

The Effect of Tapovan Research Centre (Prenatal Education Centre) on mother and child

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ABSTRACT

The present paper aimed to study the effect of Tapovan Research center on mother and child. The effect was studied in the form of mental, physical, emotional and language development. Effect of some activities was also studied. To study data was collected from participants of Tapovan research center run by Children's University. The participant was selected by purposive sampling technique. There were 448 women in the sample. The result of data analysis revealed that the activities of Tapovan research center are effective for each and every types of development of the child. Some activities like yoga are also effective for the mother's health.

1. Introduction

Bhratiya culture is one of the earliest cultures of the earth. Our ancient Vedas, Upanisad and other grathas have the theory of holistic development of the human being from birth to death. We have a theory of punar janam. So in this way we have knowledge of before birth. The theory of Abhimanyu, a well-known example, is proof of the knowledge. India has a science of prenatal care and its effect on the holistic development of a person. Even western science now accepts the theory of Abhimanyu.

Our culture suggested that the effect of chanting Mantras is important during pregnancy. It affects a child's behavior. Western research of DeCasper, Anthony, Spence, Melanie (1986) showed that third-trimester fetuses feel their mother's speech sound and prenatal auditory experiences can influence postnatal preferences. India proved the importance of meditation on human development. Research of Chan, Ka Po (2014) verifies that prenatal meditation can influence fetal health. The study concludes the positive effects of prenatal meditation on infant behaviors and recommends that pregnancy care providers should provide prenatal meditation to pregnant women.

The research of Field, Tiffany, Diego, Miguel, Hernandez-Reif, Maria (2010) revealed that if mother is of younger age, less education and belongs from lower SES and the absence of a partner or a partner who was unhappy about the pregnancy or a partner who was depressed had higher depression and their newborns had lower gestational age and birth weight. A study of Zuckerman, Bauchner, Parker, Cabral(1990) showed that maternal depression is associated with a wide range of adverse outcomes for children, including poor mother-infant interactions at 3 months post-partum. The study population consists of 1,123 mothers and their term. During pregnancy, the more depressed mother's infants were 2.6 times more inconsolable or cry excessively. Prenatal stress (PS) has been linked to abnormal cognitive, behavioral and psychosocial outcomes in both animals and humans. Charil, Laplante, Vaillancourt, Cathy, Suzanne (2010). This

data suggest that exposure to maternal cortisol and psychosocial stress exerts programming influences on the developing fetus with consequences for infant stress regulation. Davis, Elysia, Glynn, Laura, Waffarn, Feizal, Sandman, Curt (2011).

All the above studies and our ancient philosophy shows the effect of mental health and different activities during pregnancy on the child. Children's University started Prenatal Care and Education center (Tapovan Research Centre) on the basis of ancient philosophy and Science. The Prenatal Care education center has a systematic program for pregnant women. The program is applied in a group as well as individual counseling. Research of Lathrop (2013) and Mazzoni, Carter (2017) verified that group prenatal care is more important than traditional prenatal care. In the present study systematic survey has been done to know the effect of prenatal care and education center on mother and child.

2. Specific objectives of the study:

The preset study will be conducted with focus of following objectives:

1. To study the effect of activities of Tapovan research center on parturition type.
2. To study the effect of activities of Tapovan research center on the mental development of the child
3. To study the effect of activities of Tapovan research center on the emotional development of the child
4. To study the effect of activities of Tapovan research center on the nature/disposition of the child.
5. To study the effect of activities of Tapovan research center on the physical development of the child
6. To study the effect of activities of Tapovan research center on the physical health of the mother during the prenatal period
7. To study the effect of activities of Tapovan research center on the language development of the child
8. To study the effect of music activities of Tapovan research center on child

9. To study the effect of yoga activities of Tapovan research center on mother during the prenatal period
10. To study the effect of craft activities of Tapovan research center on child
11. To study the effect of Garbh Samvad on child
12. To study the effect of Mathematical Activities of Tapovan research center on child

- Mental development of the child: academic achievement, disposition/ nature
- Language development of the child
- Physical health of the mother: Health of mother during the prenatal period and parturition type
- Effect of activities: Maths, Yoga, craft, music, garbh samvad etc..

