

**SOCIETY FOR PEOPLE'S EDUCATION AND ECONOMIC CHANGE
(SPEECH)**

End line Evaluation on Early Child Growth and Brain Development



**Animated Videos on Parenting for Early Brain Development
A Pilot Project in India**



Project supported by:

**Grand Challenges Canada®
Grands Défis Canada**

Project Implemented by:



Resource Organisations



February 2020

Table of Contents:

Glossary	3
I. Introduction.....	4
II. The Background	6
III. Scope and Methodology.....	12
IV. Analysis – Knowledge, Attitude and Practice (KAP).....	19
i. General	19
i. Knowledge.....	20
ii. Attitude.....	27
iii. Practice.....	33
iv. Fathers’ Involvement in Parenting	40
v. A Comparison of Parenting Practices by the Different Caregivers.....	46
vi. Knowledge on Ideal Age for Pregnancy	48
V. Analysis – Focus Group Discussions (FGD)	50
FGD with care givers of 18 to 24 months children:.....	51
i. FGD with Fathers:	52
ii. FGD with Mothers:	53
VI. Conclusions and Recommendations	56
VII. Annexures:	59
FGD Tools:.....	76

Glossary

BMRF	-	Bala Mandir Research Foundation
CCFC	-	Christian Children's Fund of Canada
FGD	-	Focus Group Discussion
KAP	-	Knowledge, Attitude, Practice
LTP	-	Learning Through Play
MBC	-	Most Backward Class
NDDS	-	Nippising District Development Screen
NTD	-	Neural Tube Disorders
SC	-	Schedule Caste
SPEECH	-	Society for Peoples Economic Change

End line Evaluation on Early Child Growth and Brain Development

Introduction

This report is on the end line evaluation of Early Child Growth and Brain Development, which is a part of the project “Animated Videos on Parenting for Early Brain Development”, which is again, a pilot Project in India funded by Grand Challenges Canada and implemented jointly by Society for Peoples Economic Change (SPEECH) and Christian Children’s Fund of Canada (CCFC). The project seeks to empower parents and care givers in rural communities by providing them with information on proper ante-natal and pre-natal practices as well as parenting for the holistic development of children in the first 1,000 days of life. The uniqueness of the project lies in the fact that it has used animated videos as the medium of such communication.

Objective of the Project

The project’s objective has been to empower parents and care givers in rural communities, by providing them with information on all aspects of child development such as health and nutrition, cognitive development, language and communication, making convivial relationship with adults, other children as also with the environment, thereby nurturing the children’s intangible, but vital sense of self. The interventions have been based on Learning Through Play (LTP) adapted versions of LTP developed by Bala Mandir Research Foundation (BMRF) and the Network for Information on Parenting with support from UNICEF.

Information Contents

The information provided under the project relates to important milestones of this period, that is, the first 1,000 days of life of the children, along with a focus on aspects relating to nutrition, hygiene, health and psycho-social development of the child.

Baseline Survey

A Baseline survey has already been conducted in five blocks of Virudhunagar district (Kariapatti, Vembakottai, Thiruchuli, Sivakasi and Narikudi) in Tamil Nadu, India.

Map of Virudhunagar District showing five project blocks.

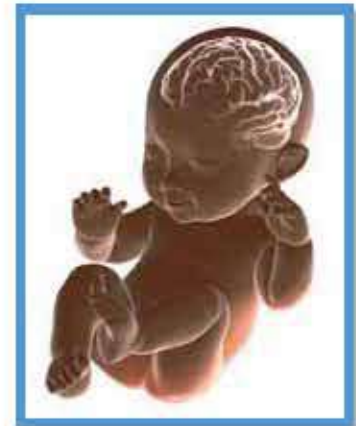


End line Survey and Data Triangulation

This instant report is the result of a triangulation of data collected under the baseline survey, and those collected under the end line evaluation carried out during post-administration phase of the aforesaid animated videos on parenting for early brain development, both in the control group and in the experiment group. While the KAP (Knowledge, Attitude and Practice) study collected data from the baseline sample, the endline survey included FGDs (Focus Group Discussions), in addition to KAP and the preceding exposure of the experiment group to animated videos, songs and other print information relating to responsive parenting for early brain development. As part of early child development. Qualitative data collection has been the focus of this end line study in view of its ability to construct compelling arguments about how things work in particular contexts and its ability to produce well-founded cross-contextual generalities.

The early years of a child's life are crucial for its later health and development since the main determinant of the latter is how fast the brain grows starting before birth and continuing into early childhood. Therefore, nurturing and responsive care for the child's body and mind is the key to supporting its early and healthy brain development. It is important to note that positive or negative experiences can add up to shape a child's development and can have lifelong effects. Right and proper care for children should start before birth and should continue through childhood, which will ensure that the child's brain grows properly and well, reaching its full potential.

Early childhood experiences are important for proper and timely brain development as children are ready from birth to learn and they have to learn many things for many years to come such that they get properly equipped to face the challenges that life may pose to them. The children, however, depend on parents, family members, and other caregivers as their first teachers to develop the right skills to become independent, competent, physically and mentally fit and thereby lead healthy and successful lives.



Right: Pic. Courtesy CDC

Some Facts related to Early Brain Development

The audio-visuals used in this project can better be appreciated when viewed against the background of some interesting points relating to brain development:

The first three years of life are very important for brain development. For instance, a 4-week-old fetus forms new neurons at a rate of 250,000 every minute, and by the time a child is three years of age, its brain will reach 80 percent of adult volume and process close to 1000 trillion connections between neurons.

Due to the gauge of the human birth canal, babies are born with underdeveloped brains that are hypersensitive to stimulus. Hence it is believed that the first three months of life outside the womb equal to a "fourth trimester", a sort of extension of the conditions of life in utero.

A healthy baby normally emerges from the womb with 100 billion neurons, nearly twice as many neurons as adults, but in a brain that's half the size. This massive number of neurons is necessary for the tremendous amount of learning a baby has to do in its first year of life. While brain volume will double by

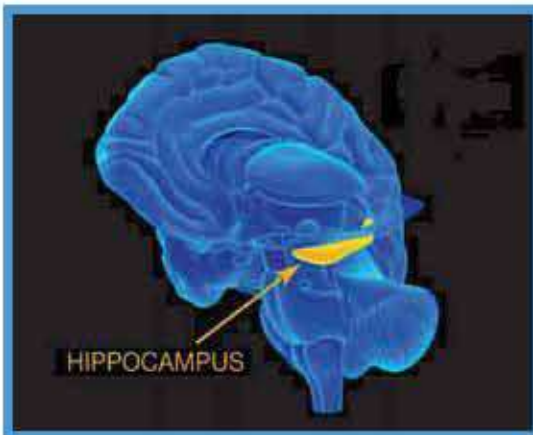
the age of 3, not all of those neurons will stick around; synaptic pruning takes place as a baby ages, in which the brain gets rid of weaker synaptic connections in favor of stronger ones.

In the first three years of life, the brain grows faster than any other body part. The cerebellum, in particular, grows the fastest of all brain structures; in just three months it grows to be 110 percent bigger than it was at birth.

As for energy use, about 60 percent of a baby's metabolic energy (primarily the consumption of glucose) is spent on growing the brain. In contrast, the brain of an adult uses only about 25 percent of the body's metabolic energy.

The early and growing brain sets up a transitional groundwork in a process known as "analysis by synthesis" in which the brain predicts the motor movements that will be required to make the sounds of speech and prepares to do so¹.

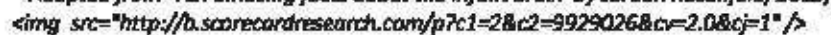
Physical touch strengthens baby's synapses



It has been found that babies who receive regular touch have stronger neuronal connections, leading to greater overall well-being. Babies who are deprived of touch have been noted to suffer a number of negative health effects, ranging from low weight to emotional disorders such as anxiety and depression. It has also been noted that babies nurtured by their mothers (or caregivers) tend to have thicker hippocampus (the elongated ridges on the floor of each lateral ventricle of the brain, thought to be the centre of emotion, memory, and the autonomic

nervous system) than those who have not been as well nurtured. It may be noted here that a stronger hippocampus is associated with improved memory, better focus, ability to retain learning, etc.

(Source: https://www.esa.int/ESA_Multimedia/Images/2014/05/Hippocampus)

¹ Adapted from 'Ten amazing facts about the infant brain' by Jordan Rosenfeld, 2015;


Much of the infant-mother bond in the early days is determined by smell and touch. Studies have shown that babies are imprinted with, and attracted to, the scent of their own amniotic fluid, which helps them to find their mothers' nipples, which explains the normal tendency of newborns to find their mothers' nipple for feeding. This is a strong point worth noting in favour of first hour breastfeeding for the newborns.

The above points reinforce the objective of this project, namely, 'to empower parents and care givers in rural communities, by providing them with information on all aspects of child development such as health and nutrition, cognitive development, language and communication, making convivial relationship with adults, other children as also with the environment, thereby nurturing the children's intangible, but vital sense of self.'

Important aspects of Nurturing by parents and other Care Givers

Nurturing by parents and other caregivers may consist of simple activities like speaking to, playing with, and caring for their child. Children learn best when parents and other caregivers take turns when talking and playing, and build on the child's skills and interests. The care givers should understand the needs of the child and respond sensitively so that the child's brain is well protected from stress. Actions like speaking with children and exposing them to books, stories, and songs, to the environment, etc, will help strengthen children's language and communication skills, which will benefit them greatly in later days' success in learning in schools.

While exposure of children to stress and trauma can have long-term negative consequences for their brain development, actions such as talking, reading, and playing can stimulate brain growth. When children are at risk, tracking children's development and making sure they reach developmental milestones can help ensure that any problems are detected early and to ensure that children receive the needed interventions in time.



Source: PASIEKA / Science Photo Library

Ante-natal, pre-natal, post-natal and child development services

While empowering care givers on early brain development of children, it needs to be done within the context of ante-natal care, pre-natal care, post-natal care and overall child development, the last two contexts roughly corresponding to 3 years of age or the first 1,000 days.

Nutrition, health and hygiene are important aspects that permeate all these stages of a child's growth in utero, peri-natal, neo-natal and post-natal stages as also in its infancy through to attaining 3 years of age.

Malnutrition of pregnant women, infants, post-natal women and children can have serious consequences on the overall well-being of these groups. An important point to note in this connection is that malnutrition can set in, in utero, and intensify during the 0 to 3 years of age period. Therefore, nutrition interventions need to be focused on this period. If this is not done properly, this window of opportunity never returns in the lifetime of the child so affected. In other words, a malnourished child of 0 to 3 years age group is most likely to be marred physically and mentally for life. This is indeed a serious concern. The care givers need to be properly educated and made convinced of this message.

Iodine Deficiency Disorders

Even though there are several micronutrients that contribute to the proper growth and development of the foetus and later the infant and the child, iodine deficiency comes first in view of its direct impact on brain growth and development as also because this aspect of child development is not given the kind of attention that it deserves to be given. It has been recognized generally that iodine deficiency in children may lead to impaired physical growth; impaired mental development; loss of about 10 to 15 IQ points and compromised school performance. It is particularly important to note in this context that thyroid of the foetus does not become activated until about the tenth week and before that period, its development depends upon the thyroid hormone of the mother. Hence maternal iodine deficiency during this period may result in reductions in brain DNA and RNA. Extreme deficiency may result in severe mental retardation, cretinism, which, again, may take several forms. The other relevant points are that even milder forms of iodine deficiency in endemic areas may lead to even non-cretinous children becoming mentally and neurologically challenged. The worst part of this scenario is that such a status may remain unnoticed within the community. In such cases, there may not be any referral made of the affected children to appropriate treatment/rehabilitation centres. What is important to note here is that given the serious effects of iodine deficiency on the proper functioning of the brain, even mild deficiency may have irreversible effects.

Iron Deficiency Disorders

Iron is another important micronutrient which is essential for the binding and transport of oxygen as well as for the regulation of cell growth and differentiation. The daily requirement of this micronutrient is in the higher range during pregnancy. Any deficiency in this leads to anaemias. Iron deficiency is the primary cause of anaemia although Vitamin A deficiency, folate deficiency, malaria and HIV may also result in anaemia. Iron deficiency may also result in neurological impairment, which may not be fully reversible. It is also associated with increased susceptibility to infections. Available data show that in India IDA is more

pronounced among women of reproductive age, children and people belonging to the lower economic strata. In pregnant women, it leads to maternal and neo-natal mortality, low birth weight, increased risk of obstetrical complications, increased morbidity and serious impairment of the physical and mental development of the child. It may also seriously affect the learning capacities of children and adolescents.

Other Genetic and Deficiency Related Foetal Diseases and Disorders and Pre-conception Counselling

There are several other possible congenital disorders that have a high risk for proper foetal development, including brain development. Examples are:

- + Neural Tube Disorders (NTDs)
- + Huntington Chorea
- + Congenital Heart Disease
- + Haemophilia
- + Thalassemia
- + Sickle Cell Anaemia
- + Tay Sachs Disease
- + Cystic Fibrosis
- + Muscular Dystrophy
- + Down's Syndrome
- + Maternal Metabolic Disorders
- + Recurrent Pregnancy Loss

Though all the aforesaid conditions may seriously impair the growth of the foetus in the womb and have a negative impact on the physical and mental capacities of the child, very little attention is paid to such aspects either at the pre-conception care stage or at the ante-natal care stage particularly in the rural public health delivery system. This includes counselling given to women at the anganwadi centres.

Health, hygiene and sanitation

At least four visits to the health centre by every pregnant woman for getting ante-natal health check-up, planning and achieving safe delivery, first hour breastfeeding, exclusive breastfeeding, complementary feeding, immunization, nutrition supplementation for children and mothers with particular stress on including micronutrients, monthly weighing growth monitoring of children and referral of cases on persistent weight losses to the appropriate referral centres are important aspects to be underlined and ensured by the health delivery system. Building awareness on these aspects among the members of the

community, particularly the care givers at the family and community level will greatly enhance the health status of women and children.

Taking proper measures to ensure hygiene and sanitation among the community members, particularly among adolescent girls, mothers and children, will enhance the health status of these target groups. Awareness building on personal hygiene, provision of sanitary toilets, provision of protected water to all households in a community, keeping the surroundings clean and devoid of mosquito-breeding puddles and channels, and inculcating the habit of proper waste disposal methods among the people, will enhance the hygiene and sanitation status in a community to satisfactory levels.

The role of animated videos and other audio-visuals

The animated videos, songs and the booklet covering the aspects of mother and child nutrition and health care and parenting for early brain development of the child fill in a much needed gap in the provision of early childhood stimulation noticed in the provision of such services as between the care givers at homes, in the communities, as well as by the service delivery systems of child health and nutrition. They relate to the key points mentioned in the above sub-sections. The animated videos and audio recorded songs have been developed in the form of modules focusing on specific age cohorts of the children. Seven such audio-visual modules have been used in the project, covering the different phases of early development of the child, as follows, that is, module 1 covering trimesters 1, 2 & 3 of pregnancy; module 2 covering from birth to 2 months of age; module 3 covering 2 to 5 months of age; module 4 covering 5 to 8 months of age; module 5 covering 8 to 13 months of age; module 6 covering 13 to 18 months of age; and module 7 covering 18 to 24 months of age. These modules, as already mentioned, have been developed by BMRF, Chennai and administered in the field by SPEECH, with support provided by CCFC.

This end line evaluation tries to assess the impact of the animated videos on the caregivers in terms of increases in their knowledge, development of more positive attitudes and enhancement of their practices and to learn from their responses on ways to further improve upon early childhood stimulation services. It assumes importance because there is an apparent grey area where nurturing for early brain development falls between the stools, as it were, between the care givers at family, community and service delivering institutional levels.

This project, therefore, comes as a step to fill in the gap observed as above and is aimed at enhancing responsive parenting in the target groups.

The project consists of a baseline survey, administration of the audio-visual package developed specially for the project, consisting of animated videos in seven modules, songs on the different themes and a booklet. The project proposed to test the hypothesis that animated videos on early childhood development and parenting are more effective as compared to regular theory based intervention.

The Baseline Survey

The baseline survey was implemented, as already mentioned, in five blocks of Virudhunagar district in Tamilnadu, namely, Kariapatti, Vembakottai, Thiruchulli, Sivakasi and Narikudi.

To assess the first 1000 days' development / parenting skills a knowledge attitude and practice (KAP) survey and a standardised growth and development monitoring checklist (NDDS) were administered. This tool was based on Nippising District Development Screen (NDDS) checklist, which is a standardised tool and it was filled in by the parents with a view to measuring the emotional, fine motor, gross motor, learning and thinking, self-help, communication, vision and hearing of children belonging to the age group 0 and 24 months. For the purpose of the study, it was presumed that each child or pregnant woman would have at least two primary caregivers and one secondary caregiver. Based on the estimation of three caregivers per child and per pregnant women, the total number of caregivers from all the 53 villages was estimated as 3126.

Sampling for the BLS

The sampling unit for this study was the primary and secondary caregivers of children between 18 and 24 months of age. For the baseline the sample unit of caregivers of children between 18 and 24 months was selected as they had already passed through the stages of pregnancy till 18 months to 24 months which will would constitute the first 1000 days of life. The total sample estimated was 423. However, the final figure came to 303.

The following table gives the break-up for the baseline sample by the income and educational qualifications of the respondents.

