropriate response to illness and an understanding of the various factors which play a role in growth and development of the child by the AWWs .

Objectives of Study: The key objective of the study is to assess the current knowledge among Anganwadi Workers on growth monitoring of children enrolled in Anganwadi center and counselling of beneficiaries

Methods: Descriptive Cross sectional study with convinient sampling was undertaken. Structured questionnaires were preapred addressing the objectives of the study and face-face interviews with AWWs were conducted.

Results: The study findings highlight that all the AWWs having the knowledge regarding the services provided under ICDS at AWC. In terms of knowledge regarding the weight gain by the children more than half of the AWWs dont, have proper idea and knowledge.As the increase in the work experience knowledge regarding the ideal weight gain of children increase in AWWs. Three forth of the AWW do not know how to use the electronic weighing machine to weight the children even after the training. Depending on response to question regarding the growth chart almost ninety percent of AWW know the importance of growth chart and the clour difference provided in growth chart and for what colour code stand for. Almost 91% of Anganwadi worker know the name of MUAC Tape but do not know how to use the MUAC tape.

Conclusion: All the AWWs who have the less work experience should get on the job or refresher training regarding the ideal weight gain of children at specific age. Similarly the Planning should be done to reorient the AWWs to operate the Electronic Weighing Machine at Block level . This can be done by providing training hierchically ie, training of supervisors, block co-ordinators, and CDPOs at block level who can further train the AWWs at SEJA Level. Age and work experience do not have any concern with filling of growth monitoring. More than 60 percent of AWWs do not know on which principle ICDS follow i, e Weight for age. With the help of health department schedule training for AWWs at SEJA level to train the AWWs regarding the MUAC Tape, so that proper growth monitoring data can be received and children with the special attention regarding malnutrition can be track down and provide the care. The present Study shows AWWs really need the trianing on time and time-to-time refresher training to keep the impotant aspects of growth monitoringin there mind.

Key Words: Anaganwadi worker, Growth Monitoring, Elecronic Weighing Machine, knowledge of AWW

1.2 Introduction of the study:

The Anganwadi worker (AWW) is the community based voluntary frontline worker of the ICDS programme. Selected from the community, she assumes a pivotal role due to her close and continuous contact with the beneficiaries. The output of the ICDS scheme is to a great extent dependant on the profile of the key functionary i.e. the AWW, her qualification, experience, skills, attitude., training etc.

An Anganwadi is the focal point for delivery of ICDS services to children and mothers. An Anganwadi normally covers a population of 1000 in both rural and urban areas and 700 in tribal areas. Services at Anganwadi center (AWC) are delivered by an Anganwadi Worker (AWW), who is a part-time honorary worker. She is a woman of same locality, chosen by the people, having educational qualification of middle school or Matric or even primary level in some areas. She is assisted by a helper who is also a local woman and is paid a honorarium being functional unit of ICDS programme which involves different groups of beneficiaries, the AWW has to conduct various different types of job responsibilities.

An AWW's multifarious role requires managerial, education, communication and Counselling Skills. The various job responsibilities of an AWW are:

A. Planning for Implementation of ICDS Programme

1. Village Mapping
2. Rapport Building with Community
3. Conducting Community Survey and Enlisting Beneficiaries
 - Children 0-6 years
 - Children 'At Risk'
 - Expectant and Nursing Mothers
 - Adolescent Girls
4. Birth and Death Registration

B. Service Delivery

1. Preparation and Distribution of Supplementary Nutrition
 - Children 6 months to 6 yrs.
 - Expectant and Nursing Mothers
 - Children and Mothers ‘At Risk’
2. Growth Monitoring
 - Promote Breast feeding and counsel mothers on IYCF
3. Assisting Health Staff in Immunization and Health Check-up of Children and Mothers
4. Referral Services
5. Detection of Disability among Children
6. Providing Treatment for Minor Ailments and first aid.
7. Management of Neonatal and Childhood Illnesses
8. Health and Nutrition Education to Adolescent Girls, Women and Community
9. Organising Non-formal Preschool Education Activities
10. Depot holder of medicine kit contraceptives of ASHA and under ICDS
11. Counselling Woman on Birth Preparedness
12. Assist CDPOs/Supervisors in implementation of KSY and SABLA

C. Information, Education and Communication

1. Mobilise Community & Elicit Community Participation
2. Maintain Liaison with Panchayat, Primary Schools, Mahila Mandals and Health functionaries etc.

D. Management and Organisation

1. Management of AnganThiwadi Centre
2. Maintenance of Records, Registers and Visitor’s Books
3. Preparation of monthly progress Reports

E. Awards :

Mata Yashoda Award for best performing Anganwadi worker and Anganwadi Helper at state and District Level.

1.3 Background of District Panchmahal

Panchmahal district is one of the 26 districts of Gujarat state in western India. The district is divided into 11 Talukas and 16 blocks. Godhra city is the administrative headquarters of this district.

1.3.1 Socio-Economic and Demographic Profile of the district

In 2011, Panchmahal had population of 2,390,776 of which male and female were 1,226,961 and 1,163,815 respectively. In 2001 census, PanchMahal had a population of 2,025,277 of which males were 1,044,937 and remaining 980,340 were females. There was change of 18.05 percent in the population compared to population as per 2001.

The initial provisional data released by census India 2011, shows that density of Panchmahal district for 2011 is 457 people per sq. km. In 2001, Panchmahal district density was at 389 people per sq. km. Panchmahal district administers 5,231 square kilometers of areas.

Average literacy rate of Panchmahal in 2011 were 70.99 compared to 60.92 of 2001. If things are looked out at gender wise, male and female literacy were 82.51 and 58.89 respectively. For 2001 census, same figures stood at 75.91 and 44.94 in Panchmahal District.