3. Methodology

The main objective of the paper was to study the effect of prenatal education center runs by Children's University, Gandhinagar. Survey method was used for the study. To reach the objective data was collected from a participant from all over Gujarat. For the collection of the data, a questionnaire was constructed. The responses on the tool were objective type. Expected outcomes/ answers were given in the questionnaire. In the questionnaire, the participant has to answer on the bases of the comparison of their Tapovan child with another normal child/their other child. Data were analyzed and the conclusion has been derived on the basis of data analysis done by percentage technique. Thus the whole research was carried out by survey method. Further details of the methodology are given in the next part of the paper.

4. Participants

For the present study participants of Tapovan research (prenatal education) centers run by Children's University during the years, 2010 to 2017 were the population. There are 22 Tapovan research centers in all over Gujarat. All the participants of the centers were the population for the study.

For the selection of the sample, all the Tapovan research centers were selected. From each and every centers 20 participants were selected purposively in the sample. The purpose of the selection of the participants was the availability of the participants. In the present research participants were mothers. They may move to her in-laws' house so availability of the participant was the main concern for sample selection, so at last 448 participants were in the study.

5. Measurement

For the collection of the data, a questionnaire was constructed. The main objective of the present study was to study the effect of Tapovan research center on the child and mother. So there was two major part of the concern for tool construction: effect of the center on mother and child. So the effect of different activities and effect on different types of developments are the main components of the tool construction. After discussion with educationalist and Hon. V. C. Children' University, Prof. K.S. Likhia following elements were included in the tool.

- Physical development of the child

Keeping in the mind, above said criteria, items were constructed for the tool. As the academic level of the participants was not known, the formats of most of the items were closed type. Probable answers were given and the participant has to choose appropriate answers. For more details of development, there were open-ended questions too.

This is the minor research so, to know the development of the child, parents observations were considered as development, other complicated measurement techniques were not used. Participants were asked to compare their Tapovan Child with other normal child and to give the answer on the basis of the comparison. This type of data collection technique controls the variables like family climate, socioeconomic status, educational level of the parents and such other variables. The options given in the items were in colloquial language so the participant can give answer easily.

6. Data collection

For the collection of the data both e technique and manual technique were used. In e technique, google form was generated and posted it on their social media "whatsapp" group. There are 22 Tapovan research centers of Children's University in different districts of Gujarat. Some Tapovan research centers have their group. The link of the google form was posted on whatsapp group with clear instruction about filling form. Hard copies of the forms were posted to Tapovan research centers for the participant, who doesn't have social media or any other e platform for filling the form. Data was computerized and analysed by frequency and percentage technique.

7. Data analysis and Interpretation

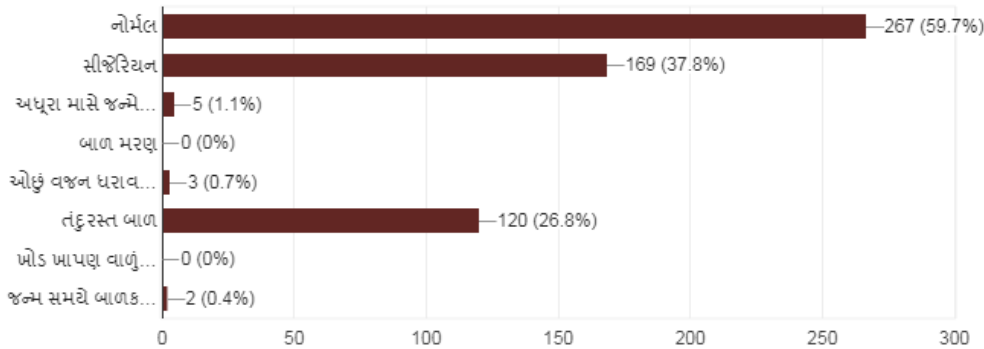
Data were computerized and analyzed by frequency and percentage technique. The details of the analysis of the data are given below.