Table 1: Baseline respondents, by educational qualifications and income levels

Baseline (N = 303) Educational Qualification and Income												
Income	Below 2500		2500-5000		5000-7500		7500-10000		above 10000		Total	
Edu. Qual.	n	%	N	%	n	%	n	%	n	%	N	%
Illiterate	8	53%	22	26%	12	14%	3	4%	4	10%	49	16%
Primary	4	27%	18	21%	20	23%	14	18%	5	13%	61	20%
Middle	2	13%	19	22%	24	27%	29	38%	6	15%	80	26%
ITI		0%	1	1%	1	1%	1	1%		0%	3	1%
Diploma		0%	2	2%	3	3%		0%	4	10%	9	3%
Higher Secondary		0%	18	21%	21	24%	13	17%	11	28%	63	21%
Under Graduate	1	7%	3	4%	5	6%	12	16%	2	5%	23	8%
Post Graduate		0%	1	1%	2	2%	4	5%	4	10%	11	4%
Professional		0%	1	1%		0%		0%	3	8%	4	1%
Grand Total	15	100%	85	100%	88	100%	76	100%	39	100%	303	100%

Note: i. The incomes indicated in the table above represent total monthly family income.

ii. The educational qualifications represent the educational levels completed.

It may be seen from the above table that the bulk of the respondents fall within the 2,500-5,000 (85) and the 5,000-7,500 (88) categories, followed by the 7,500-10,000 category (76). Education qualifications-wise, by far the largest number is seen as middle school completed (80), followed by higher secondary (63) and primary completed (61).

Sampling for the End Line Control Group and Experiment/Treatment Group

Once the baseline survey was completed, the villages were grouped into two groups for purposes of administering the animated videos and the other audio and print material. Group A care givers were to be exposed to animated videos on parenting and early childhood development (treatment group, 42 villages, n=2418) and Group B (control group, 11 villages, n=729) were to be exposed non-video based parenting and early childhood development. The homogeneity of Group A and Group was to be ensured by means of randomly selecting the parents from same taluk (a revenue sub-division below the district and revenue division levels) and with similar socio economic characteristics. To control spill-over effect, both the groups were to be selected from villages of different panchayats (local self-government units at the village level) but from the same taluk.

Both the control and experimental groups were also administered the same parenting skills and knowledge attitude and practice (KAP) survey and the standardised growth and development monitoring checklist (NDDS) as was done during the baseline survey.

However, in the final reckoning, the end line control group accounted for 136 respondents and the end line experiment accounted for 568 respondents, making a total of 704 respondents.

The following table gives details of the composition of the respondents contacted, in terms of care givers, for the endline evaluation.

Table 2: Endline respondents, by types of care givers

Respondent Type	Control Group	Exp., Group	Grand Total
1. Mother	93 (68%)	310 (55%)	403 (77%)
2. Father	28 (21%)	156 (28%)	184 (26%)
3. Grandmother	15 (11%)	91 (16%)	106 (15%)
4. Grandfather	0%	5 (1%)	5 (1%)
5. Aunt	0%	5 (1%)	5 (1%)
6. Uncle	0%	1(0.2%)	1 (0.2%)
Grand Total	136 (19.31%)	568 (80.68%)	704

It may be seen from the above table that majority of respondents in both the control and experiment group are seen to be mothers. It enhances the value of the findings since mothers are the most important of all caregivers. They provide continued support and sustenance to the children outside of womb for the first 6 months of age quite intensively and continue to provide care and assistance extensively till about age 3 years.

Children:

As for children, there were 136 in the control group and 568 in the experiment group.

The following table indicates the order of birth of the children.

Table 3: Order of birth of children in the endline survey

Order of Birth	Control Group (% in brackets)	Exp Group (% in brackets)	Total (% in brackets)
First order	69 (51)	285 (50)	354 (50)
Second order	49 (36)	235 (41)	284 (40)
Third order	11 (08)	41 (07)	52 (7)
Fourth Order	6 (04)	5 (01)	11 (2)
Fifth Order	1 (01)	2 (0)	3 (0)
Grand Total	136	568	704

It may be seen that most of the children in the sample are of the first and second orders, constituting about 90% of the total.

The following table gives the break-up of endline respondents by educational qualifications and income levels.

Table 4: Endline respondents, by educational qualifications and income levels

Edu Qual	Income		Below 2500		2501-5000		5001-7500		7501-10000		Above 10000		Total	
Illiterate	10	9%	13	11%	35	30%	19	17%	38	33%	115	16%		
Primary	8	6%	12	9%	44	34%	30	23%	35	27%	129	18%		
Middle	13	7%	4	2%	39	20%	60	30%	81	41%	197	28%		
ITI	1	7%		0%	3	21%	3	21%	7	50%	14	2%		
Diploma	1	3%		0%		0%	14	47%	15	50%	30	4%		
Higher Secondary	9	6%		0%	13	9%	56	40%	62	44%	140	20%		
Under Graduate	6	12%		0%	7	14%	13	27%	23	47%	49	7%		
Post Graduate	4	17%		0%	2	9%	6	26%	11	48%	23	3%		
Professional	2	29%		0%		0%	1	14%	4	57%	7	1%		
Total	54	8%	29	4%	143	20%	202	29%	276	39%	704	100%		

The following table gives the details of the respondents sampled for the end line control group.

Table 5: Endline control group respondents, by educational qualifications and income levels

Endline_Control (n= 136) Educational Qualificaiton and Income													
Income	Below 2500		2501-5000		5001-7500		7501-10000		Above 10000		Total		
	n	%	n	%	n	%	N	%	n	%	n	%	
Educational Quali													
Illiterate	0	0%	2	67%	2	18%	2	6%	7	8%	13	10%	
Primary	0	0%	1	33%	1	9%	8	23%	15	17%	25	18%	
Middle	0	0%		0%	4	36%	11	31%	31	36%	46	34%	
	0	0%		0%		0%		0%	1	1%	1	1%	

ITI												
Diploma	0	0%		0%		0%		0%	3	3%	3	2%
Higher Secondary	0	0%		0%	4	36%	10	29%	25	29%	39	29%
Under Graduate	0	0%		0%		0%	1	3%	3	3%	4	3%
Post Graduate	0	0%		0%		0%	2	6%	1	1%	3	2%
Professional	0	0%		0%		0%	1	3%	1	1%	2	1%
Grand Total	0	0%	3	100%	11	100%	35	100%	87	100%	136	100%

It may be seen from the above table that a large number (87) of the control group or 64% fall under the > Rs. 10,000 income group. Educational qualification-wise, middle school level (46) and higher secondary level (39) account for 62.5% of the sample.

The following table gives the details of the respondents sampled for the end line experiment group.

Table 6: Endline experiment group respondents, by educational qualifications and income levels

Endline_Experiment (n= 568) Educational Qualification and Income												
Income	Below 2500		2501-5000		5001-7500		7501-10000		Above 10000		Total	
Educational Quali	n	%	n	%	n	%	N	%	n	%	n	%
Illiterate	10	19%	11	42%	33	25%	17	10%	31	16%	102	18%
Primary	8	15%	11	42%	43	33%	22	13%	20	11%	104	18%
Middle	13	24%	4	15%	35	27%	49	29%	50	26%	151	27%
ITI	1	2%		0%	3	2%	3	2%	6	3%	13	2%
Diploma	1	2%		0%		0%	14	8%	12	6%	27	5%
Higher Secondary	9	17%		0%	9	7%	46	28%	37	20%	101	18%
Under Graduate	6	11%		0%	7	5%	12	7%	20	11%	45	8%
Post Graduate	4	7%		0%	2	2%	4	2%	10	5%	19	3%
Professional	2	4%		0%		0%		0%	3	2%	5	1%
Grand Total	54	100%	26	100%	132	100%	167	100%	189	100%	568	100%

Occupational distribution of endline respondents

The following table provides the occupational distribution of endline respondents in terms of the control group and the experiment group.

Table 7: Occupational distribution of endline respondents by control group and experiment group

Occupation	Control Group				Exp Group			
	Mother	Father	Others	Total	Mother	Father	Others	Total
Advocate	0%	0%	0%	0%	1 (0.3%)	1 (0.6%)	0%	2 (0.4%)
Agriculture	8 (8.6%)	4 (14.3%)	6 (40%)	18 (13.2%)	15 (4.8%)	7 (4.5%)	10 (9.8%)	32 (5.6%)
Daily Wage Labour	5 (5.4%)	5 (17.9%)	2 (13.3%)	12 (8.8%)	18 (5.8%)	16 (10.3%)	27 (26.5%)	60 (10.6%)
Government Job	1 (1.1%)	0%	1 (6.7%)	2 (1.5%)	4 (1.3%)	4 (2.6%)	1 (1%)	9 (1.6%)
House Wife	70 (75.3%)	0%	4 (26.7%)	74 (54.4%)	156 (50.3%)	10 (6.4%)	21 (20.6%)	187 (32.9%)
Physiotherapist	0%	0%	0%	0%	0%	1 (0.6%)	0%	1 (0.2%)
Private Sector	4 (4.3%)	6 (21.4%)	1 (6.7%)	11 (8.1%)	32 (10.3%)	52 (33.3%)	3 (2.9%)	87 (15.3%)
Self-employed	1 (1.1%)	13 (46.4%)	1 (6.7%)	15 (11.0%)	4 (1.3%)	62 (39.7%)	3 (2.9%)	69 (12.1%)
Unemployed	4 (4.3%)	0%	0%	4 (2.9%)	80 (25.8%)	3 (1.9%)	37 (36.3%)	120 (21.1%)
Grand Total	93 (68%)	28 (21%)	15 (11%)	136	310 (55%)	155 (22%)	91 (13%)	568

It may be noted in the above table that housewives constitute a large category, that is, 75.3% in the control group and 50.3% in the experiment group. Similarly, self-employed fathers constitute 46.4% in the control group and 39.7% in the experiment group.

Age distribution

The age distribution of the respondents indicates that more than half of them in both the control and the experiment groups fall in the groups of 25 to 29 and 30 to 34 put together, that is, 55.88% in the control group and 59.08% in the experiment group. The following table may be seen for details.

Table 8: Age distribution of respondents in the endline control and experiment groups

Age Category	Control Group				Exp., Group			
	Mother	Father	Others	Total	Mother	Father	Others	Total
Below 25	27 (29.03%)	0%	0%	27 (19.85%)	65 (20.97%)	0%	1 (.98%)	66 (11.64%)

25-29	27 (29.03%)	4 (14.29%)	0%	31 (22.79%)	171 (55.16%)	41 (26.45%)	2 (1.96%)	214 (37.74%)
30-34	31 (33.33%)	14 (50%)	0%	45 (33.09%)	56 (18.06%)	64 (41.29%)	1 (.98%)	121 (21.34%)
35-39	8 (8.60%)	5(17.86%)	0%	13(9.56%)	17(5.48%)	41(26.45%)	2 (1.96%)	60(10.58%)
Above 40	0%	5 (17.86%)	15 (100%)	20 (14.71%)	1 (0.32%)	9 (5.81%)	96 (94.12%)	106 (18.69%)
Grand Total	93 (68.38%)	28 (20.59%)	15 (11.01%)	136	310 (54.58%)	155 (27.28%)	102 (17.96%)	568

Distribution of the samples by caste and religious groups

Since knowledge, attitudes and practices relating to parenting plays an important role in early brain development of children, it is relevant to see the distribution of respondents by caste and religious groups and to see the proportion of respondents by such groups who have received the benefit of exposure to animated videos on parenting for early child growth and brain development. The following table indicates that most of the beneficiaries were the Most Backward Classes (MBCs) and Scheduled Castes (SCs), that is, 55.2% (MBCs 22.8%+SCs 32.4%) in the control group and MBCs and SCs at 88.6% (MBCs 55.1% + SCs 33.5%) in the experiment group.

Table 9: Proportion of respondents by caste and religious groups in the endline control and experiment groups

Caste	Control Group			Exp Group		
	Hindu	Christian	Total	Hindu	Christian	Total
BC	60 (44.4%)	0%	60 (44.1%)	62 (11.3%)	1 (5.3%)	63 (11.1%)
MBC	31 (23%)	0%	31 (22.8%)	310 (56.5%)	3 (15.8%)	313 (55.1%)
SC	43(31.9%)	1 (100%)	44 (32.4%)	176 (32.1%)	15 (78.9%)	190 (33.5%)
OC	1 (0.7%)	0%	1 (0.7%)	1 (0.2%)	0%	1 (0.2%)
Grand Total	135 (99.26%)	1 (0.74%)	136	549 (96.65%)	19 (3.35%)	568

The Tools

Besides the administration of parenting skills and knowledge attitude and practice (KAP) survey and the standardised growth and development monitoring checklist (NDDS), Focus Group Discussions (FGDs) were also conducted in the endline evaluation as a qualitative tool to complement the KAP and NDDS exercises.

Copies of the baseline and endline evaluation tools as developed by SPEECH and CCFC may be seen in the Annexures.

This section analyses the KAP data collected under the baseline and endline studies. Findings of the FGDs are analysed separately in the subsequent section.

Gender distribution and weight status of children in the sample

The following table gives details of the gender distribution and weight status of children in the baseline, endline control and endline experiment samples.

i. General

The total baseline sample of 303 was made up of 144 females and 159 males, showing a 47.5%:52.5% gender ratio as between females and males. The higher proportion of males is only slight. An analysis of weights shows that 64% of the female children and 44% of the male children were of normal weight. Similarly, severely under-weight female children constituted 4%, while the corresponding figure for male children was 8%. In endline control group, 37% of female children and 44% of male children were found to be of normal weight, while in the endline experiment group, 54% of female children and 49% of male children were found to be of normal weight. High proportions of severely under-weight children have been reported in respect of female children in endline control group with 21% as against 9% for male children. The overall weight status for the baseline sample is 53% normal and 6% under-weight. Similarly, the overall weight status of the endline sample is 49% normal and 5% severely under-weight. As for the grouping under-weight, it may be noted that for baseline, it has been assessed as 34%, while it has been assessed as 9% for the total endline sample. Considering the fact that there is also a category of over-weight, the overall picture on weight status in the sample underlines the need to focus on under-weights and severe under-weights.

Influence of income levels on weight status of children

Though income levels (of family) do play a part in influencing the weight status of children, it is always not so because there are possibilities of monitoring weight gain or loss of children by all irrespective of income levels and to take remedial action by giving nutrition rich food supplements to the affected children. Even in the case of poorer groups, it is always possible to build awareness in them in favour of going in for micronutrient rich and bio-available food materials and thus ensure that their children attain normal weights. It may be noted that the animated videos in this project does include such awareness on such child feeding practices.

It may be noted that high levels of severe under-weight has been seen even among >Rs. 10,000 income levels in the baseline (10%) and endline control (14%) groups.

ii. Knowledge

Knowledge on Parenting by Income Levels

The following table gives the details of knowledge aspects of parenting by income levels.

Table 10: Knowledge on parenting by income levels among the baseline and endline respondents

<i>Baseline (N = 303) - Knowledge on Parenting and Income</i>												
<i>Income</i>	Below 2500		2500-5000		5000-7500		7500-10000		above 10000		Baseline_Total	
<i>Knowledge on Parenting</i>	N	%	n	%	n	%	n	%	n	%	N	%
<i>I think my behaviour influences the behaviour of my child</i>	2	1%	10	3%	17	6%	12	4%	3	1%	44	15%
<i>The ideal age for pregnancy is between 20 and 30</i>	11	4%	77	25%	82	27%	70	23%	37	12%	277	91%
<i>Male parent determines the sex of the baby</i>	6	2%	64	21%	69	23%	58	19%	29	10%	226	75%
<i>The minimum weight of the child should be 2.5 kg at birth</i>	12	4%	80	26%	86	28%	71	23%	35	12%	284	94%
<i>Brain development starts from conception</i>	8	3%	62	20%	67	22%	63	21%	31	10%	231	76%

Baby starts to respond to communication in Womb	11	4%	70	23%	75	25%	67	22%	33	11%	256	84%
Child should be born on a specific date and time that is marked by astrologer (Disagree or strongly disagree)	12	4%	79	26%	81	27%	70	23%	35	12%	277	91%
Food restrictions during pregnancy is advisable	9	3%	37	12%	20	7%	26	9%	20	7%	112	37%
Endline (N = 704) - Knowledge on Parenting and Income												
Income	Below 2500		2500-5000		5000-7500		7500-10000		above 10000		Endline_Total	
Knowledge on Parenting	n	%	n	%	n	%	n	%	n	%	N	%
I think my behaviour influences the behaviour of my child	35	5%	8	1%	27	4%	108	15%	218	31%	396	56%
The ideal age for pregnancy is between 20 and 30	44	6%	24	3%	123	17%	195	28%	267	38%	653	93%
Male parent determines the sex of the baby	40	6%	18	3%	55	8%	171	24%	238	34%	552	78%
The minimum weight of the child should be 2.5 kg at birth	44	6%	27	4%	132	19%	202	29%	273	39%	678	96%
Brain development starts from conception	40	6%	23	3%	109	15%	188	27%	256	36%	616	88%
Baby starts to respond to communication in Womb	39	6%	24	3%	110	16%	190	27%	256	36%	619	88%
Child should be born on a specific date and time that is marked by astrologer (Dis-agree / Strongly Dis agree)	40	6%	29	4%	141	20%	199	28%	263	37%	672	95%
Food restrictions during pregnancy is advisable	44	6%	17	2%	93	13%	119	17%	202	29%	475	67%

It may be seen from the above table that the knowledge relating to brain development starting from conception is lower (10%) in > Rs.10,000 level, as compared to lower levels of Rs. 7,500-10,000 (21%) and in Rs. 2,500-5,000 level (20%). However, it is lowest in < Rs. 2,500 level at a mere 3%. There is improvement seen in endline groups with 36% for the > Rs. 10,000 group, 27% for the Rs. 7,500 to 10,000 group, but only 3% for the 2,500-5,000 group and an improvement to 6% at the < Rs. 2,500 group.