With regards to Sex Ratio in Panchmahal, it stood at 949 per 1000 male compared to 2001 census figure of 938. Child Sex Ratio as per census 2011 was 932 compared to 935 of census 2001. In 2011, Children under 0-6 formed 15.69 percent of Panchmahal District compared to 16.85 percent of 2001.

In ICDS, the district is divided into 16 blocks namely, Jambughodha, Kalol-1, Kalol-2, Khanpur, Kadana, Sehera-1, Sehera-2, Morwa hadaf-1, Morwa hadaf-2, Godhra, Halol, Santrampur-1, Santrampur-3, Lunawada, Ghoghambha-1, Ghoghambha-2 . The area that has been chosen for the

study is Sehera-1, Ghoghambha-1, Kalol-1, Kalol-2 block.

Table 1: Distribution of Anganwadi Center at Block Level

S.No	Name of Block	AWC	S.No	Name of Block	AWC
1.	Jambughodha	57	9.	Sehera 1	157
2.	Halol	251	10.	Sehera 2	128
3.	Kalol 1	108	11.	Kalol 2	106
4.	Godhra	458	12.	Ghoghambha 2	169
5.	Ghoghambha 1	201	13.	Santrampur 3	178
6.	Santrampur 1	201	14.	Kadana	203
7.	Khanpur	144	15.	Morwa Hadaf 2	137
8.	Morwa Hadaf 1	159	16.	Lunawada	314

1.4 Literature review

A study titled Knowledge of Anganwadi Workers About Growth Monitoring in Delhi written by Sanjiv kumar Bhasin, Rakesh Kumar et al indicates that Growth monitoring is an excellent tool for assessing the growth of a child and for detecting the earliest changes in growth and to initiate appropriate interventions. As such, it contributes to the promotion of child health and nutrition and is an educative tool for the mother with regard to child feeding, appropriate response to illness and an understanding of the various factors which play a role in growth and development of the child. Growth monitoring is one of the important function of AWWs, for which they should be sufficiently trained.

1.5 Rationale for the Study

Growth monitoring is an excellent tool for assessing the growth of a child and for detecting the earliest changes in growth and to initiate appropriate interventions. As such, it contributes to the promotion of child health and nutrition and is an educative tool for the mother with regard to child feeding, appropriate response to illness and an understanding of the various factors which play a role in growth and development of the child [1].

Growth monitoring has unique and as yet, incompletely applied potential for assisting health workers and parents to identify children with early problems in order to apply corrective measures[2].

Growth monitoring is one of the important function of AWWs, for which they should be sufficiently trained. The present study was conducted to assess the knowledge of AWWs regarding growth monitoring and to find out the gaps in their knowledge. for better planning and implementation of growth monitoring at district level .

1.6 Research Question:

What is the current level of knowledge among the Anganwadi workers on Growth monitoring of children enrolled at Anganwadi center and counseling of beneficiaries in Panchmahal district?

1.7 Objectives:

The key objective of the study is to assess the current knowledge among Anganwadi Workers on growth monitoring of children enrolled in Anganwadi center and counselling of beneficiaries

1.8 Specific Objectives:

- i.** To deduce an objective standard for knowledge level of Anganwadi workers working under ICDS from ICDS mission document & Review of Literature
- ii.** To find the gap between the knowledge expected of an anganwadi worker to the knowledge she actually has.
- iii.** To recommend the measures to bridge the gap

1.9 Methodology:

1.9.1 Study Period: March 2014- April 2014

1.9.2 Study Design: Cross-sectional descriptive study

1.9.3 Study area: The study has been conducted in Kalol-1, Sehera-1, Ghoghmbha-1 and Ghoghambha-2 blocks of Panchmahal district of Gujarat. The selection of the Blocks were done purposively and 30 anganwadi centers were selected randomly from each block

1.9.4 Study Group: The sample for the present study comprises of 30 Anganwadi workers belonging to four Blocks of Panchmahal Districts. The nature and purpose of the study was explained to Anganwadi worker. The study was carried out with AWW consent and co-operation. The line listing of all AWCs was made for each block and a random number table selected the AWCs randomly.

1.9.5 Tools Applied: A face-to-face interview schedule was used as a tool for data collection with various questions framed on the knowledge among Anganwadi workers regarding the services of ICDS. Major content of the interview schedule was: socio-economic and demographic profiles of AWWs, Knowledge about various ICDS services especially growth monitoring under AWC done by AWW.

1.9.6 Data Collection: Quantitative and Qualitative study designs were followed to collect

necessary information on Anganwadi workers awareness regarding growth monitoring of Children. Data were collected personally by making personal visits to Anganwadi centres. Data was collected both from primary and secondary sources. Primary data was collected from all the Anganwadi workers. The secondary data was collected from official records, journals and literature form social science discipline and Guidelines.

1.9.7 Data Analysis: The data obtained was compiled and tabulated using the SPSS software along with Microsoft Excel wherever required. Univariate and Multivariate analysis is performed to address above objective.

1.9.8 Ethical Considerations: Informed consent was taken before starting the interview. If anyone disagreed to become part of the data collection process they were not forced by any means. Prior information was given before visiting any Anganwadi Center. Confidentiality was ensured to all participants.

1.10 Finding and Analysis:

a) Knowledge of Anganwadi Worker regarding the services provided under ICDS at AWC.

The day to day functioning of the AWC is a critical indicator of the effectiveness of the ICDS Programme. The Services provided under one roof of AWC are Supplementary Nutrition to Children from 6 months to 6 years, Pre School Education to Children of age group 3 to 6 years, Health check-ups of Children , Adolescent girls, Pregnant and Lactating women, Referral Services, and Nutrition and Health Education to Adolescent girls , Lactating and Pregnant women. An attempt has been made in study to assess the knowledge of AWW regarding the services provided at AWC. As shown in **Table 2**, it was observed that 100% of interviewed AWW know the exact services, which they have to provide at AWC.

