

Mother's Knowledge on Child's Developmental Milestones and Parenting Skills in Kanchipuram District, Tamilnadu - A Descriptive Cross Sectional Study

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ABSTRACT

Mothers' knowledge of child development is closely associated with the positive child developmental outcomes. Mother plays an important role in assessing the child's development on observations by identifying their appropriate developmental milestone. Past research reveals that there is a strong relationship between the demographic characteristic and Mother's Knowledge and it is strongly influence on the child nurturing development. In India, is very less known with regards to the level of knowledge that mothers exhibit about child development and parenting.

Methodology: A descriptive cross sectional study was conducted among 174 mothers who have children less than 3 years living in Kanchipuram district, Tamil Nadu, India. Participants were administered by KIDI. Descriptive statistical analysis was used to measure the means, standard deviations, and percentages. Chi-square test was used to compare the association between the groups.

Results: The results of our study showed that the level of maternal knowledge about child developmental milestones in Kanchipuram is relatively low. Among the developmental milestones, physical and language milestones have the least knowledge. And majority of parents have the average knowledge on parenting skills.

Discussion: The lacks of knowledge among the individual mothers of their child's developmental milestones were examined at a given point in time. One conceivable explanation for this finding is that mother's in Kanchipuram are not competently knowledgeable about their child's developmental norms and their milestones that may be associated to the lack of communication to child specialist. Therefore, a lack of exposure to such sources of information may deprive mothers from valuable knowledge about normative child development.

Keyword: Knowledge of Infant Development Inventory (KIDI)

INTRODUCTION

For past two decades the research carried out on maternal cognition such as beliefs, attitudes and knowledge as clearly revealed that the cognitive aspects of parenting strongly influences the mother-child interaction and the construction of the learning environment of the child was appropriate to their development. ⁽¹⁾ The recent research reveals the positive child

developmental outcomes were closely associated with the Mothers' knowledge of child development. ⁽²⁾

Mathew, 2012 explained that the mother concerns towards the child development involves the team effort of the family especially the child's mother plays an important role in assessing the child's development on observations by identifying their appropriate developmental milestone.

Paediatrician also provides a guide for identifying the infants at the risk of developmental delay and the researchers also proved the better developmental outcomes of the children as enhanced due to the better developmental stimulation provided by the mothers with increased knowledge of their child's development. ⁽³⁾

The research evidences as supported that the parenting as influenced the maternal knowledge. More appropriate learning environment for the children enhances their interaction towards their mother with better sensitivity/productivity for the Mothers who judge the abilities of their children more accurately. ⁽⁴⁾ The developmental competences of the maternal knowledge and their maternal expectations directly influence the type of environment provided to their infants. ⁽⁵⁾ The IQ development of the infants enhances through the structural environment provided by the knowledgeable and perceptive mothers. ⁽⁶⁾

The Past research reveals that there is a strong relationship between the demographic characteristic and Mother's Knowledge and it is strongly influence on the child nurturing development. Moreover more recent studies examine the individual knowledge of the child's mother regarding their child growth in relation to their ethnic differences. ⁽⁷⁻¹⁰⁾ Most of the recent studies were focused only countries which includes the United States of America, the United Kingdom and France. In India, is very less known with regards to the level of knowledge that mothers exhibit about child development and parenting.

Rationale of the Study

This study was carried to

- Estimate the mother's knowledge respective to their children's developmental marker and parenting skills
- To determine any association between this knowledge and social demographic variables (education level, occupational status, Number of children, Age of the mother)

- To determine is there any association between the mothers' knowledge and parenting skills.

METHODOLOGY

A descriptive cross sectional study was conducted among 174 (where prevalence rate 2.5%, ⁽¹¹⁾ with confidence interval 90%, margin of error 2%, with 5% non response rate) mothers who have children less than 3 years living in Kanchipuram district, Tamilnadu, India. The respondents were selected by using multi stage sampling. In first stage one block has been randomly selected by using simple random sampling from a total of 13 blocks. In the second stage from the selected block five villages has been selected by using simple random sampling. Finally, the respondent from those selected village has been selected using convenient sampling. The researcher was obtained the ethical clearance from the College's ethical research committee prior to the beginning of their project. The researcher verbally described about the project to each mother individually and gets concern from them. Mothers who concerned to take part in this study were asked to answer to the questionnaire. The questionnaire has questions from the following domains: socio demographic, maternal knowledge of child developmental milestones, maternal knowledge about the parenting skills