As for the perception 'male parent determines the sex of the baby', the highest proportion was found among those earning between Rs. 5,000 and 7,500(23%), followed by 2,500-5,000 group (21%), 7,500-10,000 group (19%) and those earning above Rs. 10,000 (10%), with a 2% for the group earning less than 2,500. The total proportion in the baseline group was 75%, which increased to 78% in the endline.

All other knowledge items have shown increases in proportion in the endline as compared to baseline proportions.

It may be concluded that overall, there has been improvement in knowledge aspects due to exposure to animated videos.

The following discussion will be in terms of comparing the results as between the control and experiment groups as part of the endline results.

Comparison between endline control and experiment groups:

Table 11: Knowledge on parenting by income levels as compared between the endline control and experiment respondents

Endline_Control (N = 136) - Knowledge on Parenting and Income												
Income	Below 2500		2500-5000		5000-7500		7500-10000		above 10000		Control Group_Total	
	n	%	n	%	n	%	N	%	n	%	N	%
I think my behaviour influences the behaviour of my child	0	0%	0	0%	2	1%	13	10%	65	48%	80	59%
The ideal age for pregnancy is between 20 and 30	0	0%	3	2%	11	8%	34	25%	83	61%	131	96%
Male parent determines the sex of the baby	0	0%	3	2%	8	6%	28	21%	60	44%	99	73%

The minimum weight of the child should be 2.5 kg at birth	0	0%	3	2%	11	8%	35	26%	86	63%	135	99%
Brain development starts from conception	0	0%	3	2%	10	7%	33	24%	72	53%	118	87%
Baby starts to respond to communication in Womb	0	0%	3	2%	10	7%	33	24%	72	53%	118	87%
Child should be born on a specific date and time that is marked by astrologer (Disagree / Strongly Dis agree)	0	0%	3	2%	11	8%	35	26%	87	64%	136	100%
Food restrictions during pregnancy is advisable	0	0%	3	2%	5	4%	14	10%	60	44%	82	60%

Endline_Experiment (N = 568) - Knowledge on Parenting by Income

Income	Below 2500		2500-5000		5000-7500		7500-10000		above 10000		Experiment Group_ Total	
Knowledge on Parenting	n	%	n	%	n	%	N	%	n	%	N	%
I think my behaviour influences the behaviour of my child	35	6%	8	1%	25	4%	95	17%	153	27%	316	56%
The ideal age for pregnancy is between 20 and 30	44	8%	21	4%	11	2%	16	1%	184	32%	522	92%
Male parent determines the sex of the baby	40	7%	15	3%	47	8%	14	3%	178	31%	423	74%
The minimum weight of the child should be 2.5 kg at birth	44	8%	24	4%	12	1%	16	7%	187	33%	543	96%
Brain development starts from	40	7%	20	4%	99	17%	15	5%	184	32%	498	88%

conception												
Baby starts to respond to communication in Womb	39	7%	21	4%	100	18%	157	28%	184	32%	501	88%
Child should be born on a specific date and time that is marked by astrologer (DisAgree / Strongly Dis agree)	40	7%	26	5%	130	23%	164	29%	176	31%	536	94%
Food restrictions during pregnancy is advisable	44	8%	14	2%	88	15%	105	18%	142	25%	393	69%

Improvements are noticeable from the above table in the experiment group, as compared to the control group, in respect of knowledge items, namely, brain development starts from conception (from 24% to 27% in the Rs. 7,500-10,000 group); and baby starts to respond to communication in womb (from 24% to 28%) in the same group.

It is worth noting that in respect of the less than Rs. 2,500 group, the knowledge levels in respect of all the items have been shown as 0% in the control group, which again, have shown considerable improvements in the experiment group, varying from 6% to 8% in respect of all the items.

Similarly, with regard to knowledge on minimum birth weights of the child, remarkable increase in awareness is seen as between the control and experiment group, namely from 8% in the Rs. 5,000-7,500 group to 21% in the experiment group.

These indicate the greater effectiveness of the animated videos and other audio-visuals used in the project among the poorer groups of respondents, the poorest groups showing considerable improvements.

The next set of tables examines the scenario with respect to possible caste-wise traditional or cultural determinants of knowledge bases and what the project has influenced overall as between baseline and endline bases.

Caste-wise perceptions of knowledge on parenting

In rural and traditional societies, it is possible that there are strong beliefs and taboos concerning parenting and allied aspects of early child growth and brain development. This section will examine as to what extent the animated videos and other audio-visuals used in the project has been effective in enhancing the knowledge and attitudes of the respondent groups as between the baseline and endline phases. The following tables may be seen.

Table 12: Caste-wise comparison on perceptions on parenting and early child growth and brain development as between baseline and overall endline phases

Baseline (N = 303) - Knowledge on Parenting and Caste												
Caste groups	SC		ST		MBC		BC		OC		Total	
Knowledge on Parenting	N	%	N	%	n	%	n	%	n	%	N	%
I think my behaviour influences the behaviour of my child	17	6%	0	0%	11	4%	16	5%	0	0%	44	15%
The ideal age for pregnancy is between 20 and 30	113	37%	0	0%	99	33%	63	21%	2	1%	277	91%
Male parent determines the sex of the baby	104	34%	0	0%	66	22%	54	18%	2	1%	226	75%
The minimum weight of the child should be 2.5 kg at birth	118	39%	0	0%	98	32%	66	22%	2	1%	284	94%
Brain development starts from conception	94	31%	0	0%	83	27%	53	17%	3	1%	233	77%
Baby starts to respond to communication in Womb	105	35%	0	0%	90	30%	58	19%	3	1%	256	84%
Child should be born on a specific date and time that is marked by astrologer (Dis Agree / Strongly Dis agree)	110	36%	0	0%	102	34%	63	21%	2	1%	277	91%
Food restrictions during pregnancy is advisable	37	12%	0	0%	45	15%	30	10%	0	0%	112	37%

Endline (N = 704) - Knowledge on Parenting and Caste												
Caste groups	SC		ST		MBC		BC		OC		Endline Total	
Knowledge on Parenting	N	%	N	%	n	%	n	%	n	%	N	%
I think my behaviour influences the behaviour of my child	37	5%	0	0%	45	6%	30	4%	0	0%	112	16%
The ideal age for pregnancy is between 20 and 30	222	32%	0	0%	319	45%	110	16%	2	0%	653	93%
Male parent determines the sex of the baby	205	29%	0	0%	238	34%	78	11%	1	0%	522	74%
The minimum weight of the child should be 2.5 kg at birth	228	32%	0	0%	329	47%	119	17%	2	0%	678	96%
Brain development starts from conception	220	31%	0	0%	293	42%	101	14%	2	0%	616	88%
Baby starts to respond to communication in Womb	219	31%	0	0%	295	42%	104	15%	1	0%	619	88%
Child should be born on a specific date and time that is marked by astrologer (Dis-agree / Strongly Dis agree)	230	33%	0	0%	323	46%	117	17%	2	0%	672	95%
Food restrictions during pregnancy is advisable	180	26%	0	0%	221	31%	74	11%	0	0%	475	67%

Significant improvements in perceptions on parenting are noticeable in respect of the most backward classes (MBCs) for all the knowledge variables listed in the table above. However, with respect to the scheduled castes, no such improvements are noticeable. Backward classes and other communities have shown declines.

This, perhaps, is an area needing further probes from a cultural-anthropological angle for finding out the reasons for such variations in perceptions noticed between the different caste-groups in the two phases of the study.

Caste-wise comparison on perceptions on parenting and early child growth and brain development as between endline control and experiment groups

Caste-wise comparisons on perceptions on the above issue between the control group and the experiment group, marked improvements are seen among the 'most backward classes' (MBCs) in the experiment group as compared to the control group in all the knowledge points, excepting in the case of 'minimum weight of the child at birth should be 2.5 kg'. At the same time, it is surprising to note that among the 'backward classes' (BCs), steep declines are noticed. In the case of 'scheduled castes' (SCs), it is a case of increases in some (4 cases), decreases in some (2 cases) and no change in some (2 cases).

While marked improvements in experiment group may be attributed to the exposure to the animated videos and other AVs, the steep declines noticed among the BC's and the mixed results noticed among the SCs is rather surprising. Deeper probes into the causes of such steep declines appears warranted.

iii. Attitude

This section examines the caste-wise attitudes on parenting.

Caste-wise attitudes on parenting

The following table gives the results of attitudes as found by the baseline and overall endline studies.

Table 13: Caste-wise attitudes on parenting as compared between baseline and endline

Baseline (N = 303) - Attitude towards on Parenting and Caste												
Caste groups	SC		ST		MBC		BC		OC		BaselineTotal	
Attitude towards on Parenting	n	%	n	%	N	%	n	%	n	%	N	%
I don't find parenting hard	22	7%	0	0%	21	7%	16	5%	0	0%	59	19%
I find it is important for my child that both parents are involved in the upbringing	114	38%	0	0%	106	35%	62	20%	2	1%	284	94%
It is not good to have many children	88	29%	0	0%	92	30%	50	17%	2	1%	232	77%
It is not okay to miss some stages of my child's immunization	99	33%	0	0%	93	31%	49	16%	3	1%	244	81%
I feel my spouse supports me in the upbringing of our child	113	37%	0	0%	103	34%	62	20%	2	1%	280	92%
I don't see my child as the cause of many of my problems	112	37%	0	0%	104	34%	63	21%	3	1%	282	93%

The pregnant women should register in the PHC by 3rd month of pregnancy	117	39%	0	0%	109	36%	68	22%	3	1%	297	98%
Breast feeding immediately after delivery is essential	118	39%	0	0%	109	36%	67	22%	2	1%	296	98%
Endline (N = 704) - Attitude towards on Parenting and Caste												
Caste groups	SC		ST		MBC		BC		OC		EndlineTotal	
Attitude towards on Parenting	n	%	n	%	N	%	n	%	n	%	N	%
I don't find parenting hard	217	31%	0	0%	330	47%	111	16%	1	0%	659	94%
I find it is important for my child that both parents are involved in the upbringing	232	33%	0	0%	328	47%	109	15%	2	0%	671	95%
It is not good to have many children	211	30%	0	0%	301	43%	91	13%	2	0%	605	86%
It is not okay to miss some stages of my child's immunization	222	32%	0	0%	337	48%	119	17%	2	0%	680	97%
I feel my spouse supports me in the upbringing of our child	225	32%	0	0%	336	48%	104	15%	1	0%	666	95%
I don't see my child as the cause of many of my problems	218	31%	0	0%	326	46%	118	17%	1	0%	663	94%
The pregnant women should register in the PHC by 3rd month of pregnancy	231	33%	0	0%	336	48%	117	17%	2	0%	686	97%
Breast feeding immediately after delivery is essential	229	33%	0	0%	340	48%	122	17%	2	0%	693	98%

It may be gleaned from the table on attitudes of caste-groups to the different aspects relating to parenting that increased levels of favourable attitudes are noticed among the most backward classes (MBCs) in the endline group as compared to the baseline group, while among the backward classes (BCs), it is the reverse trend, that is, down trends noticed in respect of all but one item. Scheduled castes (SCs) also show a similar trend as BCs.

While the MBCs seem to have been influenced by the project interventions, the BCs and SCs seem not to have been so influenced. The reasons for this may be sought through a social-cultural anthropological study.

The following table will examine the results of attitudes of caste-groups by control and experiment groups.

Table 14: Caste-wise attitudes towards parenting as compared between endline control and experiment groups

Endline- Control Group (N = 136) - Attitude towards on Parenting and Caste												
Caste groups	SC		ST		MBC		BC		OC		Control GroupTotal	
Attitude towards on Parenting	N	%	n	%	N	%	n	%	N	%	N	%
I don't find parenting hard	43	32 %	0	0 %	27	20 %	0	0%	55	40 %	125	92%
I find it is important for my child that both parents are involved in the upbringing	44	32 %	0	0 %	31	23 %	1	1%	60	44 %	136	100%
It is not good to have many children	38	28 %	0	0 %	29	21 %	1	1%	38	28 %	106	78%
It is not okay to miss some stages of my child's immunization	44	32 %	0	0 %	31	23 %	1	1%	59	43 %	135	99%
I feel my spouse supports me in the upbringing of our child	44	32 %	0	0 %	31	23 %	0	0%	58	43 %	133	98%
I don't see my child as the cause of many of my problems	42	31 %	0	0 %	31	23 %	0	0%	59	43 %	132	97%
The pregnant women should register in the PHC by 3rd month of pregnancy	43	32 %	0	0 %	30	22 %	1	1%	60	44 %	134	99%
Breast feeding immediately after delivery is essential	44	32 %	0	0 %	31	23 %	1	1%	60	44 %	136	100%
Endline- Experiment Group (N = 136) - Attitude towards Parenting by Caste groups												
Caste groups	SC		ST		MBC		BC		OC		Experiment GroupTotal	
Attitude towards on Parenting	n	%	n	%	N	%	n	%	N	%	N	%
I don't find parenting hard	174	31 %	0	0 %	303	53 %	56	10 %	1	0%	534	94%
I find it is important for my child that both parents are involved in the upbringing	187	33 %	0	0 %	297	52 %	49	9%	1	0%	534	94%
It is not good to have many children	173	30 %	0	0 %	272	48 %	53	9%	1	0%	499	88%

It is not okay to miss some stages of my child's immunization	178	31 %	0	0 %	306	54 %	60	11 %	1	0%	545	96%
I feel my spouse supports me in the upbringing of our child	181	32 %	0	0 %	305	54 %	46	8%	1	0%	533	94%
I don't see my child as the cause of many of my problems	176	31 %	0	0 %	295	52 %	59	10 %	1	0%	531	93%
The pregnant women should register in the PHC by 3rd month of pregnancy	188	33 %	0	0 %	306	54 %	57	10 %	1	0%	552	97%
Breast feeding immediately after delivery is essential	185	33 %	0	0 %	309	54 %	62	11 %	1	0%	557	98%

It may be gleaned from the above table that steep increases in attitudes in favour of parenting care for the early child growth and brain development stand out clearly among the most backward classes (MBCs). Similarly, marked increases may be seen among the backward classes. However, when it comes to the scheduled castes, it may be seen that 4 cases, there are increases, in 2 cases there are decreases and in 2 cases the position remains the same as between the control and experiment groups.

The project interventions seem to have had significant impact on changing the attitudes of most backward and backward castes on their attitudes towards parenting for early child growth and brain development.

Attitudes towards parenting for early child growth and brain development among the baseline and endline respondents by educational qualifications

An analysis of the data reveals that between the baseline survey and the endline, there has been an upward trend in respect of all the attitude items, excepting the one on registration of pregnant women by the third month of pregnancy, which shows a down trend. As for breastfeeding immediately after delivery, is no change and the proportion remains the same at 98%.

It may also be seen that the proportions of respondents having the stated attitudes towards parenting are generally higher among illiterates, primary, middle and higher secondary levels than among ITI certificate holders, diploma holders, graduates, post-graduates and other professionals.

The upward trends noticed in the endline respondents in attitudes towards parenting for early child growth and brain development as compared with the baseline respondents show that the project interventions has had a positive impact on the target groups.

The next table will examine attitudes towards parenting as compared between the endline control group and the endline experiment group.

Table 15: Attitudes towards parenting for early child growth and brain development as compared between endline control group and endline experiment group

Endline Control Group (N=136) - Attitude towards on Parenting and Educational Qualification																			
Educational Qualification	Illiterate		Primary		Middle		ITI		Diploma		Higher Secondary		Graduate		Post Graduate		Professional		Endline_Control Group Total
Attitude towards on Parenting	n	%	n	%	n	%	n	%	n	%	N	%	n	%	n	%	N	%	N
I don't find parenting hard	9	7%	2	4%	4	3%	1	1%	3	2%	37	27%	4	3%	3	2%	0	0%	125
I find it is important for my child that both parents are involved in the upbringing	13	10%	2	8%	4	3%	1	1%	3	2%	39	29%	4	3%	3	2%	2	1%	136
It is not good to have many children	6	4%	1	3%	3	8%	1	1%	2	1%	33	24%	3	2%	3	2%	2	1%	106
It is not okay to miss some stages of my child's immunization	13	10%	2	8%	4	3%	1	1%	3	2%	39	29%	4	3%	3	2%	2	1%	135
I feel my spouse supports me in the upbringing of our child	11	8%	2	8%	4	3%	1	1%	3	2%	39	29%	4	3%	3	2%	2	1%	133
I don't see my child as the cause of many of my problems	12	9%	2	8%	4	3%	0	0%	3	2%	39	29%	4	3%	3	2%	2	1%	132
The pregnant women should register in the PHC by 3rd month of pregnancy	13	10%	2	8%	4	3%	1	1%	3	2%	38	28%	4	3%	3	2%	2	1%	134
Breast feeding immediately after delivery is essential	13	10%	2	8%	4	3%	1	1%	3	2%	39	29%	4	3%	3	2%	2	1%	136

Endline - Experiment (N=568) - Attitude towards on Parenting and Educational Qualification																			
Educational Qualification	Illiterate		Primary		Middle		ITI		Diplo ma		Higher Secondary		Graduate		Post Graduate		Professional		Endline_Expe rimentTotal
Attitude towards on Parenting	n	%	n	%	n	%	n	%	n	%	N	%	n	%	n	%	N	%	N
I don't find parenting hard	96	17%	102	18%	114	20%	122	21%	126	22%	92	16%	42	7%	16	3%	4	1%	534
I find it is important for my child that both parents are involved in the upbringing	89	16%	99	17%	115	20%	13	2%	26	5%	96	17%	43	8%	18	3%	5	1%	534
It is not good to have many children	86	15%	92	16%	103	18%	10	2%	25	4%	91	16%	39	7%	18	3%	5	1%	499
It is not okay to miss some stages of my child's immunization	97	17%	99	17%	116	21%	13	2%	26	5%	98	17%	43	8%	19	3%	4	1%	545
I feel my spouse supports me in the upbringing of our child	93	16%	97	17%	114	20%	13	2%	26	5%	97	17%	43	8%	17	3%	4	1%	533
I don't see my child as the cause of many of my problems	96	17%	102	18%	114	20%	11	2%	26	5%	92	16%	39	7%	18	3%	5	1%	531
The pregnant women should register in the PHC by 3rd month of pregnancy	100	18%	104	18%	116	21%	11	2%	26	5%	100	18%	43	8%	17	3%	5	1%	552
Breast feeding immediately after delivery is essential	99	17%	104	18%	117	21%	12	2%	26	5%	101	18%	45	8%	18	3%	2	0%	554

An analysis of the above table shows illiterates have shown marked improvements in attitudes towards parenting for early child growth and brain development in respect of all the eight themes listed in a remarkable manner. While graduates have shown moderate improvements, post-graduates have shown slight improvement. On the other hand, it may be seen that higher secondary levels have shown sharp declines, while middle levels have shown mixed results. The changes in other groups are not significant.