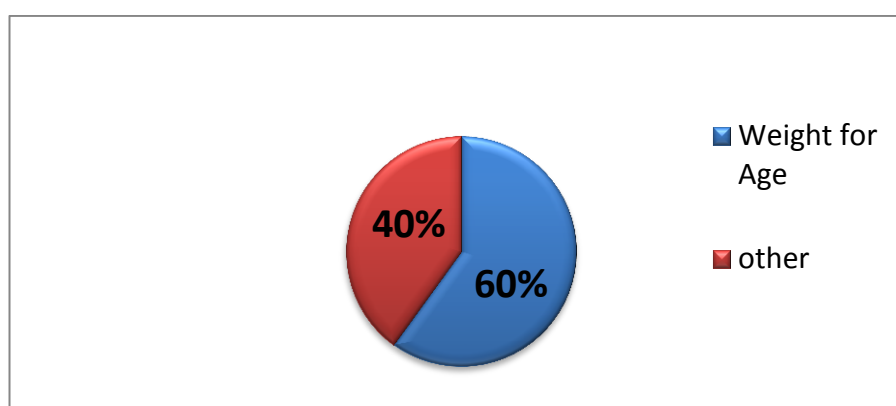
Table 2: knowledge of Anganwadi Workers regarding the services provided under ICDS at Anganwadi Center (n=120)

Services	Yes	
	Number	%
Supplementary Nutrition	120	100 %
Pre School Education	120	100 %
Health Check ups	120	100 %
Referral Services	120	100 %
Nutrition and Health Education	120	100

b) Knowledge of AWWs on the principle ICDS follows

As there are many principle are followd to check the malnourished children in different country eg, weight for height, weight for age and height for age .ICDS is following the principle of weight for age. However, when it was ask to AWWs more than half of the AWWs failed to answer the correct one.

Figure 1: Knowledge of AWWs regarding the prinicple followed by ICDS to track malnouridhment in children



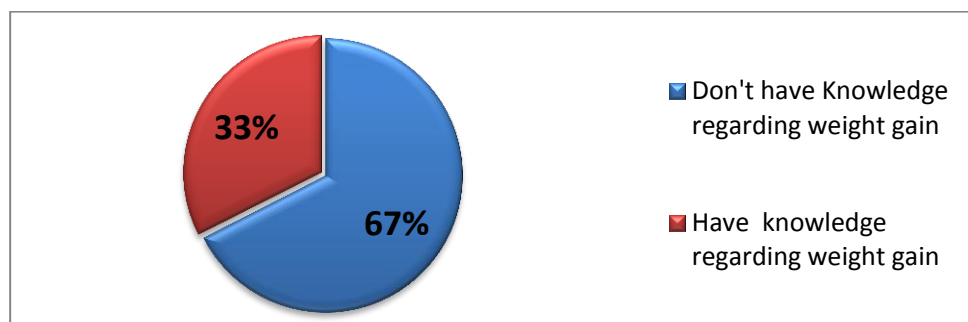
c) Knowledge regarding the weight gain by children per month

In children, growth is most rapid at the younger age. While the child is in the mother's womb, it

grows many times from a tiny egg to a baby weighing between **2.5 kg- 3 kg** at birth. A healthy baby gains about **800 grams** each month during the **first two months** of life, about **600 grams** from **3 months** to **4 months**, around **400 grams** from **5 months** to **6 months**, and thereafter healthy child gains around **200 grams** each month up to **3 years**.

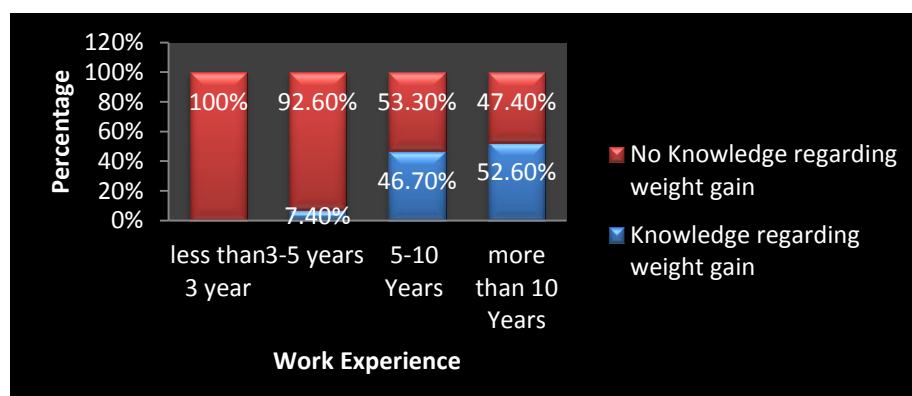
Among the AWWs there is lack of Knowledge regarding the ideal weight gain of children. 67% of AWW dont know the exact weight gain even they take weight of child .33 % show the positive response .They got the knowledge through training and books provided to them or through FHW or MO visits at there AWC.(Figure 2)

Figure 2: Knowledge of the Anganwadi worker regarding the weight gain by children per month (n=120)



It is however, worth noting that work Experience and knowledge regarding the ideal weight gain having some sort of relation. The AWW with least experience less than 3 years having almost no knowledge regarding the ideal weight gain and as the work experience increases there is increase in knowledge. Almost 53% of AWWs who having the experience of more than 10 years know what should be the ideal weight gain.(Figure 3)