Parturition type

Data regarding the effect of Tapovan research center on the type of parturition was collected. The item constructed for the data regarding parturition type was multiple choices. Participants are allowed to choose more than one option. The analysis of the data was presented in graphical form as under.

જો હા તો તમારા તપોવન બાળની ડીલીવરી કેવી હતી?

447 responses



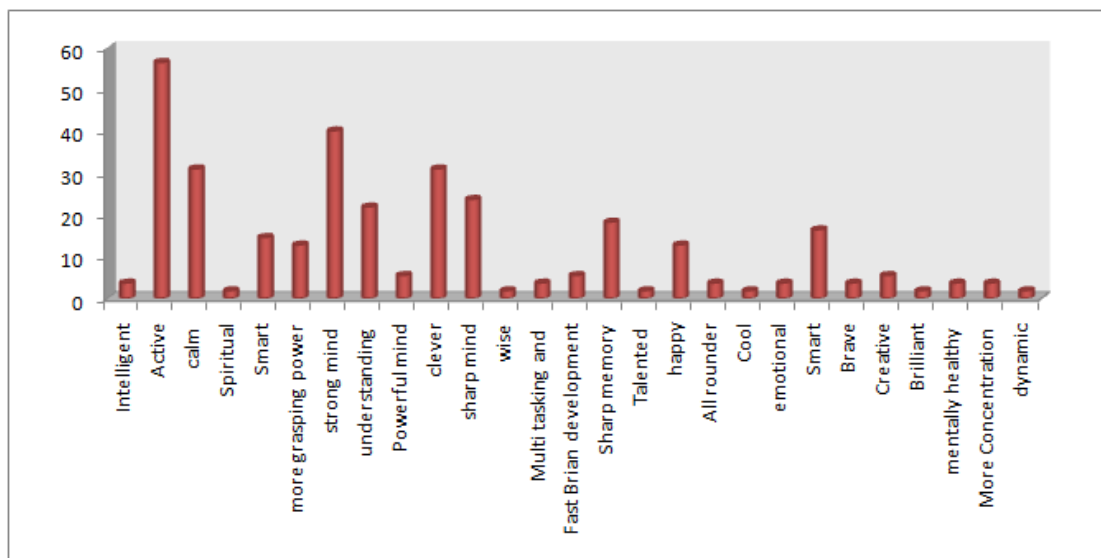
Above graph shows that type of normal parturition is 59.7%. And cesarean section 37.8% only five children were born before nine-month no mortality death is reported. Three children were underweight at the time of birth.

Mental development

Open-ended item was constructed for the data collection regarding the mental development of the child. Participants are asked to write their answer in an adjective or in sentences. Data were analyzed by frequency distribution. Here is analyzed detail of their answers.

Adjective	%	Adjective	%
Intelligent	3.64	Sharp memory	18.2
Active	56.42	Talented	1.82
Calm	30.94	Happy	12.74

