Knowledge and Attitude of Mothers regarding Nocturnal Enuresis and its Management among Primary School Children

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Abstract
A descriptive study was conducted on knowledge and attitude of mothers regarding nocturnal enuresis and its management among primary school children. The target population was mothers of primary school children. Convenient sampling technique was used to select 100 mothers of primary school children at selected areas of Hassan. The self administered structured questionnaire and attitude scale was designed to assess the knowledge and attitude regarding nocturnal enuresis and its management among mothers of primary school children. Overall findings of the study clearly showed that 55 percent of the mothers had inadequate knowledge and 91 percent of the mothers had neutral attitude regarding nocturnal enuresis and its management. There is a positive correlation between knowledge and attitude (r = +0.184). There is no significant association between knowledge and attitude with selected socio demographic variables. Regarding the demographic variables, 51 percent of them were in age group of 26-30 years, all were Hindus and married, majority (81%) of sample had secondary education, 76 percent of samples were housewife, majority (75%) were belongs to nuclear family, 72 percent of samples had two children, and 78 percent of them had information from relatives, friends, neighbors. The overall mean knowledge and attitude scores were 48.30 percent with SD 3.441 and 68.65 percent with SD 5.81 respectively.

Key words: Nocturnal enuresis, Knowledge attitude, Bed wetting.

A child is a human between the stages of birth and puberty. School age children usually have smooth and strong motor skills. However, their coordination, endurance, balance and physical abilities vary.

The total population of primary school children in world is 2.2 billion. Whereas in India it is 1.5 million. In Karnataka population of primary school children is 68.5 lakh. Among these 6.8 percent of primary school children are suffering from health and behavioural problems (Poverty Facts, 1998).

The common health problems are malnutrition, infectious diseases, intestinal parasites, diseases of skin, eye and ear, dental caries, genito-urinary diseases. The main behavioural problems are antisocial problems, personality disorders, educational difficulties, habit disorders like enuresis, nail biting, thumb sucking. Among these problems enuresis is the most common in school children (Cox & Oroghan, 2001). Enuresis is nocturnal bedwetting for at least two nights per month in children 5 years (Riccabina, 2010).

A study conducted on knowledge and attitude of mother on bed wetting problem in Derby shows that high value of children with enuresis are receiving the care from the hospital and remaining children are staying back in home. Results showed a high value being given to the specialist nurse led service by parents and children and a high amount of conflicting, non evidence-based advice given to parents and careers from various health professionals prior to referral to the specialist nurse. The results of the study led to the formulation of recommendations to improve services available to children with enuresis, their parents and carers.

Enuresis problem is managed primarily within the family especially by mother, behavioural therapy as the first choice of treatment (Lauver, 1983). Mother can make the child to build self confidence, motivate them towards independent control. Children need to believe that they are helping themselves and to sustain feelings of confidence and hope mother need to have knowledge about restriction of too much of water and drinks at bed time and waking him up once or twice to void at night. Mother need to spend at least half an hour of quality time with the child (Rosenfeld & Jerkins, 1991).
The study was conducted with following objectives.
• To assess the (a) level of knowledge of mothers regarding nocturnal enuresis and its management and (b) attitude of mothers regarding nocturnal enuresis and its management among primary school children.
• To develop and administer an information booklet regarding nocturnal enuresis and its management.
• To find the correlation between knowledge and attitude of mothers regarding nocturnal enuresis (a) and its management among school children, (b) with selected demographic variables.

Need for the study: Home is a place not only of strong affection, but of entire unreserved. The family is founded on love. The love of a family is life’s greatest blessing. Family may begin with opening ceremony to signal the start of the daily routine and follow a schedule curriculum. Usually parents provide supervision and help. A school is an institution designed for the teaching of students under the direction of teachers. The school implements value-based educational practices, thereby helping to mould children into good citizens (Rogers, 2003).