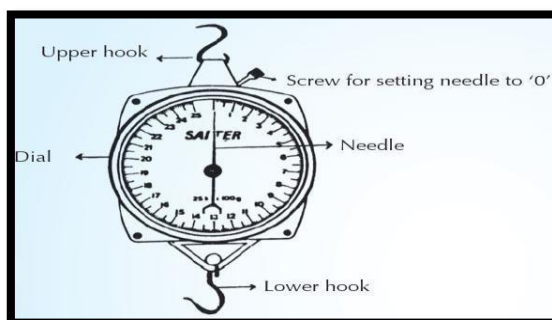
Figure 3: Relationship between work experience of AWW and the knowledge about weight gain of children at specific age



d) Availability of Scales at AWC

We already discussed that children grow most rapidly from birth to 3 years, particularly in the first six months. In this age, they are also more vulnerable to diseases and inadequate nutrition, which affect normal growth pattern. It is, therefore, essential to monitor growth of children in this age more frequently. The AWW should weigh all new borns and children from birth- 1 month weekly, one month- 3 years every month and 3-5 years at every three months. However, children who are severely underweight, or who have not gained weight for 2 months, or who are “at risk” of under nutrition, should be weighed frequently preferably every month. The golden principle of New WHO Growth Standards i.e. weighing and plotting weight of children based on completed weeks/months, it is advisable to conduct four weighing sessions in a month at the AWC so that all children are weighed every month. Those children who do not attend AWC should also be motivated to attend the weighing sessions, without fail.

Figure 4: Salter Scale used at Anganwadi Center

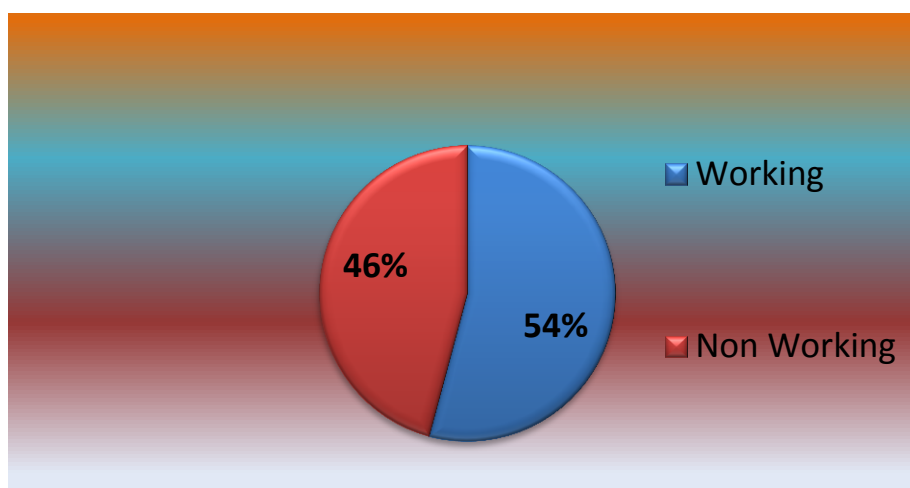


ICDS is currently using “Salter or Dial type scale”. The Salter Weighing Scale is a reliable, light and portable scale, which can weigh children weighing up to 25 kg. The Salter scale is round in shape, with the needle in the centre. Weights are marked in kilograms around the dial. There are two variations of the Salter scale. One type has only 500 gm markings between kilograms, and the other has 100 gm as well as 500 gm markings between kilograms. The Scale has a screw on top to make the zero adjustment so that the needle points to zero before the child is weighed. **(Figure 4)**

All the AWCs being visited had salter scale with marking of 100 grams and all the AWWs had proper knowledge of weighing the children.

Beside availability of Salter scale, working condition of the Salter scale plays the key role. Among the visited AWCs, 54% of the Scale was in proper working condition and ideal weight is measured. Remaining 46 % scale, either damaged, lost spare or having rust on the spring that effect the correct growth, which directly effect on the growth monitoring of the children and fake nutrition status is recorded monthly. (Figure 5)

Figure 5: Working Condition of Salter Scale



e) Knowledge regarding the Electronic Weighing Machine

Recently Government has implemented the electronic weighing machine to reduce the manipulation of data. All the AWWs have received the training for operating the electronic weighing machine one month back.

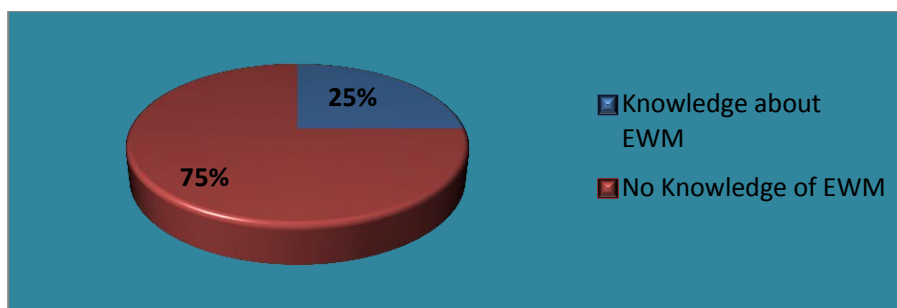
Figure 6: Electronic Weighing machine introduce at Anganwadi Center



All the AWWs received the training of operating the Electronic Weighing Machine recently. Even

after receiving the training 75 percent of AWWs do not know the proper steps to follow while operate the Electronic weighing machine.

Figure 7: knowledge of the Anganwadi worker regarding Electronic weighing machine (n=120)



f) *Knowledge about the WHO Growth Charts and Interpretation of Growth Charts*

Growth monitoring chart register is a part of the Mother & Child Protection (MCP) Card Package, which also includes a Mother & Child Protection Card and a Guide Book. Growth monitoring chart register is for recording the weight of children as per their **age up to 5 years**. The register is based on new WHO Child Growth Standards and contains weight-for-age growth charts.