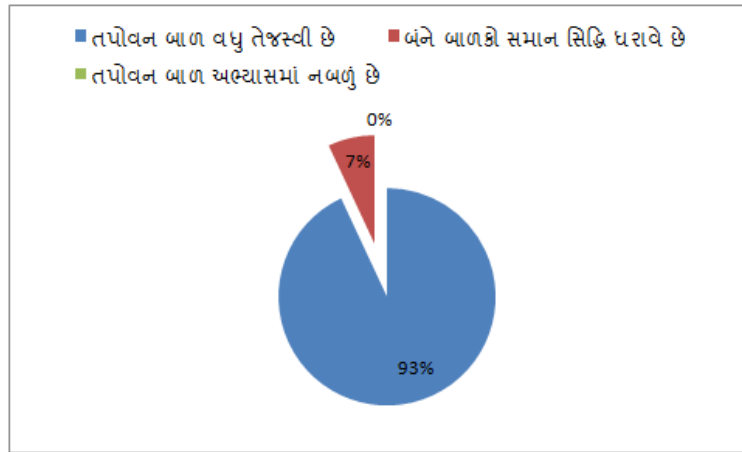
Adjective	%	Adjective	%
Spiritual	1.82	All rounder	3.64
Smart	14.56	Cool	1.82
More grasping power	12.74	Emotional	3.64
Strong mind	40.04	Smart	16.38
Understanding	21.84	Brave	3.64
Powerful mind	5.46	Creative	5.46
Clever	30.94	Brilliant	1.82
Sharp mind	23.66	Mentally healthy	3.64
Wise	1.82	More concentration	3.64
Multi tasking and	3.64	Dynamic	1.82
Fast brain development	5.46		



Above table and graph shows that each and every participant reported that their Tapovan child is mentally more developed than other children. They give their answer in different adjectives. They reported 27 types of adjective or synonyms of the adjectives given in the table. All that adjectives indicate a positive sign of mental development of Tapovan child.

Academic achievement

Effect on academic achievement of the child was also investigated during the research. Fixed answer type questions were given to the participant. The result of the collected data is given in the table below.

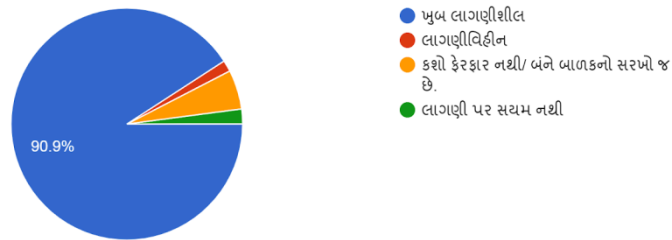


Above graph and table shows that 93% participant reported that their Tapovan child is brilliant only 7 % reported that both the children are the same. No one said that Tapovan child has poor academic achievement.

Emotional Development

The emotional development of the Tapovan child is also the concern of the present study. Close-ended questions regarding emotional development were asked to the participants. The result of the answers given by the participants is given in the following chart.

તપોવન બાળનો ભાવનાત્મક/ સાંવેગિક વિકાસ અન્ય બાળકના પ્રમાણમાં કેવો છે ?
383 responses

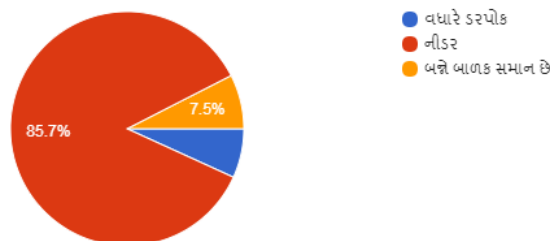


From the above data, it is revealed that 90.9% participant reported that their Tapovan child has more affection with them. Only 1.6% participant said that their child has no feeling for them, 5.5 % participant reported that there is no change regarding feelings in the Tapovan child is compared to other child and 2.1 % said that their child doesn't have control over their emotions.

Fear

Fear is a common emotion seen in the child. To know the activities of Tapovan research center on fear was also been studied. The close-ended question was asked to the participants. The result of the answers given by participants is given in the graph below.

તપોવન બાળમાં ડરનું પ્રમાણ અન્ય બાળક કરતા કેવું છે? (બાળ ૨ વર્ષનું હોય તો ચકાસવું)
280 responses



From the above graph, it is revealed that 85.7% participants stated that their Tapovan child is braver, 7.5% participants reported that both children are same in the relation

to fear only 6.8% reported that their Tapovan Child is more fearful.