The above analysis indicates that as between the control and experiment groups, the project interventions have been effective in improving attitudes towards parenting for early child growth and brain development not only among the illiterates but also among graduates and post-graduates.

iv. Practice

This section examines the practice aspects of the impact of the project interventions on the endline group overall and the experiment group as compared to the control group.

The following table will examine the impact on practice, overall, as between the baseline phase and the endline phase.

The survey data shows a remarkable increases have been evidenced in respect of all the eleven practices listed in the > Rs. 10,000 income group, as compared to the baseline levels. Such increases, though to a slightly lesser extent, are noticeable among those earning Rs. 7,500-10,000. Moderate increases are observable in respect of all the practices among the baseline respondents in endline earning < Rs. 2,500. However, substantial downtrends are observed with respect to all the eleven practices when it comes to those in the Rs. 5,000 to 7,500 income bracket. Similar downtrends are noticeable among the Rs. 2,500 to 5,000 respondents, except in one case (spending money on alcohol).

The findings of the baseline survey shows marked improvements in practices relating to parenting for early child growth and brain development, as compared to the baseline data. This indicates positive impact of the project on changing the behaviours of the parents on aspects related to parenting for early child growth and brain development.

The following table gives the details in terms of impact on practice as between the endline control group and the endline experiment group.

Table 16: Impact on practices relating to parenting for early child growth and brain development by income levels as compared between endline control group and endline experiment group

Endline _ Control Group (N = 136) - Practice of Parenting and Income												
Income	Below 2500		2500-5000		5000-7500		7500-10000		above 10000		Baseline _ Control Group Total	
Practice on Parenting	n	%	n	%	N	%	n	%	n	%	N	%
My spouse and I solve our issues by talking	0	0%	2	1%	10	7%	31	23%	85	63%	128	94%
I feel like my spouse and I work together to provide for our child	0	0%	3	2%	10	7%	35	26%	84	62%	132	97%

When my child is stubborn, I feel like giving up on him/her	0	0%	3	2%	8	6%	32	24%	75	55%	118	87%
When I earn money, I don't spend most of it on alcohol	0	0%	3	2%	11	8%	35	26%	87	64%	136	100%
Beating does not occur between spouse and I whenever we quarrel	0	0%	3	2%	11	8%	34	25%	72	53%	120	88%
During pregnancy and delivery woman need professional support (prenatal and postnatal care)	0	0%	3	2%	11	8%	35	26%	86	63%	135	99%
I feed my child when my child is hungry	0	0%	3	2%	9	7%	31	23%	86	63%	129	95%
I do not use bad words and/or I beat/cane to discipline my child	0	0%	2	1%	7	5%	30	22%	71	52%	110	81%
To show love to my child, I give him/her gifts and special food on special days	0	0%	3	2%	11	8%	34	25%	82	60%	130	96%
I spend time with my child to show I love him/her	0	0%	3	2%	10	7%	32	24%	85	63%	130	96%
Practice of rituals (Baby shower/Seemantham) to pregnant women is necessary	0	0%	3	2%	11	8%	34	25%	87	64%	135	99%
Endline _Experiment Group (N = 568) - Practice of Parenting and Income												
Income	Below 2500		2500-5000		5000-7500		7500-10000		above 10000		Baseline_ Experiment Group Total	
Practice on Parenting	n	%	n	%	N	%	n	%	n	%	N	%
My spouse and I solve our issues by talking	45	8%	22	4%	112	20%	162	29%	184	32%	525	92%
I feel like my spouse and I work together to provide for our child	50	9%	22	4%	124	22%	165	29%	187	33%	548	96%
When my child is stubborn, I feel like giving up on him/her	45	8%	21	4%	66	12%	143	25%	159	28%	434	76%
When I earn money, I don't spend most of it on alcohol	53	9%	25	4%	128	23%	159	28%	168	30%	533	94%

Beating does not occur between spouse and I whenever we quarrel	42	7%	23	4%	126	22%	155	27%	174	31%	520	92%
During pregnancy and delivery woman need professional support (prenatal and postnatal care)	46	8%	24	4%	129	23%	163	29%	177	31%	539	95%
I feed my child when my child is hungry	53	9%	21	4%	48	8%	142	25%	180	32%	444	78%
I do not use bad words and/or I beat/cane to discipline my child	42	7%	23	4%	127	22%	154	27%	160	28%	506	89%
To show love to my child, I give him/her gifts and special food on special days	53	9%	25	4%	120	21%	161	28%	184	32%	543	96%
I spend time with my child to show I love him/her	50	9%	26	5%	132	23%	166	29%	183	32%	557	98%
Practice of rituals (Baby shower/Seemantham) to pregnant women is necessary	49	9%	25	4%	132	23%	166	29%	186	33%	558	98%

An analysis of the above table reveals that practice levels have gone up considerably in the endline experiment group as compared to the control group falling within the income bracket of less than Rs. 2,500 from zero (in the experiment group) to 7-9% (in the control group) proportions. Increases in practice levels has been observed to be moderate in the Rs. 2,500 to 5,000 income level as between the control and experiment groups, with the latter registering about 4 to 5% levels as against the former with only 1 to 2% levels.

The increases in the Rs. 5,000 to 7,500 level is more significant in all but one case (that is, feeding the child when it is hungry) from about 6-8% in the control group to about 20-23% in most cases in the experiment group.

Increases have been moderate in the Rs. 7,500 to 10,000 level also. It is surprising to note that such practice level should show downtrends in the > Rs. 10,000 level. In the totals of groups, it is seen that as between the control and the experiment groups, there is a mixture of increases in some, decreases in some and same level in one case.

It may be this be seen that as far as practices are concerned, there has been a considerable impact of the project interventions in the respondents with income level of less than Rs. 2,500 a month. While moderate impact has been observed in the income group of Rs. 2,500 to 5,000 a month, significant impact has been observed in the income group of Rs. 5,000 to 7,500 a month. It may be seen that the project's pro-poor approach has yielded good dividends.

The following set of tables will analyze the impact of the project interventions on practice levels of the respondents by their educational qualifications.

Table 17: Impact of project on practices relating to parenting analyzed by educational qualifications of respondents as between the baseline and the overall endline studies

Baseline (N = 303) - Practice on Parenting and Educational Qualification																				
Educational Qualification	Illiterate		Primary		Middle		ITI		Diplo ma		Higher Secondary		Graduate		Post Graduate		Professi onal		Baseline_Gr and Total	
Practice on Parenting	n	%	n	%	n	%	n	%	n	%	N	%	n	%	n	%	N	%	N	%
My spouse and I solve our issues by talking	40	13%	56	18%	71	23%	31	1%	83	3%	59	19%	22	7%	10	3%	1	0%	270	89%
I feel like my spouse and I work together to provide for our child	46	15%	58	19%	73	24%	31	1%	72	2%	55	18%	19	6%	10	3%	3	1%	274	90%
When my child is stubborn, I feel like giving up on him/her	0	0%	10	3%	9	3%	21	1%	41	1%	14	5%	31	1%	2	1%	4	1%	48	16%
When I earn money, I don't spend most of it on alcohol	0	0%	10	3%	9	3%	21	1%	41	1%	14	5%	31	1%	2	1%	0	0%	44	15%
Beating does not occur between spouse and I whenever we quarrel	35	0%	46	15%	55	18%	10	0%	62	2%	42	14%	18	6%	8	3%	3	1%	214	71%
During pregnancy and delivery woman need professional support (prenatal and postnatal care)	44	15%	56	18%	73	24%	21	1%	72	2%	58	19%	23	8%	8	3%	4	1%	275	91%

I feed my child when my child is hungry	41	14%	48	16%	70	23%	4	1%	7	2%	56	18%	20	7%	8	3%	4	1%	258	85%
I do not use bad words and/or I beat/cane to discipline my child	38	13%	41	14%	53	17%	3	1%	7	2%	40	13%	15	5%	7	2%	2	1%	206	68%
To show love to my child, I give him/her gifts and special food on special days	42	14%	57	19%	77	25%	3	1%	9	3%	55	18%	20	7%	10	3%	4	1%	277	91%
I spend time with my child to show I love him/her	46	15%	53	17%	74	24%	3	1%	9	3%	60	20%	21	7%	9	3%	4	1%	279	92%
Practice of rituals (Baby shower/Seem antham) to pregnant women is necessary	49	16%	57	19%	75	25%	3	1%	8	3%	48	16%	21	7%		9%	4	1%	265	87%
Endline (N = 704) - Practice on Parenting and Educational Qualification																				
Educational Qualification	Illiterate		Primary		Middle		ITI		Diploma		Higher Secondary		Graduate		Post Graduate		Professional		Endline_Grand Total	
Practice on Parenting	n	%	n	%	n	%	n	%	n	%	N	%	n	%	n	%	N	%	N	%
My spouse and I solve our issues by talking	99	14%	117	17%	184	26%	14	2%	30	4%	134	19%	46	7%	22	3%	7	1%	653	93%
I feel like my spouse and I work together to provide for our child	105	15%	121	17%	194	28%	14	2%	30	4%	139	20%	48	7%	23	3%	7	1%	681	97%
When my child is stubborn, I feel like giving up on him/her	78	11%	92	13%	154	22%	12	2%	26	4%	122	17%	44	6%	19	3%	5	1%	552	78%
When I earn money, I don't spend most of it on alcohol	106	15%	123	17%	188	27%	14	2%	30	4%	133	19%	47	7%	21	3%	7	1%	669	95%
Beating does not occur between spouse and I	104	15%	117	17%	181	26%	12	2%	30	4%	126	18%	42	6%	21	3%	7	1%	640	91%

whenever we quarrel																				
During pregnancy and delivery woman need professional support (prenatal and postnatal care)	110	16%	121	17%	179	25%	13	2%	30	4%	135	19%	45	6%	22	3%	6	1%	674	96%
I feed my child when my child is hungry	83	12%	89	13%	154	22%	14	2%	27	4%	134	19%	44	6%	21	3%	7	1%	573	81%
I do not use bad words and/or I beat/cane to discipline my child	101	14%	118	17%	171	24%	13	2%	29	4%	118	17%	42	6%	18	3%	6	1%	616	88%
To show love to my child, I give him/her gifts and special food on special days	106	15%	112	16%	187	27%	14	2%	30	4%	137	19%	48	7%	22	3%	7	1%	663	94%
I spend time with my child to show I love him/her	109	15%	124	18%	192	28%	14	2%	30	4%	136	19%	44	6%	22	3%	7	1%	678	96%
Practice of rituals (Baby shower/Seem antham) to pregnant women is necessary	114	16%	128	18%	194	28%	13	2%	29	4%	140	20%	48	7%	21	3%	6	1%	693	98%

An analysis of the above table (by educational qualifications levels) reveals that overall, there has been a positive impact of the project interventions as compared between the control group and the experiment group.

Among illiterates, we find uptrends in seven out of 11 cases (67%). Among middle level, increases have been recorded in 10 out of 11 cases (91%). Among ITI certificate holders also increases have been evidenced in all cases (100%), albeit in moderate proportions. The diploma holders have also shown increases in all cases (100%). As far as the higher secondary-level persons and graduates are concerned, it is a mixed picture of ups, downs and no-changes. Among graduates, we see that in six practices, there are

no changes; however, in three practices there are increases and in another three, there are downtrends. Post-graduates also offer a similar picture with no-change in seven practices, uptrends in respect of three and downtrend in respect of one. As for professionals, no change is seen in respect of 9 practices; along with two uptrends. As for the total, there is uptrend noticeable in respect of all the practices but one, the exception being the one relating to feeding the child when it is hungry.

Interestingly, 100% increases have been seen among the technically qualified ITI certificate holders and diploma holders.

Similarly, the reasons for the slight downtrend noted overall, relating to feeding the child when it is hungry may be further investigated.

Impact of project on practices relating to parenting analyzed by educational qualifications of respondents as between the endline control group and the experiment group

The impact of project relating to parenting by educational qualifications between the two groups reveals an interesting pattern in respect of Illiterates, ITI certificate holders, graduates and post-graduates, upward changes have been evidenced in respect of all the practice items relating to parenting for early child growth and brain development (100% upward change). Diploma holders closely follow with upward trends in 10 out of 11 practices (91%). Among professionals, no changes are noticed. It is surprising to note that among higher secondary persons, there is in evidence a downtrend in respect of all the 11 items of practice.

In sum, out of the nine levels of qualifications listed, significant upward trends are noted in respect of 5 levels, and no change in respect of one, that is, in 56% of the levels.

Therefore, the project interventions have favourably impacted the respondents in the control group in respect of a majority of qualification levels.

The reasons for a total downtrend witnessed in respect of respondents in the experiment group in higher-secondary level of education may be further probed.

v. Fathers' Involvement in Parenting

The next set of tables gives details about the involvement of fathers in parenting, by income groups.

Table 18: Fathers' Involvement in Parenting by Income Groups

Baseline (N = 303) - Income level and Father's involvement in Parenting												
Income	Below 2500		2500-5000		5000-7500		7500-10000		above 10000		Baseline_Total	
Father's involvement in Parenting	n	%	n	%	N	%	n	%	n	%	N	%
Source comfort	1	0%	19	6%	24	8%	17	6%	13	4%	74	24%
Security	1	0%	8	3%	24	8%	13	4%	5	2%	51	17%
Equal care	2	1%	9	3%	14	5%	12	4%	5	2%	42	14%
Playmate	3	1%	6	2%	3	1%	7	2%	2	1%	21	7%
Day today activity	2	1%	4	1%	1	0%	5	2%	2	1%	14	5%
spending time	3	1%	4	1%	1	0%	4	1%	0	0%	12	4%
Others	2	1%	34	11%	23	8%	18	6%	12	4%	89	29%
Total	14	5%	84	28%	90	30%	76	25%	39	13%	303	100%
Endline (N = 704) - Practice of Parenting and Income												
Income	Below 2500		2500-5000		5000-7500		7500-10000		above 10000		Endline_Total	
Father's involvement in Parenting	n	%	n	%	N	%	n	%	n	%	N	%
Source comfort	43	6%	12	2%	53	8%	74	11%	136	19%	318	45%
Security	0	0%	0	0%	3	0%	5	1%	5	1%	13	2%
Equal care	7	1%	13	2%	85	12%	108	15%	110	16%	323	46%
Playmate	3	1%	6	2%	3	1%	7	2%	2	1%	21	3%
Day today activity	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
spending time	0	0%	1	0%	1	0%	14	2%	13	2%	29	4%
Total	53	8%	32	5%	145	21%	208	30%	266	38%	704	100%
Endline_Control Group (N = 136) - Practice of Parenting and Income												
Income	Below 2500		2500-5000		5000-7500		7500-10000		above 10000		Endline_Control GroupTotal	
Father's involvement in Parenting	n	%	n	%	N	%	n	%	n	%	N	%
Source comfort	0	0%	1	1%	3	2%	12	9%	14	10%	30	22%
Security	0	0%	0	0%	0	0%	1	1%	1	1%	2	1%
Equal care	0	0%	2	1%	7	5%	22	16%	70	51%	101	74%
Playmate	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Day today activity	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
spending time	0	0%	0	0%	0	0%	0	0%	2	1%	2	1%
Others	0	0%	0	0%	1	1%	0	0%	0	0%	1	1%
Total	0	0%	3	2%	11	8%	35	26%	87	64%	136	100%

Endline_Experiment Group (N = 568) - Practice of Parenting and Income												Endline_Experiment Total	
Income	Below 2500		2500-5000		5000-7500		7500-10000		above 10000			N	%
Father's involvement in Parenting	n	%	n	%	N	%	n	%	n	%		N	%
Source comfort	43	8%	11	2%	50	9%	122	21%	62	11%		288	51%
Security	0	0%	0	0%	3	1%	5	1%	4	1%		12	2%
Equal care	7	1%	11	2%	78	14%	86	15%	39	7%		221	39%
Playmate	0	0%	0	0%	0	0%	0	0%	0	0%		0	0%
Day today activity	0	0%	0	0%	0	0%	0	0%	0	0%		0	0%
spending time	0	0%	1	0%	1	0%	14	2%	11	2%		27	5%
Others	4	1%	3	1%	0	0%	1	0%	12	2%		20	4%
Total	54	10%	26	5%	132	23%	228	40%	128	23%		568	100%

the impact of the interventions relating to fathers' involvement in parenting has been considerable as evidenced by substantial increases in the proportions under 'source comfort' (from 24% to 45%) and 'equal care' (from 17% to 46%) as compared between baseline and endline figures.

