

A STUDY TO EVALUATE THE EFFECTIVENESS OF VALID INFANT ASSESSMENT GUIDE A READY RECKONER ON THE KNOWLEDGE REGARDING GROWTH AND DEVELOPMENT AMONG MOTHERS OF INFANT IN SMVCH & RC AT PUDUCHERRY

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ABSTRACT

A study to evaluate the effectiveness of valid infant assessment guide a ready reckoner on the knowledge regarding growth and development among mothers of infant in SMVCH & RC at Puducherry. Quantitative research approach with Pre-experimental – one group Pretest Posttest design was used for the study. Through Non-probability convenient sampling technique 60 mothers of infant were selected. Demographic variables were collected by using structured questionnaire. Pre test was conducted on level of knowledge regarding growth and development was assessed using semi structured questionnaire. It took about 10-20 minutes. And then educational intervention was given by using valid infant assessment (ready reckoner) guide. After 2 days post test was assessed for 10-20 minutes using same questionnaire. The collected data were analyzed based on the above mentioned objectives using descriptive and inferential statistic. The pre-test mean and standard deviation score was 8.83 ± 1.777 and post-test mean and standard deviation score was 14.95 ± 2.777 , the calculated 't' value of 11.844 which was greater than the tabulated value at $p < 0.001$ level. Hence research hypothesis H1 was accepted. The study revealed that valid infant assessment guide a ready reckoner regarding knowledge of growth and development among mothers of infant was effective.

Introduction

“Children are the only possessions we can take to heaven”

-Croft M.Pentz

The birth of a newborn is one of the most awe-inspiring and emotional events. The new human being affects the lives of the parents and also the other family members. Children's are the gift of the god. Children are the definition of unconditioned love and most precious treasure. They contribute to the one third of the global population. They are the basic resource for the future mankind. Children are vulnerable to all kinds of illness. This vulnerability is due to immature development of immune system. The infants are totally dependent on his or her care takers and unable to communicate directly his or her needs. Infancy is a very crucial period of child because of rapid changes that occur during this stage like brain growth, acquisition of various skills and physical growth. Development is a phenomenon peculiar to infant and children. Development specifies changes in functions (stages of maturity) of the organism. It refers to emerging and expanding capacity of an individual to provide progressively greater faculties in function and acquisition of variety of competencies for optimal functioning in a social milieu. The development of psychomotor functions follow progressive sequences along gross motor abilities, communication skills, fine motor skills and personal social behavior.

Infants constitute 2.92 percent of the population of **India**. As 30% of them are underweight (below 2.5kg) and 1/3rd of them premature (less than 37 weeks), they are even more prone to develop various health problems like infections. The vulnerable status of infants and additional problems in countries like India warrant special attention to infant health. IMR in India is currently estimated to be 48/1000 live births/ years (World Bank, 2013).

Compared to an IMR of as low as 5/1000 live births/ year in countries such as Japan and Sweden the IMR in India is still high. We have extremely low IMR states, states like Kerala (14/1000) while in 3-4 states IMR <50 (Karnataka, Tamil Nadu, Andhra Pradesh and Punjab) but we also have high IMR states like Uttar Pradesh (83/1000) and Orissa (96/1000). More than 200 million children under 5 years of age in developing countries do not reach their developmental potential. Besides biological determinants, family environments of young children are major predictors of cognitive and socio emotional abilities. Early identification and timely intervention in populations with established risk can go a long way towards improving their functional capacity.

Family Welfare and Maternal and Child health Department, Pondicherry (2015) stated that Infant Mortality Rate has declined from 22 (deaths per 1000 live births) to eleven according to the latest Sample Registration System. Times of India conducted study that Infant mortality rate(2016) is 40.5 deaths/1,000 live births. The Male IMR is 39.2 deaths/1,000 live births and female IMR is 41.8 deaths/1,000 live births.