Maternal knowledge of child development

The measure of mothers' knowledge of child growth related was adapted from the Knowledge of Infant Development Inventory. ⁽⁵⁾

Thirty items were selected from the original 75 items of the KIDI (21 statements related to norms and milestones, and 9 statements related to parenting). The statement included in this study describe a infant's behaviour at a given point in time, including locomotors, sensory, and cognitive milestones, as well as parenting

responses regarding crying, feeding, and diapering.

Mothers answered to this statement by agreeing or disagreeing with each statement, or reporting they were not sure. A factual score was figure out for each item. For a subset of 17 statements that associated to norms and development markers, if mothers disagreed with the statements, they were asked further; if each statement was true either for the younger or older child. An underestimate and overestimate score was computed for these 17 items.

Underestimate- the mother's incorrect evaluation that the child is too young to be competent of an activity or task.

Overestimate- the mother's incorrect evaluation that the child is competent of an activity/task that is absolutely too challenging for them at their current age.

Three dimension scores were then figure out including the percentage of correct answers, the percentage of statement for which the respondent underestimated development, and the percentage of statement for which the respondent overestimated development.

Translation

The KIDI was translated into Tamil by a Linguistic professor who is expert in both English and Tamil. Once the questionnaire was transliterated in to the Tamil and that transliterated version was back-transliterated into English by another bilingual person expert in the university.

For comparison, the back-transliterated was reviewed with the original English version. Some modifications in wording of the Tamil were suggested and accomplish with the help of the back translator, and an acceptable Tamil version was reached by the translators and researchers. This final modified Tamil version was believed that adequate in terms of a transliterated adaptation of the original English inventory. Face validity and content validity of the questionnaire were assessed.

Statistical methods:

Descriptive statistical analysis was used to measure the means, standard deviations, and percentages. Chi-square test was used to compare the association between the groups. A 5% alpha was adopted to minimize the possibility of Type II error due to multiple comparisons.

RESULTS

Majority (55.2 %) of the respondents have children in the age group 2-3 years. Around 45 percent of mothers are in the age group of 25-30 years and only 5% are above 35 years. Around 39 percent of mothers are undergraduates and post graduates. About 46% of mothers have one child and 48% mothers have two children and only 5% of mothers have three children. Around 83% of mothers are home maker and 95% of children are attending the anganwadi centre. (Table 1)

Table 1: Demographic characteristics of the respondent

| Variable | Response | Frequency (%) n=174 |
|-------------------------|--------------------------|---------------------|
| Child age | 0-1 year | 14.4 |
| | 1-2 year | 30.4 |
| | 2-3 year | 55.2 |
| Mothers age | 20-25 year | 28.2 |
| | 25-30 year | 45.4 |
| | 30-35 year | 21.2 |
| | 35 year above | 5.2 |
| Mother's education | Primary | 10.3 |
| | Secondary | 29.3 |
| | Higher secondary/diploma | 21.3 |
| | Graduated | 29.3 |
| | Post graduated | 9.8 |
| No. of children | One | 46.3 |
| | Two | 48.3 |
| | Three | 5.2 |
| Mothers occupation | Home maker | 83.3 |
| | employed | 16.6 |
| Anganwadi center (n=96) | Yes | 94.7 |
| | no | 5.3 |

Level of mother's knowledge about Child development milestones

In figure 1 shows the percentage of knowledge score about the child developmental milestone among the mothers. About 50 % of mothers correctly estimated the child developmental milestones where 27% of mothers underestimate and 18% of mother overestimated the child development

Almost 5% of mothers were not sure about the child developmental milestones.