Income brackets-wise, increases are seen in the < Rs. 2,500 group, Rs. 7,500 to 10,000 group and in the > Rs. 10,000 group, as between baseline and endline.

The reasons for decreases in in the Rs. 2,500 to 5,000 and in the Rs. 5,000 to 7,500 groups may be probed further.

A comparison of the status as between the endline control group and the endline experiment group reveals that:

the impact has shown upward trend in the endline experiment group as compared to the endline control group in the case of 'source comfort' only (from 22% to 51%).

There is a downtrend observable in the case of 'equal care' (from 74% to 39%) as between the control and experiment groups. The reasons for this warrant further study.

The next set of tables give the details of fathers' involvement in parenting by educational classifications.

Table 19: Fathers' Involvement in Parenting by Educational Qualifications

Baseline (N = 303) - Practice on Parenting and Educational Qualification																				
Educational Qualification	Illiterate		Primary		Middle		ITI		Diplo ma		Higher Secondary		Grad uate		Post Graduat e		Profess ional		Baseline_Gr and Total	
Father's involvement in Parenting	n	%	n	%	n	%	n	%	N	%	N	%	n	%	N	%	N	%	N	%
Source comfort	13	4%	11	4%	27	9%	1	0%	2	1%	11	4%	6	2%	2	1%	0	0%	73	24%
Security	6	2%	9	3%	17	6%	2	1%	1	0%	12	4%	2	1%	0	0%	2	1%	51	17%
Equal care	3	1%	9	3%	9	3%	0	0%	1	0%	11	4%	5	2%	3	1%	1	0%	42	14%
Playmate	6	2%	4	1%	2	1%	0	0%	1	0%	6	2%	2	1%	0	0%	0	0%	21	7%
Day today activity spending time	2	1%	5	2%	4	1%	0	0%	0	0%	1	0%	1	0%	1	0%	0	0%	14	5%
Others	2	1%	3	1%	5	2%	0	0%	0	0%	0	0%	2	1%	0	0%	0	0%	12	4%
Total	17	6%	20	7%	16	5%	0	0%	4	1%	21	7%	5	2%	6	2%	1	0%	90	30%
	49	16%	61	20%	80	26%	3	1%	9	3%	62	20%	23	8%	12	4%	4	1%	303	100%
Endline (N = 704) - Practice on Parenting and Educational Qualification																				
Educational Qualification	Illiterate		Primary		Middle		ITI		Diplo ma		Higher Secondary		Grad uate		Post Graduat e		Profess ional		Endline_Gr and Total	
Father's involvement in Parenting	n	%	n	%	n	%	n	%	N	%	N	%	n	%	N	%	N	%	N	%
Source comfort	48	7%	56	8%	81	12%	1	2%	1	5%	60	9%	2	4%	14	2%	4	1%	318	45%
Security	3	0%	1	0%	5	1%	1	0%	0	0%	3	0%	0	0%	0	0%	0	0%	13	2%
Equal care	5	7%	64	9%	94	13%	2	0%	1	2%	72	10%	1	2%	8	1%	3	0%	323	46%
Playmate	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Day today activity spending time	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Others	4	1%	6	1%	11	2%	0	0%	1	0%	4	1%	3	0%	0	0%	0	0%	29	4%
Total	10	1%	2	0%	6	1%	0	0%	0	0%	1	0%	1	0%	1	0%	0	0%	21	3%
Endline_Control Group (N = 136) - Practice on Parenting and Educational Qualification																				

Educational Qualification	Illiterate		Primary		Middle		ITI		Diploma		Higher Secondary		Graduate		Post Graduate		Professional		Endline_Control Group Total	
Father's involvement in Parenting	n	%	n	%	n	%	n	%	N	%	N	%	n	%	N	%	N	%	N	%
Source comfort	1	1%	6	4%	5	4%	0	0%	2	1%	13	10%	2	1%	0	0%	1	1%	30	22%
Security	0	0%	0	0%	2	1%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	2	1%
Equal care	11	8%	19	14%	39	29%	1	1%	1	1%	25	18%	1	1%	3	2%	1	1%	101	74%
Playmate	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Day today activity	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
spending time	0	0%	0	0%	0	0%	0	0%	0	0%	1	1%	1	1%	0	0%	0	0%	2	1%
Others	1	1%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	1%
Endline_Experiment Group (N = 568) - Practice on Parenting and Educational Qualification																				
Educational Qualification	Illiterate		Primary		Middle		ITI		Diploma		Higher Secondary		Graduate		Post Graduate		Professional		Endline_Experiment Total	
Father's Involvement on Parenting	n	%	n	%	n	%	n	%	N	%	N	%	n	%	N	%	N	%	N	%
Source comfort	47	8%	50	9%	76	13%	11	2%	13	2%	47	8%	27	5%	14	2%	3	1%	288	51%
Security	3	1%	1	0%	3	1%	1	0%	0	0%	3	1%	0	0%	0	0%	0	0%	11	2%
Equal care	39	7%	45	8%	55	10%	1	0%	13	2%	47	8%	15	3%	4	1%	2	0%	221	39%
Playmate	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Day today activity	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
spending time	4	1%	6	1%	11	2%	0	0%	1	0%	3	1%	2	0%	0	0%	0	0%	27	5%
Others	9	2%	2	0%	6	1%	0	0%	0	0%	1	0%	1	0%	1	0%	0	0%	20	4%

A comparison of the baseline and endline figures relating to changes in parenting by educational qualifications of fathers as given in the table above:

shows significant changes overall in respect of two variables, namely, 'source comfort' (uptrend from 24% in baseline to 45% in endline) and 'equal care' (uptrend from 14% in baseline to 46% in endline).

Significant downtrend is seen in respect of 'security', where from 17% in baseline, there is a drop to 2% in endline.

The overall picture presents a mixed picture of uptrends, downtrends and continuation of same trends by the different qualification groups. A comparison as between the endline control group and the endline experiment group presents an interesting picture. Out of a total number of 63 entries in the experiment group table, there are 38 (60%) entries, spread across the different qualification groups, where no changes have been recorded. In 16 cases (25%), there are upward changes noticed and in the remaining 9 cases (14%), downtrends have been observed.

Another interesting feature of this analysis is that while uptrends are apparent at least in respect of some variables across all the educational classifications, it is not the case in respect of professionals, in whose case, there are no changes, excepting for one variable, namely, 'equal care', where there is a slight downtrend (from 1% to 0%).

The next set of tables will examine the scenario of changes in fathers' involvement in parenting by caste groups as between baseline and overall endline, as also between endline control group and endline experiment group.

Table 20: Fathers' Involvement in Parenting by Caste Groups

Baseline (N = 303) - Father's Involvement on Parenting by Caste Groups												
Caste	SC		ST		MBC		BC		OC		Baseline_Total	
Father's Involvement on Parenting	n	%	n	%	n	%	n	%	n	%	N	%
Source comfort	37	12%	0	0%	17	6%	19	6%	0	0%	73	24%
Security	30	10%	0	0%	18	6%	3	1%	0	0%	51	17%
Equal care	12	4%	0	0%	15	5%	15	5%	0	0%	42	14%
Playmate	6	2%	0	0%	12	4%	3	1%	0	0%	21	7%
Day today activity	2	1%	0	0%	12	4%	0	0%	0	0%	14	5%
spending time	3	1%	0	0%	7	2%	2	1%	0	0%	12	4%
Others	31	10%	0	0%	30	10%	26	9%	3	1%	90	30%
Total	121	40%	0	0%	111	37%	68	22%	3	1%	303	100%
Endline (N = 704) - Father's Involvement on Parenting by Caste Groups												
Caste	SC		ST		MBC		BC		OC		Endline_Total	
Father's Involvement on Parenting	n	%	n	%	n	%	n	%	n	%	N	%
Source comfort	111	16%	0	0%	161	23%	45	6%	1	0%	318	45%
Security	5	1%	0	0%	5	1%	3	0%	0	0%	13	2%
Equal care	89	13%	0	0%	162	23%	72	10%	0	0%	323	46%
Playmate	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Day today activity	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
spending time	15	2%	0	0%	13	2%	1	0%	0	0%	29	4%
Others	15	2%	0	0%	3	0%	2	0%	1	0%	21	3%
Total	235	33%	0	0%	344	49%	123	17%	2	0%	704	100%

Endline_ Control Group (N = 136) - Father's Involvement on Parenting by Caste Groups												
Caste	SC		ST		MBC		BC		OC		Control Group_Total	
Father's Involvement on Parenting	n	%	n	%	n	%	n	%	n	%	N	%
Source comfort	7	5%	0	0%	7	5%	16	12%	0	0%	30	4%
Security	1	1%	0	0%	0	0%	1	1%	0	0%	2	0%
Equal care	36	26%	0	0%	23	17%	42	31%	0	0%	101	14%
Playmate	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Day today activity	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
spending time	0	0%	0	0%	1	1%	1	1%	0	0%	2	0%
Others	0	0%	0	0%	0	0%	0	0%	1	1%	1	0%
Total	44	32%	0	0%	31	23%	60	44%	1	1%	136	19%
Endline_ Experiment (N = 568) - Practice on Parenting by Caste Groups												
Caste	SC		ST		MBC		BC		OC		Experiment_Total	
Father's Involvement on Parenting	n	%	n	%	n	%	n	%	n	%	N	%
Source comfort	104	18%	0	0%	155	27%	29	5%	1	0%	289	41%
Security	4	1%	0	0%	5	1%	2	0%	0	0%	11	2%
Equal care	52	9%	0	0%	139	24%	30	5%	0	0%	221	31%
Playmate	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Day today activity	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
spending time	15	3%	0	0%	12	2%	0	0%	0	0%	27	4%
Others	15	3%	0	0%	3	1%	2	0%	0	0%	20	3%
Total	190	33%	0	0%	314	55%	63	11%	1	0%	568	81%

An analysis of the data in the first two sub-tables compares the involvement proportions of fathers by the seven variables and by the four caste groups (it may be noted that there are no respondents in the Scheduled Tribe category) as between the baseline and the overall endline status.

Significant upward changes are observable under 'equal care' in respect of the Scheduled Caste respondents, where the proportion of such changes have gone up from 4% in baseline to 13% in endline, though the overall proportion of change in respect of all the variables for SCs has recorded a decrease to 33% in endline from 40% in baseline.

The changes recorded by the most backward classes (MBCs) are seen to be quite steep in respect of 'source comfort' (rise from 6% in baseline to 23% in overall endline) and in respect of 'equal care' (rise from 5% in baseline to 23% in overall endline). There has been an increase in the overall total proportions also from 37% in baseline to 49% in endline. While BCs have evidenced an increase (from 5% in baseline to 10% in endline) in the variable 'equal care', the overall total trend has shown a decline from 22% in baseline to 17% in endline.

Let us now analyse the data relating to fathers involvement in parenting by their caste groups as evidenced between the endline control group and the endline experiment group. The data in the second set of sub-tables above reveal a steep increase in the proportion of change in respect of 'source comfort'

(from a mere 4% in the control group to a whopping 41% in the experiment group) and in respect of 'equal care' (from 14% in the control group to 31% in the experiment group).

There is in evidence significant positive impact of the project interventions on the fathers' perceptions on involvement in parenting in respect of the variables 'source comfort' and 'equal care', particularly among the SC's and MBC's, which shows that the project interventions have been targeted in an inclusive manner and in favour of the disadvantaged groups.

vi. A Comparison of Parenting Practices by the Different Caregivers

The following table attempts to compare parenting practices by the different care givers as evidenced in the baseline, endline control group and endline experiment group.

Table 21: A Comparison between Baseline Practices of Parenting and those of Endline in Control and Experiment Groups and by Categories of Fathers, Mothers an Other Caregivers of Control and Experiment Groups

A Comparison between Baseline Practices of Parenting and those of Endline in Control and Experiment Groups and by Categories of Fathers, Mothers an Other Caregivers of Control and Experiment Groups

An analysis of the above data would highlight that between baseline and experiment groups the changes are significant for the variable of spending money on alcohol by fathers (up from 63.8% in baseline to 90% in experiment). Another significant uptrend can be seen in respect of the variable 'beating not occurring between spouses while quarrelling' (up from 70.6% in baseline to 92% in endline experiment). Another variable of such significant change is that of 'not using bad words or caning the child in order to discipline her/him', where the uptrend recorded is from 32% baseline to 89% in endline experiment.

Practice towards parenting	Baseline	Control (Yes %)				Experiment (Yes %)			
	Yes	Mother	Father	Other	Total	Mother	Father	Other	Total
My spouse and I solve our issues by talking	270 (89.1)	91 (98)	24 (86)	13 (87)	128 (94)	289 (93)	148 (95)	88 (86)	525 (92)
I feel like my spouse and I work together to provide for our child	280 (92.4)	93 (100)	28 (100)	15 (100)	136 (100)	310 (100)	155 (99)	102 (100)	567 (99)
When my child is stubborn, I feel like giving up on him/her	263 (86.8)	81 (87)	23 (82)	14 (93)	118 (87)	243 (78)	119 (76)	72 (71)	434 (76)
When I earn money, I don't spend most of it on alcohol	44 (63.8)	0	28 (100)	0	28 (100)	0	140 (90)	0	140 (90)
Beating does not occur between spouse and I whenever we quarrel	214 (70.6)	83 (89)	24 (86)	13 (87)	120 (88)	283 (91)	142 (91)	95 (93)	520 (92)
During pregnancy and delivery woman need professional support (prenatal and postnatal care)	275 (90.8)	93 (100)	27 (96)	15 (100)	136 (100)	300 (97)	141 (90)	98 (96)	539 (95)
I feed my child when my child is hungry	258 (85.1)	93 (100)	21 (75)	15 (100)	129 (95)	255 (82)	113 (72)	76 (75)	444 (78)
I do not use bad words and/or I beat/cane to discipline my child	206 (32)	73 (78)	25 (89)	12 (80)	110 (81)	265 (85)	144 (92)	97 (95)	506 (89)
To show love to my child, I give him/her gifts and special food on special days	277 (91.4)	90 (97)	27 (96)	13 (87)	130 (96)	296 (95)	150 (96)	97 (95)	543 (96)
I spend time with my child to show I love him/her	279 (92.1)	89 (96)	26 (93)	15 (100)	130 (96)	301 (97)	152 (97)	100 (98)	553 (97)
Practice of rituals (Baby shower/Seemantham) to pregnant women is necessary	284 (93.7)	62 (67)	10 (36)	10 (67)	82 (60)	210 (68)	109 (70)	74 (73)	393 (69)

Analysis as between the endline control and experiment groups shows that as far as mothers are concerned, upward changes are observable in respect of the variables 'beating not occurring between spouses during quarrel' (from 89 to 91%), 'not using bad words or caning the child in order to discipline her/him' (from 78 to 85%), and to a minor extent in respect of the variables of 'spending time with the child' (from 96 to 97%) and 'feeling that doing rituals like seemantham to pregnant women are necessary' (from 67% to 68%).

As for the other care givers, upward trends are observable in respect of 'beating not occurring between spouses during quarrel' (from 87 to 93%), 'not using bad words or caning the child in order to discipline her/him' (from 80 to 95%), and 'feeling that doing rituals like seemantham² to pregnant women are necessary' (from 67% to 73%).

The above data indicate that the project interventions have indeed impacted the caregivers on crucial issues.

vii. Knowledge on Ideal Age for Pregnancy

The following set of tables will discuss the knowledge levels of the respondents regarding the ideal age for pregnancy, by their income categories.

Table 22: Knowledge on Ideal Age for Pregnancy by Income Categories

Baseline (N = 303) - Income level and knowledge of correct age of Pregnancy

Income	Below 2500		2500-5000		5000-7500		7500-10000		above 10000		Baseline_Total	
The ideal age for Pregnancy is between 20 and 30	n	%	n	%	N	%	N	%	n	%	N	%
Strongly Agree	1	4%	77	25%	82	27%	70	23%	37	12%	277	91%
Total	1	4%	77	25%	82	27%	70	23%	37	12%	277	91%

² Another traditional celebration, where both the pregnant woman and her husband take part and usually it is celebrated along with or very close to valaikattu.