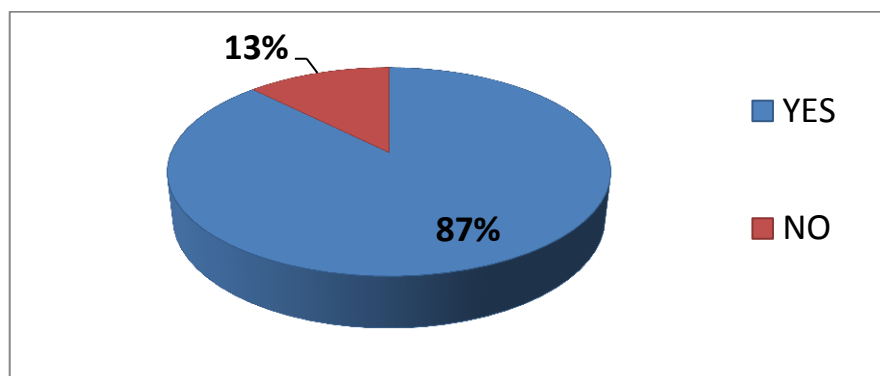
As per the new Standards, there are separate growth charts for girls and boys, as they have different weights and lengths beginning at birth and grow to different sizes related to their age. The first half of the register has growth charts for girls with ‘**pink border**’ and the second half is for boys with the ‘**blue border**’. Each set of charts is followed by pages marked as “Index” for keeping the record of growth charts maintained in the register.

The Card having the child’s name, father’s and mother’s name, family survey register number and weight at the time of birth are to be filled. Each growth chart has two axes. The horizontal line at the bottom of the chart is the X Axis. This is for recording the age of the child for five years and is called ‘month axis. The vertical line at the far left of the chart is the Y-axes. This is for recording the weight of the child from birth onwards and is called ‘weight axis’. The

horizontal lines from bottom to top of the growth chart reflect the weights from zero to 21 kg at 100 Gm intervals.

Anganwadi worker having the knowledge of WHO Growth Chart of filling the chart but they always miss the IYCF part provided in the growth chart and use of lead in place of pens to mark the weight in the chart is less. In addition, it is observed that most of the AWWs, they always forgot to join the lines between two weight dots. (Figure 8)

Figure 8: knowledge of the Anganwadi worker regarding WHO Growth Chart (n=120)



Importance of Interpretation:

When weight points plotted at different intervals are joined with a line, we get a Growth Curve. Depending on the pattern of monthly growth of a child, the direction of the growth curve may be upward, flat, or downward. An upward growth curve indicates that the child is healthy, gaining weight and is growing. However, it is not only an upward curve, which is important, but also a healthy upward curve, because of adequate weight gain each month. Whenever the weight gain is not sufficient as per the age of the child, then the growth curve is either flat or downward.

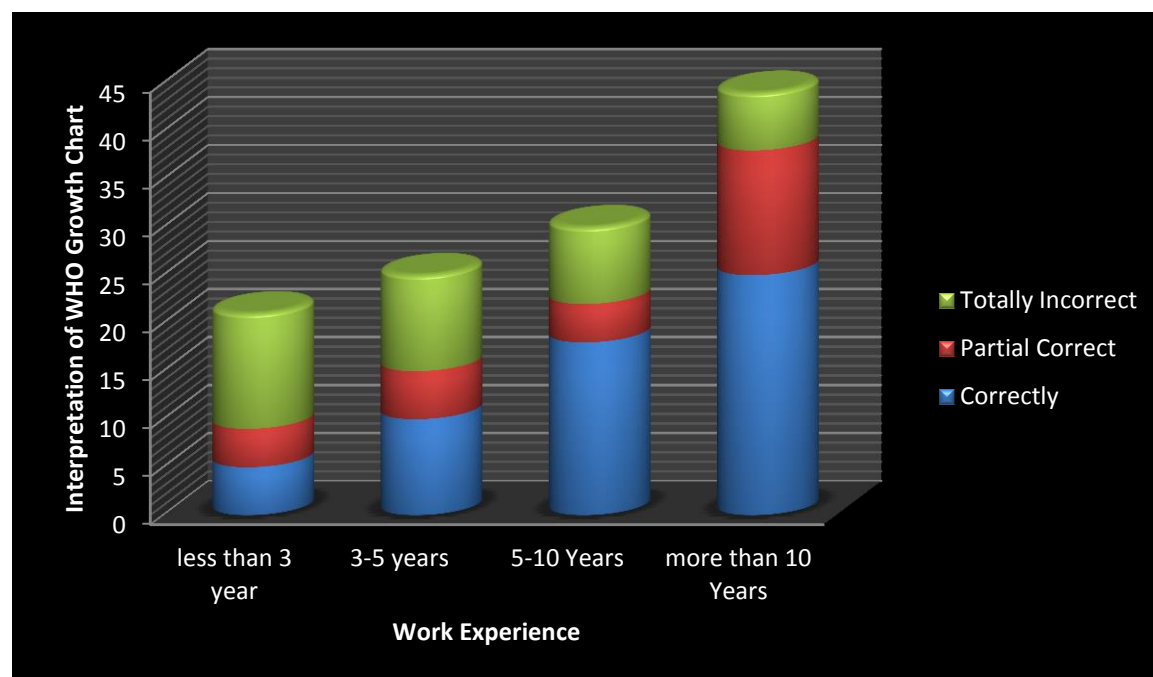
The WHO growth charts plotting helps in interpreting the following points

- ✓ Provides a visual record of the growth pattern of a child.
- ✓ Acts as a tool/aid for health and nutrition education to mothers.
- ✓ Detects growth faltering and weight loss in its early stages.
- ✓ Determines the grade of weight of child.
- ✓ Identifies beneficiaries for supplementary nutrition.

If plotted weight-for-age of a child falls on the green band, then the child's growth is normal; if it falls on the yellow band, child is moderately underweight, and if the plotted weight is on the orange band, the child is severely underweight.