With respect to emotional milestones around 70% of mother correctly estimated. The physical (27%) and language (24%) are highly underestimated by the mothers (fig 3), where cognition milestones are highly overestimated by the mothers (fig 4)

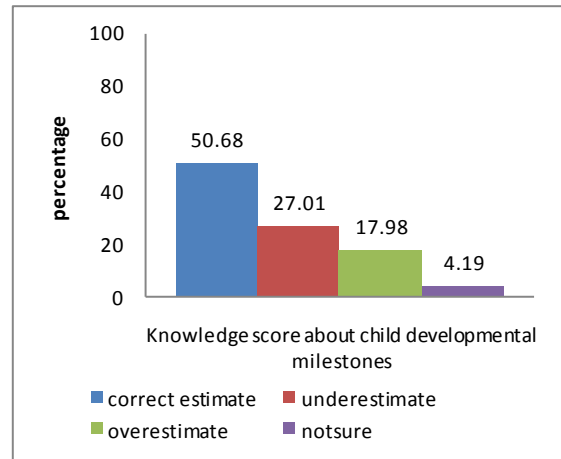


Fig 1: percentage of knowledge score about child developmental milestone among mothers

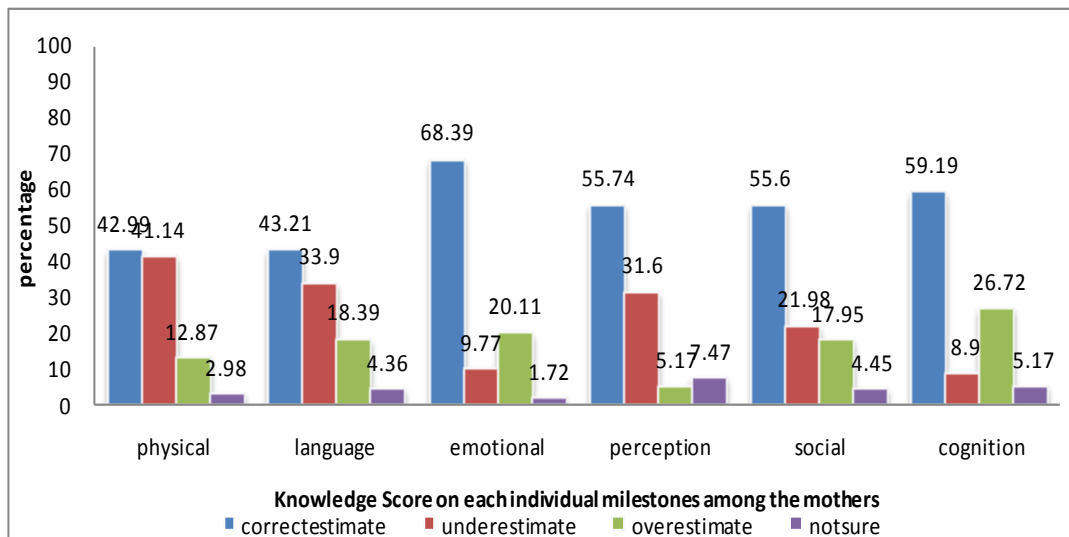


Fig 2: percentage of Knowledge score on each individual milestones among mothers

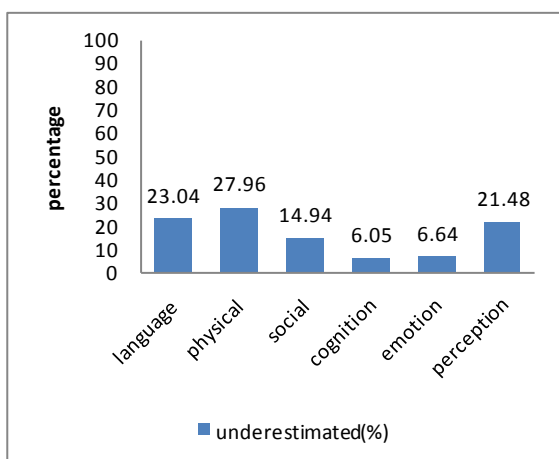


Fig 3: Percentage of knowledge score who are underestimate for each individual developmental milestones among mothers