Nature/disposition

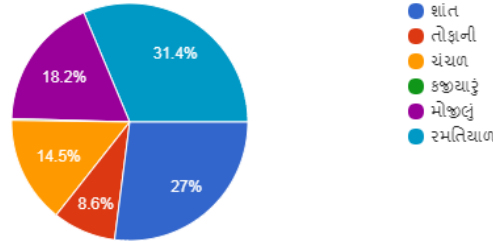
To know the overall nature of the child is also one of the objectives of the present study. A close-ended question was given to the parents. The answer to the question was in the form of some adjectives. Participants have to choose

adjectives which are suitable for their child. There were six options from them 4 are positive, 1 is nearby negative and one was totally negative.

The result of the question is given below in the chart.

બાળકનો સામાન્ય સ્વભાવ કેવો છે?

440 responses



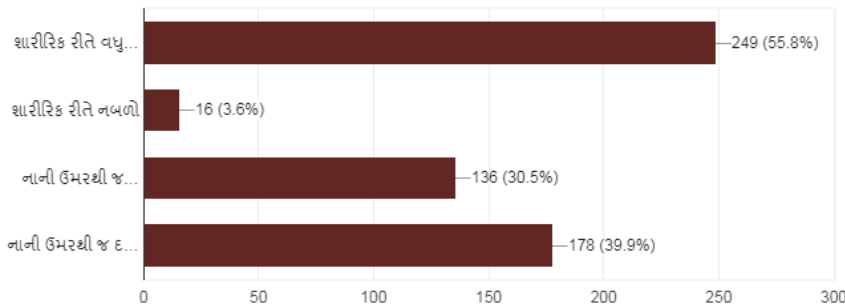
No participant reported the negative adjective, 31.4 % said that their child is jolly, 27% child reported that their child is calm, 18.2 % participant said that their child is cheerful in nature, 14.5 % participants said that their child is versatile and 8.6 % said that their child is naughty.

Physical development

To know the effect of Tapovan Research center on the physical development of the child was also one of the objectives of the present research. Data was collected on closed type questionnaire and the open-ended question was also asked. The result of collected data on the closed-ended question is given below.

તપોવન બાળનો શારીરિક વિકાસ અન્ય બાળની સરખામણીમાં કેવો છે?

446 responses



As per the analysis of the data, it is revealed that only 16 participants said that their Tapovan child's physical development is not well. It was 3.6 % of the total data. Apart from those 16 participants, all remaining participants said that their child has good physical health. As shown in above chart 249 participants said that their Tapovan child is physically stronger, 136 participants reported more psychomotor development of their Tapovan child, 178 participants said that their Tapovan child can use their all scenes skilfully from their childhood.

The open-ended question also has been asked to the participant about the physical development of the child. They gave their answers in adjective related to the physical development of the child. The analysis of the collected data is given below. Only 3.5 % of participants said that their child is not gaining weight easily other than this all remaining participants 96.5 % said positive about the physical growth of the child.

Adjective	%	Adjective	%
fit	2.5	All rounder	0.5
speedy	1.0	mature	0.5
strong	9.5	Flexible	0.5
Healthy	35.8	Easily get tooth	0.5
active	8.0	height is good	9.0
well developed	8.5	can carry the thing heavier than his own weight	0.5

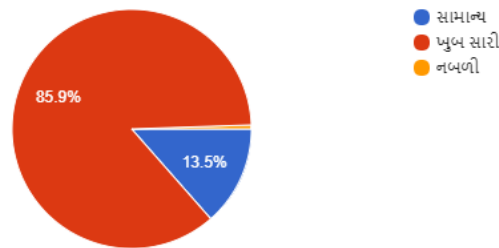
Adjective	%	Adjective	%
bold	0.5	good physical structure	13.4
more growth	2.5	energetic	0.5
learn waking in early age	1.0	smart	1.0
Normal	0.5	not gaining weight easily	3.5
Good immunity	0.5		

Effect on physical health of mother

The present study tested the effect of Tapovan on the physical health of the mother. The result of responses is given below.