Bed wetting is a frustrating problem experienced by a significant number of children. At 5-12 years of age the prevalence of enuresis in worldwide is 15-20 percent. More than 50 percent of these children show day time bed wetting. Around 1 in 6 in 5 year olds, and at least 1 in 50 in 7 years old boys and 1 in a 100 in 7 years old girls with around 0.8 percent of girls and 1.6 percent of boys aged 15-16 years wetting at least once in every 3 months. The prevalence of bed wetting was slightly more frequent in males than females and also associated with positive family history of enuresis. In India prevalence of enuresis at the age of 5 year is 20 percent and at the age of 10 year is 5 percent. At the age of 12 years the prevalence is 8 percent for males and 4 percent for females (Wikipedia, 2012).

In a study conducted on prevalence of enuresis presenting to a tertiary paediatric outpatient service and to assess parental recognition of enuresis in Australia, of the 277 participants aged 5-16 years, 36.1 percent (n=95) were identified as enuresis by clinician-based scoring method compared with 14.1 percent from parental reporting (p=0.003). The result showed that prevalence of enuresis was high among children as assessed by clinicians despite poor identification by parents (Mc Grath et al, 2008).

Some predictive factors of enuresis are longer duration of sleep in infancy and a slow rate of physical development in children (Pillitteri, 1999). Other children, such as those with attention deficit hyperactivity disorder (ADHD) may have occasional “accidents” when they become so involved in play that they are unaware of a full bladder or “forget” to empty their bladder (Gupte, 2007).

Coming across with the similar cases in the clinical postings, observing the results of the above studies and with personal interest the investigator felt that there is a need to assess the knowledge and attitude of mothers on enuresis and to create awareness among mothers of primary school children regarding its management.

Review of Literature
Prevalence and associated factors: A study was conducted on prevalence and factors affecting enuresis among primary school children in Mumbai. Parents of 1473 children aged between 6-10 years were given a self administered semi structured questionnaire. Socio-demographic profiles, enuresis data, medical and psychiatric disorders and family stressors were collected. The result showed that response rate was 89.22 percent. The overall prevalence of enuresis was 7.6 percent. Enuresis was more common in boys. A positive family history of enuresis was seen in 28.5 percent, 14.29 percent of children had day time wetting. Only 24.11 percent of parents had taken their child to a doctor for the problem. This study reports on the prevalence of enuresis in primary school children and stressor on the need for parental education and awareness about this problem (De Sousa et al, 2007).

In a study on knowledge and attitude of parents towards enuresis in children attending outpatient unit of a tertiary hospital in south west Nigeria, a total of 348 questionnaires were administered to parents of children between ages of 12-180 months. Result showed that at age of 36 months, 86 (51.8%) and 34 (20.5%) out of 166 children had achieved enuresis at day time and night respectively. It was significantly related with low maternal education (p=0.022) and low social class (p=0.009); 24 (26.7%) children had nocturnal enuresis; 4 (4.4%) of these had diurnal enuresis. All parents were aware about enuresis but only 9.8 percent correctly identified it as a health problem. A statistical significant proportion of the parents desired to discuss with health practitioners (p=0.015). The researcher concluded that there is a high prevalence of enuresis which is not reported. Therefore health worker should do routine enquiry about enuresis among children (Senbanjo et al, 2019).

A study conducted on knowledge and attitude of mother on bed wetting problem in Derby showed
that high number of children with enuresis are receiving the care from the hospital and remaining children are staying back in home. Results showed a high value being given to the specialist nurse-led service by parents and children and a high amount of conflicting, non evidence-based advice given to parents and carers from various health professionals prior to referral to the specialist nurse. The results led to the formulation of recommendations to improve services available to children with enuresis, their parents and carers (Cox & Oroghan, 2001).

Management of Nocturnal enuresis: A study on enuresis treatment in France was survey-based. It was carried out among 3803 schoolchildren (5-10 years of age). The prevalence of NE was 9.2 percent; 66 percent of mothers of children with moderate to severe NE consulted a doctor; 20 percent of these doctors did not prescribe treatment, and the majority offered advice on lifestyle and diet in the first instance. The treatments proposed consisted of drugs rather than alarm therapy. The opinions of the experts varied widely, indicating a need for a consensus about the management of NE in France (Lottmann, 1999).