Majority of the AWWs who having the work experience more has responded correctly regarding the steps for interpretation of growth chart and AWWs with less work experience need to orient regarding the interpretation of growth chart. The line that comes under the Green Coloumn is for the normal and healthy children yellow for moderate malnourished and red for severe malnourished children and this interpretation helps in monitoring the child weight and indicator for upcoming nutrition status so that necessary measures can be taken for making child healthy and nourished. **(Figure 9)**

Figure 9: Relationship of work experience and interpretation of WHO growth chart by AWWs



g) Knowledge regarding the other mode of Growth Monitoring

WHO growth chart help the AWW to monitor the proper growth. Along with growth chart, there are other mode to identify the child growth is proper or not. especially by MUAC tape, clinical signs.

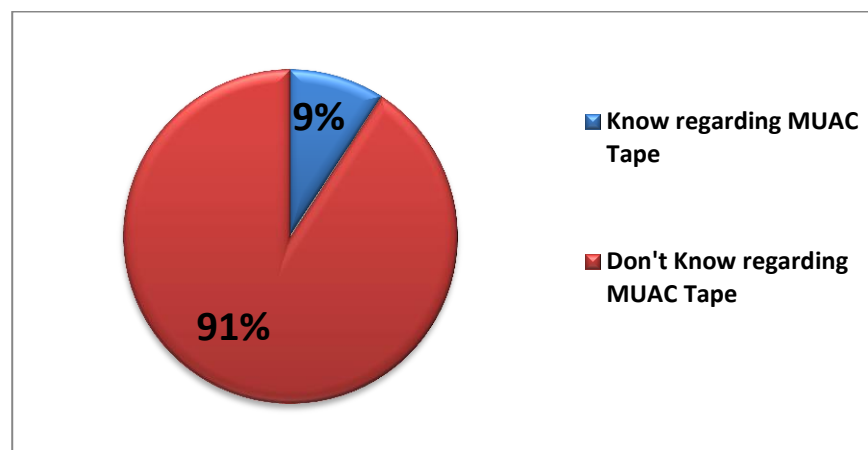
MID-UPPER ARM CIRCUMFERENCE (MUAC) MEASURING TAPES

MUAC tapes are predominately used to measure the upper arm circumference of children, helping identify malnutrition. The major determinants of MUAC are muscle and sub-cutaneous fat, both important determinants of survival in malnutrition and starvation. The tape having the tri colour green, yellow and red with the markings.

The interviewed AWWs 91 % of the anganwadi worker heard about the MUAC Tape, but don't know how to measure the reading. MUAC Tape were provided few years ago at anganwadi center but not use for measuring the nutrition status.

The use of MUAC Tape is done only at the CMTC/NRC center for enrolling the children as one of the criteria for admission. On MAMTA Divas only weight is measured and immunisation is done at AWCs (**Figure 10**)

Figure 10: Knowledge of AWWs regarding the MUAC TAPE(n=120)



h) Counselling of Parents regarding the growth and growth chart of Child

Counselling of the parents or guardian especially mother is very important step for maintaining the nutrition level of children through proper diet and care at home.

Basically, three steps have to follow to counsel the mother regarding growth of children.

Step 1: advice to mothers is to observe the growth curve of the child and determine the growth trend. See if the child has gained adequate weight, not gained weight or lost weight, as compared

to the previous month's weight.

Step 2: ask the mother what has been happening to the child during the last month to make her child's growth pattern happen that way.

Step 3: discuss with the mother specific action(s) she can take to promote her child's growth.

Counselling depend on the different age group :

A new born baby – 2 months old child

- Put the child to breast as soon as possible, preferably within one hour of birth
- Feed the yellowish first milk (colostrum) to give protection to the baby from diseases
- Exclusive breastfeeding for 6 months; do not give any other food or drinks and not even water
- Feed the breast milk whenever the child wants it, during day and night
- Breastfeed till the child is satisfied and the child stops sucking
- Continue breast feeding even if the child is sick
- Lactating mother should drink plenty of fluids (water, soups, tea, milk, lassi, etc.)
- Lactating mother should eat extra food – an extra snack / meal
- Get the child bcg, dpt, polio immunisation
- Get the child weighed every month

3-6 months old child

- Exclusively breastfeed the child, no other liquid to be given to the Child
- Breast feed 8-10 times during day and night
- Feed till the child is satisfied and the mother feels the breasts empty
- Continue breastfeeding during illness
- Give the child remaining doses of dpt and polio immunisation

7-11 months old child

- Give complementary foods followed by breast feeding or in between Breast feeds
- Modify the food cooked at home by: cooking it a little more, mashing It, taking out a portion for the baby, before adding masala/ chillies
- Start with a small quantity of food, increase the quantity so that Child takes half katori/cup of food at one time (size of katori/cup About 150 ml)
- Start semi-solid foods

- Give well cooked mashed foods like potato, banana, porridge made Of any cereal, milk/water, sugar/jaggery, bread/chapati/bhakary Soaked in milk or curry or vegetables, dal; the food should be soft but not watery
- Loose stools are due to infection and not due to introduction of Semi-solid foods
- Give plenty of fluids if child passes loose watery stools

1-2 years old child

- Child at one year should start eating the family food
- Continue to offer a wide variety of foods including family foods Such as rice, chapatti, dark green leafy vegetables, orange and yellow fruits, pulses and milk products
- Child should eat half as much as an adult in the family
- Feed the child about 5 times a day
- Feed from separate bowl and monitor how much the child eats
- Sit with the child and help her finish the serving
- Continue breastfeeding up to 2 years or beyond
- Give vitamin 'A' solution at six months interval up to the age of five Years

2-3 years old child

- Continue to feed family foods 5 times a day
- Help the child feed himself/herself
- Supervise feeding
- Ensure hand washing with soap before feeding

Majority of the AWWs has replied as per the guidelines has recommended. They do 4-5 home visits per day and discuss regarding the growth of children, tell the food, which they provide at AWC, is just supplement to fulfill the requirement of essential nutrition. As the district having the tribal area and migratory population .AWW face the difficulty in regular counselling but they try to call mother specially on BAL DIVAS and VATSALYA DIVAS celebration and keep open discussion and advice them to monitor the child at home and provide quality and quantity food . On BAL DIVAS award is given to child who is healthy and miantaing hygiene, and advice other mother to make there child to win the prize next time.