Objectives:

- to assess the level of knowledge regarding growth and development among mothers of infant .
- to evaluate the effectiveness of valid infant assessment guide a ready reckoner regarding knowledge of growth and development among mothers of infant.

- to associate the level of knowledge regarding growth and development among mothers of infant with their selected demographic variables.

Materials and Methods

Study Design

Quantitative research approach with pre experimental - one group pre-test post-test research design was used for the study.

Population

The population of the study comprises of mothers of infant who were attending and admitted in pediatric outpatient department, postnatal ward, and pediatric ward.

Study Samples and sampling techniques

The sample for the study consists of 60 mothers of infant based on the criteria for sample selection. Non Probability - Convenient sampling technique was adopted for this study.

Development and description of tools

The research instrument for data collection was developed in both English and Tami after extensive review of literature and with the help of Experts opinion. Knowledge questionnaire was used for this study.

SECTION A: Demographic Variables of the mothers

Demographic variables of the mothers consists of age of the mother, educational status of the mother, occupation of the mother, family monthly income, type of marriage, type of family, type of delivery, age of the infant, birth order of infant .

SECTION B: Semi-Structured questionnaires regarding knowledge of growth and development of infants.

It consists of 20 questionnaires to assess the knowledge on growth and development. It includes cognitive, physical, motor, emotional, social and language.

Each correct answer was given the score -1 mark and for the wrong answer was given the score - 0 mark. Obtained score was converted into percentage and it was interpreted as follows. The maximum score was 20 and the minimum score was 0.

0-7 - Adequate knowledge

8-14 - Moderate knowledge

15-20 - Inadequate knowledge

SECTION C: Valid infant assessment guide (a ready reckoner)

Modified Tamil version of valid infant assessment guide (a ready reckoner) was used as a educational booklet. It included information regarding growth and development in simplified form which is easy understood by mothers.

Validity

Content validity of the tool was validated by one medical expert in HOD of Pediatrics and two experts in Child Health Nursing. Few corrections were suggested by the experts advised to add the birth order of infants. It was incorporated in the tool and it was finalized.

Pilot study

Pilot study was conducted in SVMCH &RC, Puducherry. The investigator obtained permission from concerned authorities prior to the study. The study was conducted from 09.08.2017 to 15.08.2017. Six mothers were selected by using Non Probability – Convenient sampling technique. No constraints were faced during the pilot study. The feasibility of the setting was confirmed after the pilot study.

Reliability

The reliability of the tool was established by inter-rater reliability method (with use of Spearman Brown Formula). The 'r' value obtained for knowledge of mothers regarding growth and development variability was 0.986 which indicates that the tool was highly reliable and considered for proceeding with the main study.

Data collection procedure

PHASE-I

Data collection was started after obtaining permission from the Principal and institutional research committee, and institutional higher authorities. The data collection was conducted from 11.12.2017 to 10.1.2018. Initially mothers were identified from the register in the outpatient departments, pediatric ward and postnatal wards in SVMCH &RC for data collection. Non probability convenient sampling technique was used to select 60 mothers of infant. The investigator introduced herself to the participant and obtained a written and oral consent from mothers of infant who were participated in this study. A report was established with the mothers of infant. The investigator assured the mothers that all the response would be kept confidential.

PHASE-II

A pre-test was conducted using Semi-structured questionnaire on knowledge of growth and development among the mothers of infant and the ready reckoner guide was given for the mothers.

PHASE-III

The post-test was conducted using the same questionnaire after two days. Maximum of 10-15 minutes was taken for the guide. The data was collected for the period of one month. The time of data collection was between 9 am to 3 pm.

Ethical consideration

Prior to the data collection the written permission was obtained from the Institution Research Committees. The study was conducted in SVMCH&RC, Puducherry after obtaining permission from the Medical Superintendent. The selection of sample was based on the inclusion criteria. Each individual subject was informed about the purpose of the study. Informed consent was obtained from the sample both orally and in written form. The subject had freedom to withdraw from the study at any time. No physical or psychological harm was caused. The samples were assured for the confidentiality of the information shared

Statistical analysis

Data was analyzed by using descriptive and inferential statistics.