તપોવનમાં નિયમિત આવવાના કારણે ગર્ભવસ્થા દરમ્યાન તમારી શારીરિક તંદુરસ્તી કેવી રહી?

185 responses



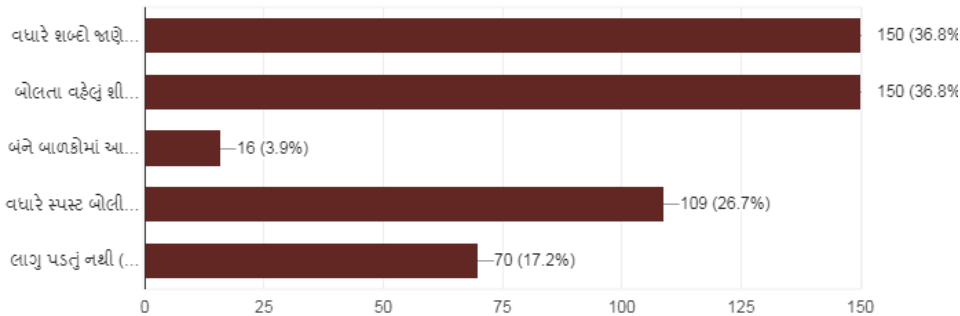
Above graph shows that 85.9 % mother's health was very good during pregnancy, 13.5 % participant said that their physical health is normal and 0.5% said that their health is not well during pregnancy.

Language development

To know the effect on language development was the objective of the present research. Data was collected through a fixed answer questionnaire. The result of the collected data is given below.

તપોવન બાળનો ભાષાકીય વિકાસ અન્ય બાળ કરતા કેવો છે?

408 responses



As per the above graph, 150 participants said that their Tapovan child knows more words 150 participants said that their child learns to speak early than normal child 16 reported both children are same and 109 participants said that their child speaks more clearly than other children.

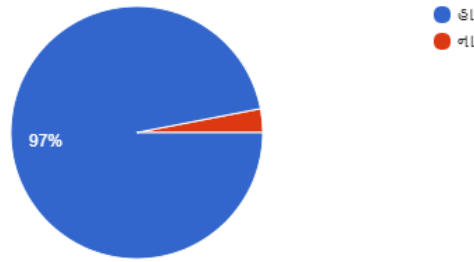
Music activities

As said in the first part of the paper that prenatal music has also an important role in the development of the child. The

fetus can hear and feel the mother's sound as well as surrounding sound entertained by mother. In the present study effect of the music suggested to the mother during her visit to Tapovan Research Centre has also been measured. Two questions were asked. The first question is there any effect of prenatal music on your child. The result is given below in the form of a chart.

શું તમે તપોવનમાં સાંભળેલ ગીતની અસર બાળક પર જણાઈ છે?

428 responses

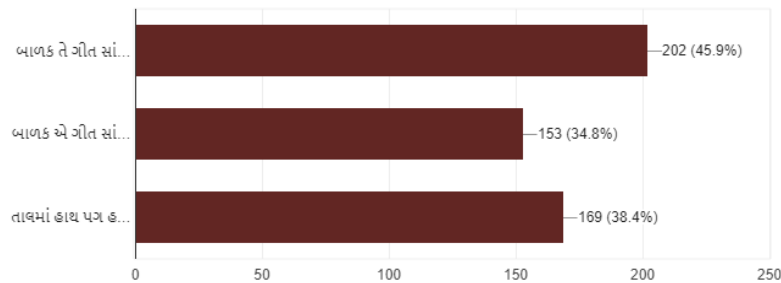


Above graph shows that 97% of women reported the effect of music entertained during pregnancy. To know the

details about the effect one more question was asked. The question was multiple choice type questions.

જો હા તો કેવી?