Endline (N = 704) - Income level and knowledge of correct age of Pregnancy

Income	Below 2500		2500-5000		5000-7500		7500-10000		above 10000		Endline_Total	
The ideal age for Pregnancy is between 20 and 30	n	%	n	%	N	%	N	%	n	%	N	%
Strongly Agree	4	6%	24	6%	12	17	196	28%	267	38%	655	93%
	5				3	%						
Total	4	6%	24	3%	12	17	196	28%	267	38%	655	93%
	5				3	%						

Endline _ Control group (N = 136) - Income level and knowledge of correct age of Pregnancy

Income	Below 2500		2500-5000		5000-7500		7500-10000		above 10000		Endline_Control Group Total	
The ideal age for Pregnancy is between 20 and 30	n	%	n	%	N	%	N	%	n	%	N	%
Strongly Agree	3	2%	11	8%	34	25	83	61%	0	0%	131	96%
						%						
Total	3	2%	11	8%	34	25	83	61%	0	0%	131	96%
						%						

Endline _ Experiment group (N = 568) - Income level and knowledge of correct age of Pregnancy

Income	Below 2500		2500-5000		5000-7500		7500-10000		above 10000		Endline_Experiment Total	
The ideal age for Pregnancy is between 20 and 30	n	%	n	%	N	%	N	%	n	%	N	%
Strongly agree	4	8%	21	4%	11	20	161	28%	184	32%	522	92%
	4				2	%						
Total	4	8%	21	4%	11	20	161	28%	184	32%	522	92%
	4				2	%						

The above set of tables compare the knowledge levels by income categories of respondents relating to ideal age for pregnancy between baseline and overall endline and between endline control group and experiment group.

As between baseline and endline, it may be seen that there has been a significant increase in the proportion of those who strongly agree that 'the ideal age for pregnancy is between 20 and 30' from 12% in baseline in the > Rs. 10,000 income category to 38% in the endline.

Comparisons on knowledge levels relating to ideal age for pregnancy by educational qualifications of respondents as seen in baseline and endline stages.

A comparison between the baseline and endline status regarding knowledge of the respondents on the ideal age for pregnancy shows that while uptrends in the proportion of those who strongly agree that the ideal age for pregnancy should be between 20 and 30 are observable among middle-school level respondents, ITI certificate holders and diploma holders; and downtrends are observable among illiterates, primary-school level respondents and graduates. The status has remained unchanged among post-graduates and professionals.

Similarly, a comparison between the endline control group and the endline experiment group shows that the proportion of respondents who strongly agree with the view that the ideal age for pregnancy should be between 20 and 30 has evidenced increases in respect of illiterates, ITI certificate holders diploma holders, graduates and post-graduates.

The project interventions appear to have been more effective among illiterates, technically qualified persons, graduates and post-graduates.

The reasons for the downtrends observable among primary, middle and higher secondary level respondents of the endline experiment group may warrant further probing.

viii. Analysis – Focus Group Discussions (FGD)

As part of the qualitative study, focus group discussions were held with the care givers in the project area and with some concerned service providers. The outcome of these discussions are briefly given below. Fuller texts received from the field teams may be seen in the Annexures. Mr. M. L. Prabakar, Technical Consultant, was the Facilitator for the FGD³s.

³ A report on the FGDs conducted is enclosed in the Annexure. Details of FGD sample and all FGDs are given in the annexure. This section summarizes the key points from the FGDs with caregivers, and parents. Other FGDs with non-project target groups are given in the annexure.

FGD with care givers of 18 to 24 months children:

The important points of this FGD are summarized as follows. The care givers have learned how to talk to children and how to deal with them and they feel happy to hear when the child talks in its own way. Fathers sometimes help in the preparation of feed for the child. They also take care of the child when the mother is busy with the household chores. The parents are aware of giving nutritious food to children. Exclusive breastfeeding is done up to 6 months and thereafter follows supplementary feeding like kanji (porridge). First hour breastfeeding is also practised. The grandparents also take care of the children by teaching them how to speak, etc. The group has learnt from the project about nutrition and health care for the pregnant women. They are also aware of water and sanitation issues, learned mostly from the project. Most of the care givers feel that safety of the children is very important for them. Keeping the child clean, brushing their teeth, washing them after play and washing hands before eating and feeding them healthy and nutrition food are considered important.

As for other caregivers, relatives like aunt and uncle born with the father and mother also take care of the child and love the child. Children feel happy when they see relatives, spend time with the grandfather, grandmother, uncle and so on. Socializing during the events and functions is considered important for the child's growth.

The father's role is important for early brain development of the child. The father learns to avoid things that may be harmful for the child's growth like fighting with others and he therefore avoids doing such things, which helps the proper growth of the children as well.

The group attends all the SPEECH meetings without fail. The safety of the child at home and at schools is considered important. They have learnt not to scold or shout at the children. An important remark made is that the sound of the bangles worn by the pregnant women on the day of Valaikattu⁴ helps the brain development of the child. They do not scold the child and encourage to play in the sand and then clean them. They feel that the child being active and mischievous is a sign of brain development. Good nutritious food is important for brain development. The group also feels that pregnant mothers should go for regular check-ups from 40th day, take periodical vaccination from 4th month, 7th month and so on. Giving good nutritious food at pregnancy, scan at 7th month is important for the child growth and brain growth as well. Mother has to talk to the child in the womb, the child will listen and be healthy if she

⁴ A traditional ceremony wherein a woman's pregnancy is celebrated usually between the 7th and 9th the month of pregnancy by adorning her with colourful bangles on both the hands, besides making her wear new dress, flowers, sandal paste, vermillion, etc., to the accompaniment of songs sung by other women. Sweets are also offered to all around.

talks. It is important to ensure that the child weight is 2.5kgs to 3kgs at birth. For this, the mother should eat more nutritious food, in order to ensure that the child will grow well in the womb and attain the said birth weight.

The group is aware that the child should not be exposed to any shocking situations. It is also essential that parents do not fight in front of the child.

i. FGD with Fathers:

The awareness of fathers on parenting for early brain development of the child is quite good. They believe in spending time with the children, giving them nutritious food, encouraging them to play, encouraging mothers to breastfeed the child exclusively up to six months, performing the traditional bangle-adorning ceremony of Valaikappu to make the pregnant women feel happy and excited, which in turn would make the baby in the womb also comfortable, thus enabling baby's early brain growth. They realize that they should not quarrel or resort to beating their wives on issues.

They also know that by showing the child its face on the mirror, it will recognize its face and that would be a stimulus for brain growth.

A father mentioned that as a parent he had a great role to play in the growth of the child. Some fathers mentioned that taking time for a walk with the child and giving good food to them was important. They also feel that listening to good songs during pregnancy, eating good and healthy food etc will help in better growth of the baby. Similarly talking and playing with the child helps their brain development.

Some father expressed the view that spending at least 2 hours with the child every day, buying them the things they need and teaching them what to do and what not to do would help their healthy growth. The love and affection shown by the fathers towards their children would stimulate brain growth of the children.

Many of the fathers mentioned that they did all the household work to help their wives when they were pregnant. They also looked after her nutrition and health needs.

One of them stated that he went to Madurai to get the atthi fruit (fig) for his pregnant wife. In addition, he also gave badam (almond)" nuts, besides agathi keera (sesbania grandiflora) to supplement her nutrition intakes. All these helped the proper and healthy growth of the baby in the womb. Many fathers said that they ensured that their wives did not lift heavy weight articles.

The fathers expressed their concern for maintaining hygienic surroundings around their houses, stressing on the need to keep them clean, particularly the drains and water storing receptacles. Some of them stated that they cleaned their children after feeding and after passing stools. One father said that since he was maintaining cleanliness in the house, his child was also putting the wastes in the garbage can.

The fathers were aware of the importance of immunization for the health of the children.

One of the fathers expressed that his child imitated him in many things. For instance, when he did his personal prayer, his child also did the same. He felt that any movement with his child was a happy moment for him.

Many of the fathers mentioned that they learnt these things from the SPEECH functionaries, but some also mentioned that they heard these things from doctors as well. As for the animated audio visual interventions used in the project, a father suggested to make the tool and the video more effective by recording some real experiences of the fathers. Many fathers recommended the holding of a seminar for all parents with children below 5 years of age.

ii. FGD with Mothers:

The mothers shared some vital information during the discussion on the changes that happened in their understanding of early child growth and brain development in the last two years. They highlighted that they understood that they needed to be loving and caring for their children.

The other points focused upon were as follows.

The brain of the child develops even while the baby is in the womb. The learning that if children are happy their brains will grow well and the role of nutritious food is for brain growth underpin their understanding. The role of valaikappu during pregnancy and talking to the child right from the time of pregnancy are important for the child's growth. They have learnt that the neurons in the brain of the baby will get well connected and will develop properly if the child is feels happy. Making the infant paly on the floor and see different colours will help its brain growth. Keeping the place hygienic and regular cleaning help the child to be healthy. The mothers have also learned that they should not shout at their children, as such act would affected the early growth and brain development of the children.

The fathers need to spend more time with the child.

Playing with children is very important to strengthen the bonding between the mother and child. Similarly, talking to them helps in their learning to speak.

Earlier many women did not allow their children to play in the sand but now they are allowing this. The women have stopped beating their children after seeing the video.

Some mothers have expressed that they tell a lot of stories to their children and all of them have stated that they do talk to their children a lot. Many mothers have opined that they have observed a change now in the fathers, who now take their children out, which helps the children to see and learn new things and helps in their brain development.

They have stated that to see the way children speak and the smiles on their little faces make them feel immensely happy. Similarly when the children say rhymes after watching what the cartoon characters say, that gives the mothers happiness and a sense of pride. Observing them saying the names of things, animals and birds and saying one, two, three gives the mothers happiness.

Many of the mothers detailed the types of care given to their children by their mothers, fathers, mother-in laws, father-in-laws and other relatives.

While comparing the contexts of caring for the child how it was earlier and what differences they are witnessing now, women in all groups shared that earlier women were going to work and they did not take special or exclusive care for their children. But now all the women stated that they are spending time with the children.

The mothers give nutritious food to their children, particularly the ones containing micronutrients, like, carrot, green leafy vegetables, barley, and eggs, along with rice, when complementary feeding starts. They also give porridge made with the powder given by SPEECH project.

While discussing about the safety of the child they have mentioned that they do not keep small and risky objects within the child's reach. They keep the house clean, avoid stagnant water, and ensure clean environment.

The aspects which the women liked in the animated videos are listed below:

- ✦ Visuals that educated them by clearly indicating how brain grows.
- ✦ Seeing the woman vomit and it can be a sign of pregnancy and the need to visit the PHC at once made a good impact (statistics show only 25% pregnant women visit the PHC in the first trimester).

- ÷ Visuals like children playing with sand, grandparents taking them out, and not disturbing the mother.
- ÷ All care givers such as the father, mothers in law, fathers in law and other relatives taking care of the child also liked the video very much.
- ÷ The visuals that showed the neurons connecting when we are happy was liked by many women and they understood that we need to be happy in order to have healthy children.
- ÷ We need to make the baby comfortable with others.
- ÷ Visuals like on 'not to hit or scold the child', teaching the child how to be responsible, and removing the stones on the way were other visuals liked.
- ÷ Message on 'not to compare with other children' liked.
- ÷ Showing the child in the mirror and helping them see and recognize their faces is good and seeing that it helps brain development.

When probed a little more about the songs, they did not remember them properly.

The mothers also suggested a few changes and improvisation to the audio-visuals, such as:

- ÷ The character speaking directly, instead of voice-over, will be more understandable by the audience.
- ÷ Cartoons can be replaced by actual people, real characters acting.
- ÷ Only two women have listened to the songs others have not.
- ÷ The tune of some songs are good but if they are doing it again, some songs can be changed and new songs can be added.
- ÷ Inputs on exercises that the pregnant women need to do for having a normal delivery may be added.

The summary of the FGDs held with the target groups as given above shows that the project has impacted on the care givers on the crucial aspects of early child growth and brain development. This only corroborates the impact aspects as highlighted in the KAP analysis earlier in this report.

The suggestions made by the mothers' group on making some improvements to the audio-visuals used in the project are worth considering.

V. Conclusions and Recommendations

This end line evaluation tries to assess the impact of the animated videos on the caregivers in terms of increases in their knowledge, development of more positive attitudes and enhancement of their practices and to learn from their responses on ways to further improve upon early childhood stimulation services. It assumes importance because there is an apparent grey area where nurturing for early brain development falls between the stools, as it were, between the care givers at family, community and service delivering institutional levels.

The Project is Relevant

This project, therefore, comes as a step to fill in the gap observed as above and is aimed at enhancing responsive parenting in the target groups.

Need to focus on under-weight children

Considering the fact that there is also a category of over-weight, the overall picture on weight status in the sample underlines the need to focus on under-weights and severe under-weights.

Improvements in Knowledge Levels on Parenting

Most knowledge items have shown increases in proportion in the endline as compared to baseline proportions. It may be concluded that overall, there has been improvement in knowledge levels on most variables due to exposure to animated videos.

By income groups: There is indication of greater effectiveness of the animated videos and other audio-visuals used in the project among the poorer groups of respondents, the poorest groups showing considerable improvements.

By caste-groups: While marked improvements in experiment group may be attributed to the exposure to the animated videos and other AVs, the steep declines noticed among the BC's and the mixed results noticed among the SCs is rather surprising. Deeper probes into the causes of such steep declines appears warranted.

Attitudes to Parenting

The project interventions seem to have had significant impact on changing the attitudes of most backward and backward castes on their attitudes towards parenting for early child growth and brain development.

By educational qualifications, the upward trends noticed in the endline respondents in attitudes towards parenting for early child growth and brain development as compared with the baseline respondents show that the project interventions has had a positive impact on the target groups.

The data analyzed also indicate that as between the control and experiment groups, the project interventions have been effective in improving attitudes towards parenting for early child growth and brain development not only among the illiterates but also among graduates and post-graduates.

Practices of Parenting

The findings of the analysis by income levels shows marked improvements in practices relating to parenting for early child growth and brain development, in endline as compared to the baseline data. This indicates positive impact of the project on changing the behaviours of the parents on aspects related to parenting for early child growth and brain development.

It may be this be seen that as far as practices are concerned, there has been a considerable impact of the project interventions in the respondents with income level of less than Rs. 2,500 a month. While moderate impact has been observed in the income group of Rs. 2,500 to 5,000 a month, significant impact has been observed in the income group of Rs. 5,000 to 7,500 a month. It may be seen that the project's pro-poor approach has yielded good dividends.

Similarly, an analysis by educational qualifications levels reveals that overall, there has been has been a positive impact of the project interventions as compared between the control group and the experiment group.

Interestingly, 100% increases have been seen among the technically qualified ITI certificate holders and diploma holders.

The reasons for a total downtrend witnessed in respect of respondents in the experiment group in higher-secondary level of education may be further probed.

The project interventions have favourably impacted the respondents in the control group in respect of a majority of qualification levels.

However, the reasons for the slight downtrend noted overall, relating to 'feeding the child when it is hungry' may be further investigated.

Fathers' Involvement in Parenting

The impact of the interventions relating to fathers' involvement in parenting has been considerable as evidenced by substantial increases in the proportions under 'source comfort' (from 24% to 45%) and 'equal care' (from 17% to 46%) as compared between baseline and endline figures.

Income brackets-wise, increases are seen in the < Rs. 2,500 group, Rs. 7,500 to 10,000 group and in the > Rs. 10,000 group, as between baseline and endline.

The reasons for decreases in the Rs. 2,500 to 5,000 and in the Rs. 5,000 to 7,500 groups may be probed further.

A comparison of the status as between the endline control group and the endline experiment group reveals that:

The impact has shown upward trend in the endline experiment group as compared to the endline control group in the case of 'source comfort' only (from 22% to 51%).

There is a downtrend observable in the case of 'equal care' (from 74% to 39%) as between the control and experiment groups. The reasons for this warrant further study.

A comparison of the baseline and endline figures relating to changes in parenting by educational qualifications of fathers shows significant changes overall in respect of two variables, namely, 'source comfort' (uptrend from 24% in baseline to 45% in endline) and 'equal care' (uptrend from 14% in baseline to 46% in endline).

Significant downtrend is seen in respect of 'security', where from 17% in baseline, there is a drop to 2% in endline.

The overall picture presents a mixed picture of uptrends, downtrends and continuation of same trends by the different qualification groups.

There is in evidence significant positive impact of the project interventions on the fathers' perceptions on involvement in parenting in respect of the variables 'source comfort' and 'equal care', particularly among the SC's and MBC's, which shows that the project interventions have been targeted in an inclusive manner and in favour of the disadvantaged groups.

Positive Impact on Crucial Issues of Parenting

A comparison of parenting practices by different care givers (mothers, fathers and others) by BLS, & ELS control and experiment groups shows that the project interventions have indeed impacted positively on the caregivers on crucial issues.

Impact on a related Knowledge Issue

As regards the related issue of knowledge of the respondents on the ideal age for pregnancy, the project interventions appear to have been more effective among illiterates, technically qualified persons, graduates and post-graduates.

The reasons for the downtrends observable among primary, middle and higher secondary level respondents of the endline experiment group warrant further probing.

Focus Group Discussions

The summary of the FGDs held with the target groups as given under the relevant section above shows that the project has impacted on the care givers on the crucial aspects of early child growth and brain development. This only corroborates the impact aspects as highlighted in the KAP analysis discussed in greater details, earlier in this report.

The suggestions made by the mothers' group on making some improvements to the audio-visuals used in the project are worth considering.

A Report on FGDs conducted among Mothers, Fathers, Care givers and ICDS staff in the Experimental and Control groups⁵

In order to identify the effectiveness in retention of the information provided through the videos, Focus Group Discussions (FGDs) were conducted among 41 mothers (30 from EG and 11 from CG), 24 fathers (18 from EG and 6 from CG), 25 Caregivers (18 from EG and 7 from CG) and 11 ICDS staff members (6 from EG and 5 from CG) in Sivakasi and Tiruchuli.