Another study on comparative safety of oral versus intranasal desmopressin for the treatment of children with nocturnal enuresis assessed the safety of desmopressin in children 18 years or younger with nocturnal enuresis with a focus on the relative safety of the oral compared with the intranasal formulation. A total of 21 clinical trials on desmopressin use in children with nocturnal enuresis were identified. There were no reports of hyponatremia. A total of 21 publications were identified that included 48 case reports of hyponatremia in children with nocturnal enuresis. In all case reports patients were treated with intranasal desmopressin. Post-marketing safety data included 151 cases of hyponatremia in children with nocturnal enuresis, of whom 145 were treated with intranasal desmopressin and 6 were treated with the tablet formulation. The study concludes that data suggest that there is a decreased risk of hyponatremia with oral desmopressin compared with intranasal desmopressin (Robson et al, 2007).

Materials and Methods

A quantitative approach was used with descriptive design. The study was conducted at Bhuvanahalli PHC at Hassan. The target populations for the study were mothers of school children appearing at Bhuvanahalli PHC at Hassan. Convenient sampling technique was used to select the sample. The total samples under the study were 100 mothers of primary school children at selected areas of Hassan.

Socio-demographic variables like age, religion, education, marital status, occupation, family income, number of children, type of family, history of enuresis, and source of information were considered for the study. The data collection was made through self administered structured questionnaire and attitude scale which was designed to assess the knowledge and attitude of mothers regarding nocturnal enuresis and its management among school children.

Description of the tool: The tool consists of a self administered structured questionnaire. It is divided into 3 parts. Part I of the tool consists of questions related to demographic data consists of 10 items. Part II consisted of items related to knowledge regarding enuresis and its management among mothers of primary school children. It had 26 items. Part III consisted of items related to attitude regarding enuresis and its management among mothers of primary school children. It is five-point Likert scale with 16 statements; among these are 8 positive and 8 negative statements and having 5 points that help in assessing their attitude.

Scoring of items: There were 26 items for assessing level of knowledge. Each item has four options with one accurate answer. The score for correct response to each item was “1” and incorrect response was “0”. Thus for 26 items maximum obtainable score were 26 and minimum was zero.

There were 16 statements, 8 positive and 8 negative statements. Each statement has five options. In positive statements the score for strongly agree, agree, uncertain, disagree, strongly disagree response to each statement was “5, 4, 3, 2, 1” respectively and in negative statements the score for strongly agree, agree, uncertain, disagree, strongly disagree response to each statement was “1, 2, 3, 4, 5” respectively. Thus for 16 statements maximum obtainable score were 80 and minimum was 16.

After the validation the tool was subjected to test for its reliability. The reliability of the tool was computed by split half Karl Pearson’s correlation formula (raw score method). The reliability coefficient of knowledge was found to be 0.79 revealing the tool is feasible for administration for the main study.

Ethical clearance was obtained from the concerned authorities and consent was obtained from participants. Confidentiality of the subjects was maintained.

Procedure for data collection: Formal permission was obtained from the medical officer the Bhuvanahalli PHC at Hassan. The data was collected from 8 June 2022 to 9 July 2022. The data obtained was analysed based on the objectives of the study using descriptive and inferential statistics.
Pilot study: After having obtained formal administrative approval from the Kadalu village at Hassan, participants (10) were informed about the purpose of the study and consent was taken from them. The pilot study was conducted on 2-5 May 2022. Data was collected from 10 samples with the help of the self administered structured questionnaire & attitude scale.

The subjects selected for pilot study were excluded from the main study. The pre-testing of the self administered structured questionnaire was done to check the clarity of the items, their feasibility, reliability and practicability. It was administered to 10 mothers of school children. The samples chosen were similar in characteristics to the population under main study. It was found that each respondent needs 50 minutes to complete the self administered structured questionnaire and it was found that the items were simple to comprehend. The mean percentage knowledge score is 62.29 percent. The mean percentage attitude score is 68.75 percent. The findings of the pilot study revealed that the study is feasible.

Results

Distribution of samples with respect to socio-demographic variables is at Fig 1. The findings of the study are presented under the following headings: Distribution of samples according to socio-demographic variables; Aspect wise & overall distribution of knowledge and attitude scores; Correlation between knowledge and attitude scores; Association between knowledge and attitude scores with selected demographic variables.