440 responses



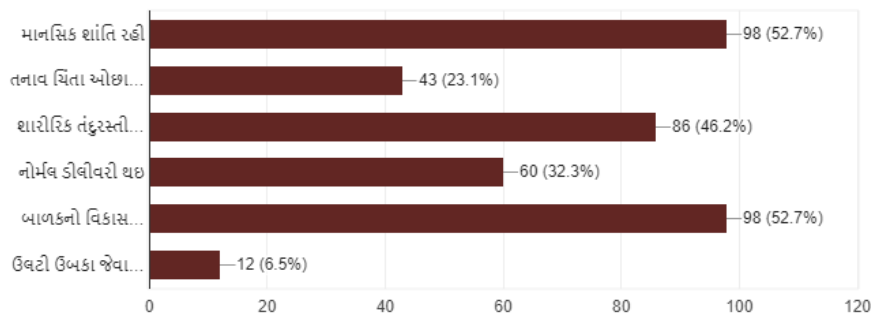
The result shows that prenatal music is preferable by the child and it was more reinforcing. A child becomes calm when listens to the music. Fall in the sleep while exposure to the prenatal music. Respond better while prenatal music is being played.

Yoga activities

Yoga and meditation are widely accepted and proved by many research studies. In this paper how yoga can affect during pregnancy was checked by asking a question. There where possible answers as options under the question. The participant can choose one or more options from given. The result of the data analysis is given as under.

તમે તપોવન દરમ્યાન કરેલ યોગ પ્રવૃત્તિની કોઈ અસર જોવા મળી?

186 responses



Above chart shows the effect of Yoga activity. 52.7% participant reported that due to Yoga they feel mental peace, 23.1 % said that they have less stress and anxiety because of yoga, 46.2 % reported that they stay physically fit due to yoga, 52.7 % observed that their Tapovan child is more healthy due

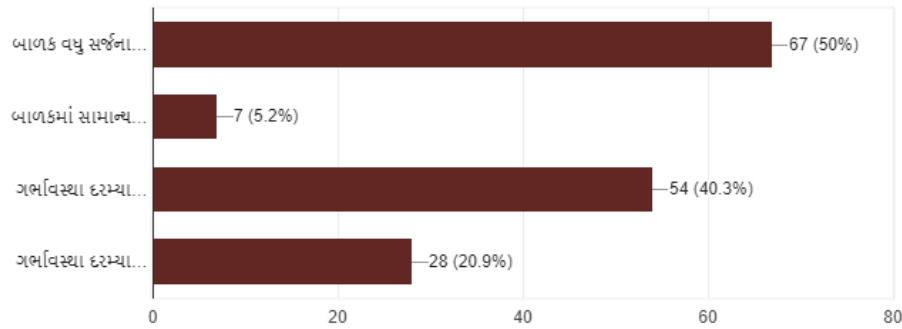
to Yoga, 6.5% of women feel that they have fewer problems like nausea and morning sickness because of Yoga.

Craft activities

The effect of craft activity was also one of the objectives of the research. A multiple-choice question was asked. The analysis of the responses is given below.

તમે કરેલ ક્રાફ્ટની પ્રવૃત્તિની અસર જોવા મળી ?

134 responses



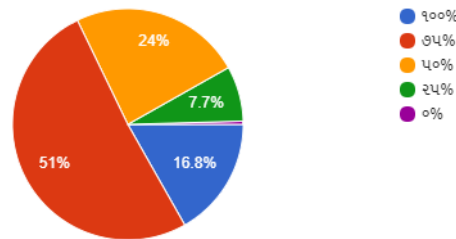
The effect was reported on the mother as well as on child. The Tapovan child is more creative as per the observation of 50% participant. Only 5.2 % reported that both children are same there are not any effect of craft activity, 40.3 % participants reported that due to these activities they stay healthy and 20.9 % participant reported that their children can respond better on the prenatal craft activity.

Effect of GarbhSamvad

Garbhsamvad is the specially designed activity of Children’s University. During Garbhsamvad mother talk with child (fetus). To know how many things of Garbhsamvad are accepted by a child or being observed in the child? The result of the collected data is given in the graphical form.