Conclusion:

All the AWWs who have the less work experience should get on the job or refresher training regarding the ideal weight gain of children at specific age. Similarly the Planning should be done to reorient the AWWs to operate the Electronic Weighing Machine at Block level. This can be done by providing training hierarchically ie, training of supervisors, block co-ordinators, and CDPOs at block level who can further train the AWWs at SEJA Level. Age and work experience do not have any concern with filling of growth monitoring. More than 60 percent of AWWs do not know on which principle ICDS follow ie, Weight for age. With the help of health department schedule training for AWWs at SEJA level to train the AWWs regarding the MUAC Tape, so that proper growth monitoring data can be received and children with the special attention regarding malnutrition can be track down and provide the care. The present Study shows AWWs really need the training on time and time-to-time refresher training to keep the important aspects of growth monitoring in their mind.

Suggestion:

- i. Requirement of refresher training of all AWWs regarding the ideal weight gain of children at specific age.
- ii. Proper re-orientation of Electronic Weighing Machine at SEJA level or Block level of AWW required. This can be done by providing training hierarchically, ie, training of supervisors, block co-ordinators, and CDPOs at block level who can further train the AWWs.
- iii. Training and Counselling of Anganwadi Worker regarding the importance of MUAC Tape and using of tape along with Weighing the child to identify the malnourished child.

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4. www.gujhealth.gov.in/pdf/PresentationofGSNMmadetoHon_bleCM.ppt
5. Manual of Growth Monitoring : NIPCCD

Annexure:

Annexure 1: List of people interacted during my internship.

S.No	Name	Designation
1)	Dr.Ratankawar Gadhavicharan, I.A.S.	District Development Officer
2)	Bhav nab en C Jidhiya	Programme Officer/ Acting R.D.D I.C.D.S(Ahemdabad)
3)	Dr.Amarnath Verma	C.D.H.O
4)	Dr.Riken Patel	D.P.C Health
5)	Dr.B P Itare	R.D.D Health (Vadodara)
6)	Jamine Patel	N.A (District –Health)
7)	Dr.Deepali Sharma	D.P.C Urban Health
8)	Jagruthiben	D.I.O (NIC)
9)	Salma	H.R Setco Company
10)	Mrs.Dhruti	Nutrition Consultant , Setco Company , Former UNICEF Consultant
11)	Miss.Shradha Sharma	State Nutrition Consultant
12)	Mrs.Ankur Vaidhya	State SABLA Consultant
13)	Kamalaben R Rathod	C.D.P.O Godhra
14)	Jyotiben J Thoriya	C.D.P.O, Santrampur-3
15)	Kumudben P Bhabhor	C.D.P.O, Lunawada
16)	Bhartiben L Chauhan	C.D.P.O,Kalol-1
17)	Harshaben A Soni	C.D.P.O, Kalol-2
18)	Varshaben Z Patel	C.D.P.O, Sehera-1
19)	Nayanaben M Bariya	C.D.P.O, Sehera-2
20)	Shantaben R Pargi	C.D.P.O,Santrampur-1
21)	Ushaben M Patel	C.D.P.O,Khanpur
22)	Rajuben Taviyad	C.D.P.O,Kadana
23)	Ramilaben D Gamidh	C.D.P.O,Ghoghambha-2
24)	Shellaben V Koralwala	C.D.P.O,Halol
25)	Jasuben R Patel	CDPO, Morwa Hadaf -1

Annexure2: Questionnaire in ENGLISH

S. No:

QUESTIONNAIRE

CONFIDENTIAL
FOR
RESEARCH ONLY

IDENTIFICATION SECTION

	IDENTIFICATION NUMBER.....	Codes
O1.	Name of the State.....	
O2.	Name of the District.....	
O3.	Name of Taluka.....	
O4.	Name of Village.....	
O5.	Name of Anganwadi Centre.....	
O6.	Date of Establishment of Anganwadi Centre... Year Date Month	
O7.	Number of Household in village/ward	
O8.	Date of Interview...../...../20....	

QUESTIONNAIRE

CONSENT: I am working with ICDS Society, Panchmahal. A study is being conducting on Assessing the Knowledge of Anganwadi Worker regarding the Growth Monitoring and Counselling in Panchmahal District. All responses will be kept confidential. Your interview responses will only be shared with research team members and will ensure that any information we include in our report does not identify you as the respondent. It is very important for the success of this study that you take part in this survey. Remember, you don't have to talk about anything you don't want to and you may end the interview at any time..

Please fill the response in corresponding box and signature / Thumb Impression

Yes..... 1 → CONTINUE

No2 → END INTERVIEW

Signature/Thumb Impression

Section A : Individual Information :