- A. Descriptive statistics was used to analyses the demographic variables of the samples. The data was tabulated by using frequency and percentage distribution.
- B. Paired ‘t’ test was used to determine the effectiveness of valid infant assessment guide
- C. Chi square test was done to find out the association between the knowledge scores of mothers of infant with the selected demographic variables.

Results

With respect to age, majority of mothers 21 (53%) were between the age of 24-28 years, 4(6.7%) belongs to the age of below 34-38years. Regarding the educational status of the mothers, 27(45%) had completed the degree, 4(6.7%) were comes under Non formal education. With regard to Occupation of the mother 29(48.3%) were Working, and 14(23.3%) were house wife. With respect to the Income 24(40%) of them were earning Rs.10001 – 15000, 1(1.7%) of them were to Rs.5000 – 10000. With respect to the type of marriage 56(93.3%) were Non Consanguineous Marriage, and 4 (6.7%) were Consanguineous Marriage. As for as family type is concerned, 31 (51.7%) were nuclear family. and 29(48.3%)were joint family. With Regards to Number of children in the family 25(41.7%) were having two children’s and 2(3.3%) were having four child. Regarding the Age of the infant 25 (41.7%) were 8-12months, 15(25%) were comes under the 0 – 3months. Regarding the Birth Order 26(43.3%)were 1st order and 5 (8.3%)were 4th order.

Table – 1: Frequency and percentage distribution of level of knowledge regarding growth and development in pre and post-test among mothers of infant.

S. NO	LEVEL OF KNOWELDGE	PRE-TEST		POST-TEST	
		n	%	n	%
1	Inadequate	18	30	7	11.7
2	Moderate	32	53.3	22	36.7
3	Adequate	10	16.7	31	51.7

Table – 1: shows that in pretest, majority 32 (53.3%) of the mothers of infant had moderate knowledge and 18 (30%) mothers of infant had Inadequate knowledge and 10(16.7%) had adequate knowledge. but in post-test 31 (51.7%) of the mothers had adequate knowledge and 22(36.7%) the mothers of infant had moderate knowledge and 7(11.7%) mothers of infant had inadequate knowledge .

Table – 2: Comparison of Pre test and post test knowledge score among mothers of infant

Knowledge	Mean±SD	t value	p value
Pre test	8.83 ± 1.777	11.844	0.001 S*
Post test	14.95 ± 2.777		

Table – 2 : shows that mothers of infant, pre-test mean and standard deviation score was 8.83 ± 1.777 and post-test mean and standard deviation score was 14.95 ± 2.777 , the calculated 't' value of 11.844 which was greater than the tabulated value at $p < 0.001$ level. Hence research hypothesis H1 was accepted. It clearly shows that valid infant assessment guide a ready reckoner regarding knowledge of growth and development among mothers of infant was effective in increasing the level of knowledge among mothers of infant.

Discussion

In this study the result indicates that frequency and percentage distribution of pre-test knowledge score of mothers of infant was the majority 18 (30%) of the mothers of infant had inadequate knowledge and 32 (53.3%) mothers of infant had Moderately Adequate and Adequate 10 (16.7%). Whereas in post-test 31 (51.7%) of the mothers of infant had adequate knowledge and 22 (36.7%) the mothers of infant had moderate knowledge and 7 (11.7%) mothers of infant had inadequate knowledge. It seems that valid infant assessment guide a ready reckoner has improved the knowledge of the mothers regarding growth and development of infant.

Conclusion

This study findings conclude that valid infant assessment guide a ready reckoner has improved the knowledge of the mothers regarding growth and development of infant. So it will be helpful for the mothers to detect the growth and development of infant in case any growth abnormalities.

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