The purpose of these focus group discussions conducted was to identify how effective was the video education strategy that provided information to the mothers, fathers and caregivers in helping to create

⁵ Report prepared by the consultant who conducted the FGDs.

an understanding and also fostering retention of these important useful messages among the people who received them. Further the discussions were done with an intention to observe the effectiveness of the videos among the Experimental Group (EG) and to identify any significant difference among those people in the Control Group (CG) who did not receive information through the videos.

The FGDs were conducted based on three separate tools for the Mothers, Fathers and Care givers. In addition, a tool was designed to collect information from the ICDS staff members on their understanding of the communication module and videos and to cull-out any specific observations they had seen in the last two years among the mothers and children covered under this project. The tool consists of 17 points for discussion with the Experimental Group (EG) and 16 points for discussion with Control Group (CG). The focus group discussions were organised in different villages for EGs and CGs and also at SPEECH offices at Sivakasi and Tiruchuli to suit the convenience of the participants.

The content of the Focus Group Discussions (FGDs), comparison of the EGs and CGs among all three sub groups Mothers, Fathers and Care Givers and in addition to this the views of the ICDS staff are captured in this report. This report also highlights significant observations and Key findings articulated by the participants during these discussions.

Details of participant of the FGDs EG and CG				
S No.	Type of Group	No. of persons	Place/ Village	Brief description
1	Mothers EG	30	Sundamkulam, K. Subramaniapuram, SPEECH office Tiruchuli	25 of them are Home makers among them 3 are under graduates. 3 of them do 100 days work under NREGA, 1 tailor and 1 farmer. The average age of the mothers is 27 years
2	Mothers CG	11	Kongankulam	29 of them are Home makers. 3 of them do 100 days work under NREGA. The average age of the mothers is 27 years
3	Fathers EG	18	Sundamkulam, K. Subramaniapuram, SPEECH office Tiruchuli	Majority of them were Mill employees, Drivers and Masons. One was a PG teacher and others were skilled workers. The average age is 32 years.
4	Fathers CG	6	Kongankulam	Majority of them were Mill employees and the rest were a Farmer, Coolie and an Auto Driver. The average age is 38 years.
5	Care givers EG	18	Sundamkulam, K. Subramaniapuram	3 men and 15 women were among the care givers. Two men were skill

				workers and one was a coolie. Among the women 9 of them were Coolies and 6 were farmers. The average age of men is 57 years and women is 54 years.
6	Care givers CG	7	Kongankulam	There were farmers and coolies, 2 persons in each occupation and 2 home makers and 1 ICDS staff. The average age is 52 years.
7	ICDS staff EG	6	Alangkulam	Average of the staff is 37 years
8	ICDS Staff CG	5	Alangkulam	Average of the staff is 37 years

Over all Objectives:

To conduct 13 FGDs among Mothers, Fathers, Caregivers and ICDS staff to ascertain the effectiveness of the education process on early brain development in fetuses and infants aging 24 months through direct education complemented by educational Videos in Experimental Groups and only through direct education among Control Groups

Methodology:

The field team of SPEECH organised meetings with the Consultant and the Mothers, Fathers and Care Givers in the villages of Sivakasi and Tiruchuli at a time and place that is mutually convenient. The FGD Consultant interacted with them and held Focus Group Discussions (FGDs) based on a tool developed jointly by CCFC and SPEECH staff along with the consultants. FGDs with the ICDS staff were also conducted to elicit their experience in these two years and their sharing on specific to the videos and the education module were recorded. Discussions were held in three phases. A consent process was followed and all participants had registered and signed on the free will to be part of these FGDs and shared their experience. The discussion notes were recorded, collated and the findings based on the overall and specific outcomes of the project were recorded.

The FGDs were focused on the major outcomes of the pilot project to equip the parents and care givers with knowledge on the holistic development of child in the first 1000 days. This is a crucial foundation for the survival, quality of life and shaping of the child's persona for a better future.

The following information were shared during the FGDs by Mothers, Fathers and Caregivers on the project implemented by SPEECH team:

Improvements and significant changes in the caregiving environment:

The overall impression gained through the 12 FGDs among the experimental groups and the Control groups clearly indicate that there has been significant improvement in caring for children, pregnant women and lactating mothers by the husbands, mothers and fathers of the women, Mothers and Fathers in law, close relatives and neighbours. The Husbands and the Mothers in law are the people who top the list of those who care for the mothers and the children. Many Mothers acknowledged that this is a recent development that had happened in the last two to three years. From the sharing in the FGDs it was evident that the Mothers, Fathers and the Caregivers have gone through a change process in the recent years such as

- a) mothers having stopped scolding or beating their child
- b) fathers have stopped drinking and smoking for it will affect their child
- c) Caregivers have stated that unlike the past men of these days take a lot of responsibility and actively involved in the care for child by sharing the responsibility of the household chores in-order to enable their wives to give good care for their children.
- d) Overall there is a significant increase in giving quality time and being actively involved in the upbringing of the children.
- e) mothers do not go for work immediately after delivery as they had done earlier but they stay with the child, full time and care for them a closer look at the participants list of the FGDs signifies that 34 among the 41 mothers are home makers (at this point of their lives) and taking care of their children.
- f) fathers expressed that they spend significant amount of their time in supporting pregnant woman, the foetus in the womb (as they make it a point to talk to them daily) and the children.
- g) Taking the children out and showing them the external world had been expressed by fathers in all the groups as their prime area of contribution to the child's brain development and overall development. Both the mothers and care givers had also acknowledged this significant change among the fathers as a recent happening.
- h) A bonding between the mothers in law and the daughters in law through the foetus in the womb was another significant change observed among the people in these groups. For example, the Mothers in law taking care of their daughters in law giving them good nutritious food, ensuring that they do not have heavy work or sharing their workload are some evidences

- i) keeping the pregnant women happy so that, the brain development of their grand child will be better was a significant expression from the women and the mothers in law.
- j) All the three groups and the ICDS staff have shared a significant observation that the children born in these last two to three years have a better understanding of things.
- k) They respond well, they do what they ask them to do, they are very active and affectionate to the parents and others around them when compared to the elder children. They attribute this to the knowledge and skills they had gained in these two years project on Parenting and brain development of the child and the various learning they had put into practice.
- l) There is also a sense of regret among some mothers with elder children and the ICDS staff that they could not do all these things for their elder child.

Knowledge and skills on the important concepts on brain development and holistic development of the child:

In all the groups the Mothers, Fathers and Care Givers highlighted the fact that the Child's brain begins to develop while the baby is in the mother's womb. Both the mothers and the fathers expressed that touching the child in the womb and talking to them helps in building a bond with the child and the parents and it helps in the child's brain development. The learning that if children are happy their brains will grow well and the role of nutritious food is very essential for brain growth was strongly embedded in their understanding that was expressed as a significant change across all representative groups. According to them this information is learnt through this project.

Many mothers, fathers and care givers expressed as they spoke regularly to the foetus in the womb, they were very responsive. Some mothers said they got indication from their child when to eat. The fathers and the children were so close immediately after birth and the children responded to their instructions. Some mothers shared that the children were familiar with the music they played or songs they sung during pregnancy. They expressed that these children were so obedient and understood their instructions very easily unlike their elder children. Due to this many mothers felt that they should have known this information earlier so that, their elder's children would also get benefitted.

Some the fathers had very touching testimonies to share. A father expressed that his wife got conceived with twins and one was under weight. The doctors said its survival is difficult and gave some treatment but were not hopeful. He took the advice of an elderly man and brought a fruit from the mountains of Thiruvannamalai and gave his wife. The couple spoke with both the foetus in the womb. When the mother delivered the twin girl babies both were of equal weight. The doctors could not believe it.

Another father shared that his wife had a complication (high risk pregnancy) so they made it a point to talk to the foetus and say we love you and we want you and you will live with us we all will be fine. The father use to say “baby you have to bear all the pain and you should be strong and come to us”. The delivery was safe and when the child was a year old, she got Chicken Pox. The child was so strong and she bore all the pain and will be calm. Very rarely she groaned a little in pain. He was in tears as he narrated this saying “my child bore so much pain which I could not even think of anyone bearing at this small age she was so strong”. The caregivers expressed that they make nutrition balls and give the children. Payaru varieties (Lentils), dates, greens they given once in a week to the children. Maavu orundai, Kadala mittai, kondakadali, sprouted millets and cereals are prepared at home and given to the children. The children are given only mothers milk till 6 months, after 6 months we give kanji. Seem Paal was not given earlier, now it is given without fail to the children. Now a days the milk tins are not used for children. We make Sathu maavu and we give Ulundu khali and no more Ceralac for children this was expressed while they narrated the importance of nutrition for the children’s brain development.

Through these experiences the parents had shared it is evident that there were strong demonstrable efforts from the parents that has led to significant brain development and positive influence on the personality of the foetus in the womb and among children.

Care for Pregnant women and the brain development of the child:

A clear understanding was found among the Mothers, Fathers and Care Givers that pregnant mothers had to be taken care physically, emotionally and socially for the proper brain development of the child. The Care givers expressed that the husbands of the pregnant women and lactating mothers took good care of them as they understood that it has a strong influence on their child’s brain development and growth. They also mentioned that this understanding and practices such as extending all possible help in the doing the household chores were not prevalent earlier.

Majority of Fathers in all groups expressed that they took good care of their wives. The care they gave ranged from giving good nutritious food, reducing the work load, doing the household chores, allowing the mothers to take rest whenever required allowing them to sleep well and not hindering the sleep were some aspects. Keeping the mothers happy, buying them what they ask for or what they like, keeping them relaxed without any stress will help in the brain development of their child this was highlighted by many fathers. Some fathers expressed that they took complete care of their wives such as giving good food, accompanying them for medical check-ups, in the presence or absence of their in- laws. Some

fathers expressed that they made the pregnant women work, that means making them do what they can do and does not mean overburdening them.

All the above information shared by the care givers and the husbands were validated through experiences shared by the mothers. The mothers mentioned that it was their husbands who majorly took care of them during pregnancy and after child birth, by assisting in household chores, taking care of the new born in their absence and also taking care of the elder children. Many women expressed that their husbands touched the child in their womb and spoke to them and after birth the babies responded so well to their fathers.

The science behind the traditional practices of conducting the “Valaikappu function” (Baby shower) and adorning the pregnant women with glass bangles were understood well on two accounts the first being the mothers are reconnected with her maternal family and the celebration gives her more happiness and this will help the brain development of the child. Secondly, the chime of the bangles is soothing for the baby in her womb and the more the baby is relaxed and happy it will have a healthy brain development.

Increased knowledge on the importance of emotional wellbeing during pregnancy:

Not a single mother or father or a care giver expressed any issues or incidents regarding poor emotional wellbeing of the pregnant women. The knowledge on the connection between the mother’s emotional wellbeing and the baby’s brain development was very clear among all the parents and care givers in both the experimental and control groups.

Many fathers expressed that they do not talk back when the wives are emotional. They understand what they are going through during pregnancy and after recovering from the impact of the delivery. They acknowledge the physical and emotional conditions of the women and that they are in the recovering process. The fathers articulated need for taking good care of the pregnant women and not quarrelling with them. After delivery also if they quarrel, their child may see them and it will impact negatively of their child. The father expressed that they felt good taking care of their wives by providing them nutritious food, making them happy (some fathers had made multiple trips to their mother-in-law’s place) and have been with the pregnant women during all the check-ups and delivery. Two fathers expressed that they did not send their wives to their mothers’ place but they took complete care as they strongly believed that they will be able to give the best care to their wife and child.

The care givers, who were largely the mother’s in-laws, expressed that the husbands of this age take care of their wives very well. Pregnancy and child care that was considered to be a women’s forte is now

being shared by the husbands of this age. They gave examples of how husbands take care of the elder children as the wives are nursing the new born of the younger child, they cook, clean the homes and wash the clothes, remove soiled clothes and change new ones, bathe the child apart from playing with them and taking them out. This relieves the pregnant and lactating women from stress and helps preserve their positive emotional status. The mothers also mentioned these activities of the fathers as observed and articulated by the care givers.

Holistic child development and importance of learning through play

The Mothers, Fathers and Care givers expressed that they have learnt the following from the meetings conducted during this project period about the early brain development of the child and appropriate care for the child. The mothers and the fathers expressed that they learnt that the neurons will get connected and brain will develop if the child is happy, touching and talking to the child will make them happy. Mothers in the experimental group mentioned about the visual that showed the connections happening in the brain of the child. All the members in the experimental and control group emphasised that one should talk only good things when the child is in the womb so that, the child will listen to good words and will speak good things to others after birth. The fathers and the mothers expressed aspects such as encouraging the child and not to hit the child, scold the child, abruptly stop the child while he or she is doing something. Threatening or admonishing will affect child and the connections will stop happening.

The Mothers and the Care givers mentioned that the fathers are performing an active role in playing with the children. Many aspects adapting to new behaviours in upbringing of the child were narrated by all the three groups both in the Experimental and control groups such as

1. The children should not be scolded for throwing things
2. Allowing the children to play with sand and water, pouring sand and water and mixing them
3. Giving two boxes to the child and the child putting things into it and playing
4. Going out to the ground, parks, Balwadis and playing with other children
5. Making the child play on the floor and see different colours
6. Encouraging the child to scribble on the sand
7. Encouraging the child to see their face in the mirror and getting to know them was also mentioned as a way to introduce themselves through play were some examples. The Fathers in their sharing also acknowledged the fact that they take care regarding playing

with the child and helping the child learn through playing. Taking them out and teaching them the names of different things, vehicles, animals, plants and relationships (such as uncles, aunt, grandpa and grandma) were done by the fathers. Many fathers expressed that are keeping the children close to nature and allowing them to play freely. They expressed that it is necessary to become like the child or as a friend and play with the child. The mothers and fathers expressed their relatives are also motivated to play with the child and especially the grand parents are also doing this and they give time for the child without restriction. The fathers articulated a greater understanding that their activities will influence the child and hence they ensured that do not have any bad or unhealthy habits like drinking and smoking. Some fathers expressed after the birth of the child they have stopped drinking and smoking. They have strongly imbibed that giving nutritious food will influence the child's brain growth and that is their prime responsibility.

All the mothers, fathers, care givers in the experimental groups and in the control, groups expressed that they understood that they need to be loving towards their children. The father and mothers expressed that they need to interact with the child and give them quality time beyond all their daily work / job or stress and strain in day to day life. They expressed that they should not show their irritation as it will negatively influence the child's attitude and they will also become angry or irritable as they grow. Not putting pressure on the child, not controlling the child but allowing them to play freely is essential for their brain development this was conveyed by the fathers.

Except for the visual on the neurons getting connected in the brain of the child all other content with regard to the brain development of the child were understood and articulated well in the control groups. All the practices with regard to care for the pregnant women and lactating mothers with a purpose to help the brain development and overall growth of the child were well articulated in the control group of Mothers, Fathers and Care givers.

Enhanced Family support to pregnant women and lactating mothers

All women mentioned about the care and increased levels of support from their husbands which they have not received earlier. All mothers mentioned a significant change in the way their relatives and In-laws took care of them.

Support by Husband: Mothers in all the groups said that their husbands gave them nutritious food and will also make them eat. They gave fruits, vegetables and non vegetarian foods such as liver and Sothuvatti (Goats intestines) to maintain the Haemoglobin levels. In all group's women mentioned about their husbands taking them to the hospital for check-ups. They shared that their husbands bought what they liked, and were very loving and caring towards them. They also mentioned that they will help if they cannot do some work or find it difficult to do it. Women in two groups mentioned that their husbands will remind them about taking their vaccination as per the schedules.

However, three women in a group (EG) mentioned that till delivery their husbands cared for them so well but later it lessened and it shifted to their children later. The same women also mentioned that their husbands were so caring for their children that they will remind them to feed the child on time and sometimes they will be more anxious about the child than the mothers.

Overall the mothers and the Care givers expressed that husband are very helpful it was not like this earlier in our families at their birth places. A few women in an experimental group highlighted that all these changes came only after the birth of the child.

Support by Women's Mothers: Many women shared that their mothers cared well for them. The mothers cooked good food and they cleaned them when they were bleeding after delivery and fainted. It is our mothers who mainly cared for us. Our parents did a lot of things for us such as giving nutritious food, they took us back to our maternal homes and they took complete responsibility of all our work and they give us more rest.

Support by Women's Fathers: Few women in two groups mentioned that their fathers joined their mothers in taking care of them. A woman mentioned that her father was so loving towards her all these days and but now after the birth of the child it had shifted to his granddaughter.

Support by Mothers and Fathers in law: In all the three groups and in the control groups the women expressed that Mothers in law and Fathers in law took good care of them. Fathers in all groups also mentioned that their parents played an important role in caring for their wives and for their children as grandparents. They were so welcoming of their grandchildren. The mothers expressed that the in-laws who fought with them reconciled with them after the birth of the child, cared well for their children and for them. They even shout at the mothers if they raise their voice little bit to their child. The mother's in-law support by taking care of the children until the women finished all their work either job or household work. Mothers in-law bathe the child, change soiled dress, sing lullaby and put them to sleep. Some of the mothers and fathers expressed that they were living in a joint family, and the family members

specially the in-laws did not allow the pregnant women to do work. In addition, to their support of taking care of the elder children they also prepared the food the women liked. Another significant aspect about this care was that they will not blame the pregnant woman or lactating mother for not working.