Name of AWW: _____

S.No	Question	Coding Categories	
A.1	Age (years)	/ _____ /	
A.2	Class Passed	/ _____ /	
A.3	Marital Status: [1 = Married; 2 = Widowed; 3 = Divorced, Abandoned or Separated; 4 = Unmarried; 5 = Other (specify); 9 = Unclear]	/ _____ /	
A.4	Religion [1 = Hindu; 2 = Muslim; 3 = Christian; 4 = Other (specify); 9 = Unclear]	/ _____ /	
A.4	Caste group (if applicable): [1 = SC; 2 = ST; 3 = OBC; 4 = Caste Hindu; 5 = Other (specify); 9 = Unclear; NA = Not applicable]	/ _____ /	
A.5	How long have you worked as an AWW? (completed years) Investigator: If less than one year, write 0)	/ _____ /	
A.6	How long have you worked in this centre? (completed years) Investigator: If less than one year, write 0)	/ _____ /	
A.7	Do you reside in the village in which the AWC is located? [1 = Yes; 2 = No; 9 = Unclear]	/ _____ /	
A.8	Date of starting operation	year/ _____ /	
A.9	What kind of food is normally provided to children in this AWC? [1 = Cooked food, same every day; 2 = Cooked food, as per weekly menu; 3 = Ready to eat food, 4 = dry take home rations, 5 = Others; 9 = Unclear] Infants (0-3 years) Toddlers (3-6 years)	/ _____ / / _____ /	
A.10	Who is responsible for cooking the food served to children in the age group of 3-6 years? [1 = Anganwadi helper; 2 = Anganwadi worker; 3 = Local women's groups; 4 = Supplied at AWC by a centralized kitchen; 5 = "Ready to eat" food is served or distributed without cooking; 6 = Others (please specify); 9 = Unclear]	/ _____ /	
	How would you describe the overall regularity and timeliness of delivery of these items? Investigator: Read Options [1 = Highly Regular; 2 = Regular; 3 = Irregular; 4 = Highly irregular; 9 = Unclear] Supplementary Food (Grain, panjiri, murmura, etc.) Medicines	/ _____ / / _____ /	
A.11	How many beneficiaries are enrolled at this AWC? 0-3 years 3-6 years Adolescent Girls Pregnant Women Lactating Mothers	/ _____ / / _____ / / _____ / / _____ / / _____ /	
A.12	How many attend on an average day (in the 3-6 age group)?	/ _____ /	
A.13	How many children, aged 3-6, attended yesterday (or on the last working day if the AWC was closed yesterday)?	/ _____ /	
A.14	How many days of training have you received, approximately?		

	At the time of starting work as an AWW After that	/ _____ / / _____ /	
A.15	How many years have lapsed since the last training you attended?	/ _____ /	
A.16	Do you feel that the training you have received is adequate or inadequate? [1 = Adequate; 2 = Inadequate; 9 = Unclear]	/ _____ /	

Section B : Growth Monitoring Knowledge of AWW :

<u>S.No</u>	<u>Question</u>	<u>Coding Categories</u>	
B.1	Do you know the importance of growth monitoring of children? [1= Yes; 2= No]	/ _____ /	
B.	In ICDS which standard is followed for growth monitoring ? [1= Weight for Height ; 2= Height for age; 3= Age for weight]	Weight for height Age for weight Height for Age	
B.2	What should be normal weight gain of children from birth to 3 years? {average weight gain per month in grams, note the Answer of AWW} Birth to 2 months 800 {standard} 3 months to 4 months 600 5 months to 6 months 400 7 months to 3 years 200	/ _____ / / _____ / / _____ / / _____ /	
B.3	How frequently growth monitoring should be done? up to age of 3 years (once every month) thereafter..(least once in 3 months)	/ _____ / / _____ /	
B.4	STEPS IN GROWTH MONITORING (Tick the response) Step 1: Determining correct age of the child Step 2: Accurate weighing of the child Step 3: Plotting the weight accurately on a growth chart of appropriate gender Step 4: Interpreting the direction of the growth curve and recognising if the child is growing properly Step 5: Discussing the child's growth and follow-up action needed, with the mother	/ _____ / / _____ / / _____ / / _____ / / _____ /	
B.5	Do you the name of weighing machine available at your centre? [1 = Yes; 2 = No; 3 = available but not working; 4= hire when needed]	/ _____ /	
B.6	Which type of weighing Machine available at your AWC? Bar scale Salter or Dial type scale Taring scale (digital scale) Electronic Weighing Maachine (Newly Provided)	/ _____ / / _____ / / _____ / / _____ /	
B.7	What is the maximum weight of the scale? (Check How they weight) Bar scale (25 Kgs) Salter or Dial type scale (20 Kgs) Taring scale (digital scale)	/ _____ / / _____ / / _____ /	
B.8	Check how AWW use the Electronic Weighing Machine ?	Correct Incorrect	
B.9	Do you how to fill the Growth monitoring Charts? [1 = Yes; 2 = No]	/ _____ /	
B.10	Which colour charts for? (Tick the Correct response of AWW) Boys (Blue) Girls (Pink)	/ _____ / / _____ /	
B.11	What are the following lines stands for? (note the response)		

	Vertical (age) Horizontal (weight)	/_____/	
B.12	What are three colours stands for provided in growth Charts? (Tick the Correct response of AWW) Green (Normal) Yellow (Moderately Underweighted) Orange (severely Underweighted)	/_____/	
B.13	What is the importance of plotting Growth Monitoring Charts? (Tick the Correct response of AWW) • Provides a visual record of the growth pattern of a child. • Acts as a tool/aid for health and nutrition education to mothers. • Detects growth faltering and weight loss in its early stages. • Determines the grade of weight of child. • Identifies beneficiaries for supplementary nutrition.	/_____/	
B.14	How will you interpret the growth curve? (write the response) • If the growth curve of a child is moving upward • If the growth curve of a child is flat • If the growth curve of a child is moving downward	/_____/	
B.15	How will you discuss the Growth Chart with the Mother? (Tick the Correct response of AWW) • Determine the trend of the growth curve. • show the growth chart to the mother. • ask what she does. • listen to the mother to find out what has happened to the child. • discuss with her specific action(s) which she can take to promote growth.	/_____/	
B.16	What are points you discuss with mothers of specific age group children's? (Check with Standards) • A NEW BORN BABY – 2 MONTHS OLD CHILD • A 3-6 MONTHS OLD CHILD • A 7-11 MONTHS OLD CHILD • 1-2 YEARS OLD CHILD • 2-3 YEARS OLD CHILD		
B.17	What are the instructions you give to mother of children fall under the following categories (colour) of Growth charts? (Check with Standards) Category (Green) Category (Yellow)		

	Category (Orange)
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