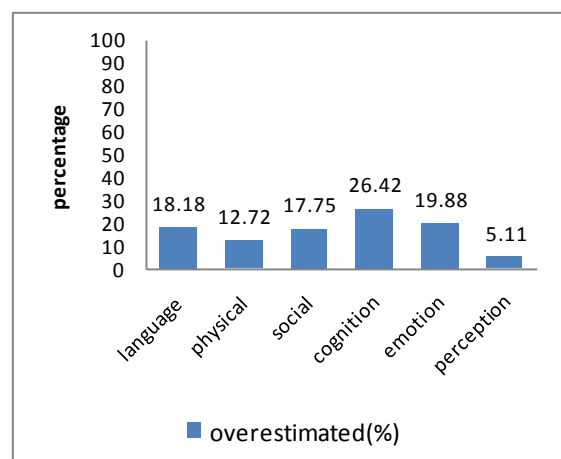


Fig 4: Percentage of Knowledge score who are overestimate for each individual developmental milestones among mothers

Maternal Knowledge on Parenting Skills

Around 18% mothers have good parenting skills and 65% of mothers have average

knowledge about the parenting skills where 17% have poor knowledge on parenting skills. (fig 5)

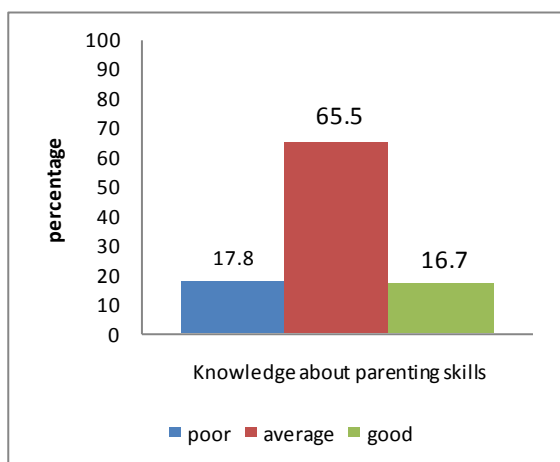


Fig 5: Percentage of Knowledge about Parenting skills among mothers

Relationship between sociodemographic characteristics and maternal knowledge of child Development milestones and parenting

Chi-square analysis was accomplished to find out whether the sociodemographic variables such as age, education, occupation, number of children, and attending anganwadi centre had any effect on Parental knowledge of child development markers and parenting skills. Results revealed that there was no significant association on maternal knowledge about child development markers with respect to mother's age, education, occupation, number of children and attending anganwadi centre.

Also mother's age, occupation, number of children and attending anganwadi centre were not significantly associated with maternal knowledge about the parenting skills. However mother's education had a significant effect on the mother's knowledge about the parenting skills. (Chi square=16.816, p value=0.032)

DISCUSSION

The results of our study showed that the level of maternal knowledge about child developmental milestones in Kanchipuram is relatively low. About 51% of mother's are

correctly estimated the child developmental milestones. Almost 49% of mother's were lacking the knowledge about child developmental milestone where 27% of mother underestimated the child development where 17% of mother's are overestimate their child development. Among the developmental milestones, physical and language milestones have the least knowledge. Major parents underestimate the physical and language milestones. Major parents overestimate the cognition milestones.

The lacks of knowledge among the individual mothers of their child's developmental milestones were examined while understanding their typical behaviour at a given point in time. One conceivable explanation for this finding is that mother's in Kanchipuram are not competently knowledgeable about their child's developmental norms and their milestones that may be associated to the lack of communication to child specialist. Therefore, a lack of exposure to such sources of information may deprive mothers from valuable knowledge about normative child development.

In the present study, we examined the contribution of the mother's sociodemographic characteristics to the maternal knowledge of the child's development milestones. We found that there is no significant contribution of socio demographic characteristics in our study.

The result evident that the 66% of parents have the average knowledge on parenting skills where 18% of mother's have good knowledge on parenting skills and 17% of mother's have poor knowledge on parenting skills. In this present study we examined the contribution of mother's sociodemographic characteristics to the knowledge regarding their parenting skills. The results showed that mother's education was a significantly associated with the Parenting Skills. So it possess that more educated mothers tend to access more information regarding their Parenting skills.

Limitation of this study

Only two domains of maternal knowledge regarding the child's development were evaluated. In present study we took a sample only on Kanchipuram district, so we cannot able to generalize it all over the state of Tamilnadu, India.

Future Direction:

The other domains of maternal knowledge regarding the child developmental processes and its principles need to be evaluated systematically and to be generalized in further research.

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