તમે કરેલ ગર્ભ સંવાદની કેટલી બાબતો બાળકએ ગ્રહણ કરી હોય તેવું તમને લાગે છે?

441 responses



The above graph revealed that 16.8 % participant reported that they observed 100 % things of garbhsamvad in their Tapovan child, 51 % observed that they felt that 75 % things of garbhsamvad was in their Tapovan child. 24 % said that 50 % of matters of Garbhsamvad accepted by Child, and 7.7 % said

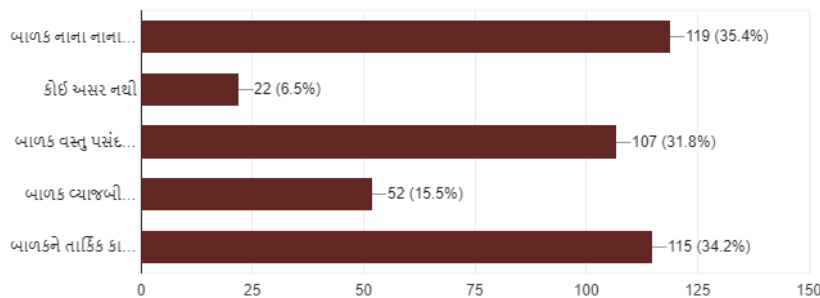
that 25 % matters accepted by the child and 0.5% said no effect of Garbhsamvad.

Mathematical Activities

To know the effect of mathematical activities one multiple choice type question was asked. The result of the analyzed data is given below.

તમે કરેલ ગાણિતિક પ્રવૃત્તિની તપોવન બાળક પર કોઈ અસર જણાઈ છે?

336 responses



The prenatal mathematical activities were effective as per participants’ observation. Their Tapovan child is more logical than other children, 31.8 % said that their child selects all the things logically, 15.5% observed that their child can make the

proper argument and as well as they understand when something is logically presented to them. Only 6.5 % participant reported that there isn’t any effect of mathematical activity.

8. Results and Conclusion

From the analysis of the data, the measure thing we can conclude is that the activities of Tapovan research center are very effective on both mother and child. The effect is shown in various aspects like Physical, mental, emotional, Language, etc.. Form the analysis we can say that about 60% reported normal delivery. As per the report of different parts of India the rate of C section delivery cross 50% in numbers. G Singh, E D Gupta(2013). Result of the present study shows that activities of Tapovan Research center are effective for normal delivery. A large number of participants indicate significant mental development of the child because of Tapovan. Most of the children are academically sound. Children of Tapovan Research center are emotionally sound as per the data interpreted. They are sensitive, emotional and brave as per the interpretation of data analysis. In the term of physical development, the Tapovan children were physically strong than their siblings. Effect of Tapovan Activities is significant on the physical health of the mother also. Another result we found is, Tapovan Child is more developed in the term of Language. He/She knows more words, can use language more effectively

than other children. Effect of music during the prenatal stage is also significant as most of the women said that their child love to hear the music, which he/she listened from the mother's womb. Effect of Yoga activity on mother and children is significant. The result of the study of Jiang, et al. (2014) revealed that yoga is effective in a lower incidence of prenatal disorder and stress, lower pain and useful for depressed women. We get a similar result in the present study. There was a positive effect of music on the newborn. The result shows that prenatal music is preferable by the child and it was more reinforcing. Same results we get in the present study in reference to craft activities. The activities done by the mother during pregnancy are reinforcing and preferable by toddlers. The research of Anthony et al. (1983) revealed that the passage of speech recited by women is more reinforcing to the new borne the same result we found in our study. Our participants reported the effect of Garbh Samvad (talk with fetus). We can conclude that prenatal care is effective for the development of the child as well as better pregnancy experience and for the health of the mother during and after pregnancy.

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