Some sharing were very significant regarding the support of the Mother in-law. A mother in a group shared that her Mother in-law, only took her to the doctor for all the check-up and she was there by her side during her delivery. A woman shared that she was vomiting blood her mother in-law took care of her so well as if she was her own daughter. She cleaned her vomit and washed her soiled clothes. She was proud to express that still her Mother in-law cares for her and until now she does all the work at home. The experiences of a woman who did not have father or mother, expressed that her Mother in-law is like her mother. The mothers in-law in the EG and in the control groups mentioned about their husbands taking care of the grandchildren specifically buying them what they want. Very few fathers expressed the role of their fathers in taking care of their children.

By relatives and neighbours: The relatives and neighbours also cared for the mothers and their children. Some relatives had taken the women to the hospital and they were caring for them at their homes. Many women were delighted to share that their relatives (husband, in-laws and family members) did Valaikappu (Baby Shower) celebration for them. They gave 5 varieties of rice cooked deliciously. few mothers said that their Sisters had taken good care of them.

Among the mothers from all the groups only one mother expressed that the role of her in-laws was limited. Only one father among all the fathers group expressed that they made multiple trips to the woman's parents house during pregnancy and after child birth as they cared well for the mother and the new born child. One mother mentioned that her grandmother took care of her. Pertaining to the aspects of care for the pregnant women, lactating mothers there were no significant difference in the level of family support, people who supported the most. Experiences of the pregnant women and lactating mothers were quite similar in the EG and CG were quite similar.

Exclusive breastfeeding:

In all the experimental groups and control groups the Mothers, fathers and the care givers expressed that mother's milk is the best nutrient the child could ever get. Feeding of colostrum immediately after birth of the baby was emphasized in all the groups. Some of the care givers also mentioned that they did not feed the babies with colostrum earlier and they had avoided by giving water and sugar solution but now after understanding the importance of breast feeding these changes have happened.

Many of the group members perceived and articulated that mother's milk is good for the child's health and brain development.

Practice of exclusive breastfeeding was emphasized in all the groups and the most significant aspect was that mothers, fathers, care givers, ICDS staff who are the representative group of the community at large opined that exclusive breast feeding (not even feeding water) was the best option for the child's health. Though there are traditions such as the maternal uncle and the elders need to first feed the new born baby with water and sugar solution. The care givers expressed that they had successfully avoided those situations. Their statements were valid and real as it came from those who actually initiate these traditional practices. After delivery the women are not so active and, in those situations, husbands are mostly away from the mother and the baby. The mothers and mothers in-law are the people who are at the helm of these situations.

Improvements in health, hygiene and nutrition

Improved health was considered to be a prerequisite for proper brain development in the child. All women, fathers and care givers shared about practices such as keeping the house and the surrounding clean and without stagnant water, clearing all unnecessary things around the house, regularly flushing the drain, brushing the teeth, teaching children to wash hands (this included the elder children as well), bathing daily, keeping their nails clean, washing hands before carrying the child, washing the fruits before eating, washing the child properly after playing in the sand, cleaning them up after eating, removing soiled dresses and putting on clean dry clothes and sprinkling Dettol inside the house, were mentioned as aspects of maintaining hygiene that were expressed by the Mothers, Fathers and care givers groups. Some additional points which were shared in a few groups were wearing slippers while going out, washing the clothes with Dettol were mentioned as some of the practices to maintain hygiene. Few women in a group mentioned that they use Lifebuoy or Dettol soap for bathing children. A few fathers mentioned that changing the curtains and bedsheets to maintain clean and neat environment will lead to good hygiene and good health. Keeping the place clean will help to maintain hygiene and will keep the Children away from infections and mosquito bite. They mentioned it is important to prevent sickness like fever and loose stools. The parents take them to GH and also to PHCs if they are sick. The children are not given traditional medicines, but the parents mentioned that they give them "Neelavembu Kashayam". Even if they are given injections they give them Kashayam.

Most of the mothers, fathers and the Care givers mentioned that all resources such as water, toilets and space for maintaining hygiene were available. Women in a group expressed that do not have toilets and do not know how to respond if the baby asks for it. They also expressed that they cannot afford it. Women (mothers and care givers) in a few groups expressed that the toilets are now built by the government, but water scarcity is an issue and it becomes severe in summer

While discussing the aspects of safety the mothers, fathers and care givers mentioned the following points

- ÷ They do not allow people who are drunk to carry their children.
- ÷ They do not keep small objects within the child's reach
- ÷ They provide only boiled and cooled water for drinking
- ÷ Many fathers and mothers mentioned that they don't buy snacks from the shops as they are not safe, they give sprouted lentils and beans to their child.
- ÷ A father mentioned that he had closed all the tanks which were open in his house
- ÷ Drying the washed clothes in sunlight is good it can help avoid allergy in children

The fathers in all groups spoke about many aspects of nutrition and health than the mothers and the Care givers. The fathers mentioned that the growth of the baby in the womb is very important. Multiple Cereals sprouted and boiled, sauce made with Dhaal are good for the children's for maintaining their health. Feeding the mother properly is beneficial and providing vaccinations at the right time is also important, as it impacts positively on the child's health. Understanding between the couple (mothers and fathers) was very good in handling issues this was observed during many discussions. The mothers and fathers though in separate groups expressed that this understanding has helped them face issues. The fathers in different groups opined that if they spend some amount of money during pregnancy for good food and nutrition, it is actually lesser. If they do this now later, it will help them to save more expenditure for the mother and the child's health.

All the points shared in the Experimental groups were also shared by the control group members. In addition, the visits by the VHN were considered to be an important aspect of health in terms of receiving information and services. A father among the members in the control group mentioned that he takes care that his child does not play in the sand because it might cause some infection and he is more health conscious and makes the child wear slippers while walking.

Increased access to quality health care

All the mother, father and care givers expressed the importance of regular check-ups for pregnant women. Taking the pregnant woman for pregnancy confirmation, regular check-ups and maintaining the vaccination scheduled properly were highlighted in all the discussions. Intake of vitamins and iron and folic acid tablets by the women was highlighted and the husbands had played a key role in making the pregnant woman consume them regularly. This was mentioned by the mothers themselves and also by the care givers. health and Good nutritional intake lead to good health and good health leads to good brain development in the child as this was clearly understood the pregnant woman accessed health care services majorly with the support of their husbands or their mothers in-law. They also mentioned that they were educated by the nurses and doctors in the hospitals.

There were opinions among the care givers that the pregnant women, lactating mothers and their husbands do not take traditional medicines. They go for tablets and injections all the time. Few fathers differed in their opinion saying they do not encourage taking English medicine (Allopathic Medicine) they go for home remedies or traditional medicine as it is less harmful.

Fathers in a group mentioned that the Nurses were very good but they do not come to their homes now. They do not come even to give vaccinations. He mentioned that they have to go to the hospital by losing day's income. They also sited instances of making complaints about lack of visits by the VHNS, and this has a negative impact when the pregnant woman went there for check-ups or vaccination these VHNS make them roam around to different centres for vaccination and check-up giving some reasons for not doing it in their centre.

Immunization for pregnant women and lactating mothers and children:

In all the groups the mothers, fathers and the care givers were clear about the importance of vaccinations for the mothers and the child. They mentioned that they were educated at the hospitals by nurses and doctors and they were reminded by their husbands at home. Though a few fathers had a different opinion on taking Allopathic medication they did not differ in the aspects of taking Vaccinations at the prescribed intervals as they perceived it as a safety measure for the mother and the child. There were no instances of avoiding vaccinations or missing vaccinations for the mother or the child shared during the discussions in the Experimental group or the control group.

Involvement of public health personnel and existing Anganwadi workers (Existing government ECCD program workers):

The ICDS staff in the Experimental Group and the Control Groups expressed that they are using this information on early brain development and growth in children as it is related to their work and it is very useful. They share this information during Anaemia prevention meetings. The speech staff are also joining them during some of these education sessions. After the orientation on this module by SPEECH staff they are now able to educate the women and their families during home visits. They also shared that earlier, they will just fill the details in the card and come back but now they are happy that they are also talking to the women and educating them.

The value addition SPEECH intervention has brought is this useful information. They taught us more information about pregnancy and brain development in a very simple manner. The information on brain growth and brain development is the most useful information they have received so far. They mentioned that the SPEECH staff come to their centres regularly and they are very happy to have them there. As the information is shared through videos the parents and the care givers liked it more and it is better than conveying them verbally.

The ICDS staff mentioned that they are talking to the mothers daily and the SPEECH staff are also working with the same mothers. They are confident that the SPEECH staff are with them in working for the development of the children. The SPEECH staff make the information more acceptable to people, so we learn this technique from them. This we considered as a value addition through this intervention.

Key findings:

Knowledge gain among parents and caregivers on holistic child development and parenting

- ÷ All the women shared that the child's early brain development starts at the stage of pregnancy.
- ÷ Many of them expressed that they did not know this information earlier when they were pregnant with their elder children. They expressed that they could not do all these activities to support the brain development of the child.
- ÷ Whatever they could not do for their elder child they did for their younger child.
- ÷ They expressed that the younger child is more attentive could understand and comprehend what they are saying much better than the elder one they also said that

their younger child was obedient and responsible in nature when compared with the elder one.

- + They also expressed that they understood that playing in the sand and playing with water is not bad and the children need to play a with sand and water for proper brain development

Change in the knowledge, attitude and practice especially among fathers on parenting and its impact on holistic child development

Comparison of the experimental group and the control group revealed the following significant information.

- + The members of the experimental group expressed this information in the light of visuals such as seeing the children playing with sand and water and husbands taking their wives to the hospital was good which they like the most. While those in the control group expressed that they understood the importance of brain development right from the time of pregnancy and the aspects such as love and care of the husband the family members, relatives and neighbours. The members of the control group mentioned that they reflected based on the messages or information given by the field staff of SPEECH and they carried out the activities for the brain development of the child.
- + The premise that the field person who does the outreach is the most important tool of communication that fosters a deeper understanding, reflection and brings about change was evident. The calibre of the outreach staff in the control group villages was higher than the field staff who worked with the experimental group villages. This was quite evident that most of the mothers had a deeper understanding and reflected on the information shared.

The ICDS staff expressed many changes among the pregnant women in aspects such as

- + taking tablets, being regular for check-ups, and taking vaccinations without fail.
- + They showed great interest in the videos and now they talk a lot with their babies in their womb.
- + The fathers are spending more time with the babies they were not like this before it is happening only after watching these videos
- + The SPEECH staff educate all households and in common places hence awareness has increased among people.
- + All family members are welcoming the child and they are caring for both Boy and Girl children without any difference.

- + Even mothers with older children come to these meetings at the centre, listen to SPEECH staff and get educated.

ICDS staff who work in the Control group areas shared a few additional points apart from the points mentioned above. They shared that

- a) The women are showing the tingling sounds of the bangles to the child.
- b) They have stopped watching TV serials.
- c) They are reading books to increase the memory power of the child.
- d) They give the first milk “Colostrum” and are following 6 months of exclusive breastfeeding for the child.
- e) They are drinking moringa soup
- f) They are going for walking regularly.
- g) They are naming the vaccines such as BCG, OPV, Benta 1,2,3. Rotta virus 1,2 are some of the examples. They are registering at the Anganwadis voluntarily
- h) The family takes responsibility for giving good nutrition to the pregnant and lactating mothers.

They also expressed that they had been giving the same information through meetings for a long time but only now they see a lot of response and change in this regard.

With regard to the children they shared that

- + These children are active, they run around, they are intelligent and talk a lot.
- + they are responding well and they are interested in the environment
- + they are bold if their mothers are around
- + they have seen that talking to the child has helped the child to learn more.
- + These children understand and learn faster when compared to other children. One of the ICDS staff had observed this from her neighbour’s child, this mother has gone through this SPEECH intervention.

The pilot project on “Animated videos on parenting for early brain development – A pilot project in India”, has created significant impact among the parents, Care givers and the ICDS staff who work within the geographies of the Experimental and Control groups, covered through this project. The animated videos had made a significant impact in getting across key messages such as support for the pregnant woman from their husbands, in-laws and families. The concept of brain development of the child in terms of neurons getting connected in the brain of the child, proper nutrition for the mother and child, touching

and talking to the child in the womb has increased knowledge among the experimental groups. The verbal messages communicated through the module to the control group members have also been equally effective. It was observed that the calibre of the field staff who educated the control group members was found to be higher as per the expressions of the mothers, care givers and the ICDS staff.

The project has made a significant breakthrough in the pilot phase in assimilating usable information and motivating practices that leads early brain development of a child and support and care for pregnant women. The most important aspect is that it had enhanced the contribution quality time of the fathers with the child and their role in caring for the mothers. The impact in the pilot phase of the project calls for an expansion on two grounds,

- a) Increase the time period from 24 months to 36 months to cover more children through the project
- b) Expand the geography of the project to all the villages as it is very much needed

Few fathers, mothers and care givers have requested videos to be done using real characters instead of animated characters or by using the project beneficiaries themselves sharing their stories and information. Many mothers and fathers mentioned that it will be better if the videos are with them so that, they can watch them multiple times, this will ensure that the information is understood and retained well. The mothers and the caregivers among the Control group requested for videos as they knew that another co-hort have seen them this was due the close proximity of the villages where the experimental groups and control groups were covered. Only on probing women spoke about the songs. They opined that few songs can be retained and others could be changed.

FGD Tools:

Mothers with 18 to 24 months children

1. What changes happened in the caring for children in the last two years?
2. What gave you happiness as a person (can be qualified little bit for our reference, such as during pregnancy, after delivery, after one year of child's growth, in relationship with husband, your parents, in laws, other relatives and neighbours)
3. How did your family members care for you when you were pregnant, narrate from what you remember? a) what kind of help you received? b) Who gave it to you? c) Did you see any change among family members.
4. Who all were involved in caring (raising/ up bringing) your children, how they were involved? a) were there any difference how they were involved earlier and how they got involved now? b) If so what are the reasons for it?

5. For your child's complete growth in the first year what were the activities you were involved in? a) did you do anything new? b) did you see benefits in them
6. How did your husband and relatives cared for (raised) your child? (what were the activities they did, spending time with the child)
7. What did you learn specifically about the brain growth of your child? a) were you able to do something towards making it happen? b) Who helped you? c) did you see any benefits?
8. What did you do to for your child's health Hygiene and safety a) did you get the necessary facilities for that?
9. What and how did you teach your children?
10. How did the relatives like Mothers, Fathers, Grand Parents help in the growth of the children?
11. From where did you learn all these aspects you have shared so far (grand mother/ mother/ VHN/ SPEECH)
12. What is the meaning of brain development of a child (discuss what stimulates it)?
13. What shall we do for the child's brain development (discuss: How to stimulate it)?
14. What is necessary for the child's (fetus) early brain development (I think this includes pregnancy as well)
15. What are the essentials for a child's (baby) early brain development (This is pertaining to child birth and till 24 months)
16. What are the aspects you liked very much about the videos, and songs share those aspects
17. In your opinion what can be done to make the tool much better and effective (discuss about videos, songs and other aspects if they emerge)

***Last two questions are additional

Focus Group Discussion

Fathers with 18 to 24 months children

18. What did you learn regarding Child birth and up brining of a child?
19. What did you learn about the role of the family members regarding the above mentioned topic (Child birth and up brining)and what you were able to do?
20. How did you get involved in up-brining or raising the child? is there something you learnt newly and you did it? Were you able to do it? (can be asked as how well you were able to do it?)

21. According to your knowledge how does the involvement of the father helps in the child's brain development and what are those?
22. How you were able to help your wife when she was pregnant and were there any issues in helping her?
23. What were you able to do for your child's health Hygiene and safety
24. In your view how important are the relatives in the child's brain development. Talk about as husband and wife, as father and mother, father and child
25. In what ways you helped the child to learn?
26. What were those experience you felt so happy in the up-bringing your child
27. From where did you learn these concepts and information?
28. What is the meaning of brain development of a child (discuss what stimulates it)?
29. What shall we do for the child's brain development (discuss: How to stimulate it)?
30. What is necessary for the child's (fetus) early brain development (I think this includes pregnancy as well)

What are the essentials for a child's (baby) early brain development (This is pertaining to child birth and till 24 months)

Focus Group Discussion

Care gives with 18 to 24 months children

31. What did you learn about up-bringing of the child in the last two years? And specifically about the role of the Father, and regarding nutrition (this we need to record nutrition for the mother and the baby as mother's nutrition has a bearing on the babies brain development).
32. What all you did for up-bringing of children and now in this current period what is the difference?
33. What are the aspects one has to do for the complete growth of a child in the context of health and hygiene, nutrition and safety of the child?
34. What importance the relatives in the family have towards the growth and development of the child and how?
35. How far, the fathers role is important for the complete growth of a child?
36. What did you learn in these two years and where did you learn them?
37. In your view what do you think is the role of the family members in the brain development of the child?
38. What is the meaning of brain development of a child (discuss what stimulates it)?

39. What shall we do for the child's brain development (discuss: How to stimulate it)?
40. What is necessary for the child's (foetus) early brain development (I think this includes pregnancy as well)
41. What are the essentials for a child's (baby) early brain development (This is pertaining to child birth and till 24 months)

Focus Group Discussion 2

ICDS staff (EG)

SPEECH Office 17.10.2019

42. What have you observed about the methodology of education by SPEECH staff on the brain development of a child?
43. specific tools they used for educating?
44. What impact or change you saw in the pregnant women/ mothers/ their husbands, family members after they got educated on brain development of children?
45. What impact or change you are able to see in the children of these mothers who received this education
46. What value addition do you think this intervention had done to what you are already doing?
47. Are able to implement this process after your orientation. Do you wish to continue this process? If yes how?
48. What changes you would recommend or suggest with regard to the implementation of the program