Aspect wise & overall distribution of knowledge scores

From Table 1 it is observed that the highest (60) mean percentage of knowledge score was obtained in clinical manifestation of enuresis, followed by 50.63 mean percentage in management and prevention of enuresis. However, the overall mean percentage of knowledge score was found to be 48.307 and standard deviation as 3.441 among the samples.

Table 2: Distribution of samples according to knowledge level on enuresis and its management (N=100)

<table>
<thead>
<tr>
<th>Knowledge level</th>
<th>Classification of samples</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate (&lt;50%)</td>
<td></td>
<td>55</td>
<td>55</td>
</tr>
<tr>
<td>Moderate (50%-75%)</td>
<td></td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td>Adequate (&gt;75%)</td>
<td></td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 2 reveals that majority (55%) of samples had inadequate knowledge followed by 42 percent of those samples who had moderate knowledge and remaining 3 percent had adequate knowledge regarding enuresis and its management among mothers of school children.

Table 3: Distribution of samples according to attitude level on enuresis and its management (N=100)

<table>
<thead>
<tr>
<th>Attitude level</th>
<th>Classification of samples</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative (&lt;40%)</td>
<td></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Neutral (40%-80%)</td>
<td></td>
<td>91</td>
<td>91</td>
</tr>
<tr>
<td>Positive (&gt;80%)</td>
<td></td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 3 reveals that majority (91%) of samples had neutral attitude; remaining 9 percent had positive attitude and no one had negative attitude regarding enuresis and its management among mothers of school children.

Table 4 shows that in the positive statements, the respondents had mean attitude score of 80.47 percent and in the negative statements, the respondents had mean attitude score of 56.82 percent. This indicates that most of the mothers have positive attitude towards enuresis and its management but remaining subjects need to change their attitude. The overall mean attitude score was found to be 68.65 percent with SD as 5.81 towards enuresis and its management.

Table 1: Aspect wise knowledge scores on enuresis and its management among mothers of school children (N=100)

<table>
<thead>
<tr>
<th>No</th>
<th>Knowledge aspects</th>
<th>Total items</th>
<th>Min score</th>
<th>Max score</th>
<th>Mean knowledge score</th>
<th>Mean (%)</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Concept of enuresis</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>2.19</td>
<td>43.8</td>
<td>1.01</td>
</tr>
<tr>
<td>2</td>
<td>Prevalence and classification of enuresis</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0.80</td>
<td>40</td>
<td>0.73</td>
</tr>
<tr>
<td>3</td>
<td>Causes and risk factor for enuresis</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>2.21</td>
<td>44.2</td>
<td>1.04</td>
</tr>
<tr>
<td>4</td>
<td>Clinical manifestations of enuresis</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>1.80</td>
<td>60</td>
<td>0.91</td>
</tr>
<tr>
<td>5</td>
<td>Management and prevention of enuresis</td>
<td>11</td>
<td>1</td>
<td>11</td>
<td>5.57</td>
<td>50.63</td>
<td>2.23</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>26</td>
<td>17</td>
<td>12.560</td>
<td>48.307</td>
<td>3.441</td>
<td></td>
</tr>
</tbody>
</table>
Correlation between knowledge and attitude scores

Table-5 reveals that 55 percent of the respondents had inadequate knowledge, 42 percent of the respondents had moderate knowledge followed by 3 percent of the respondents possessing adequate knowledge. With respect to attitude towards enuresis and its management 91 percent of the respondents had neutral attitude compared to 9 percent of the respondents who possessed positive attitude and none of the respondents had negative attitude. There exist a positive significant relationship between knowledge and attitude of respondents on enuresis and its management that indicates higher the knowledge score is better the attitude score of respondents ($r= +0.184$).

Association of knowledge scores with selected demographic variables

The $\chi^2$ value was computed to find association between the knowledge level of mothers of primary school children on enuresis and its management and selected demographic variables. The calculated $\chi^2$ value for all variable is less than the table value. Variables had no significant association with knowledge score at 0.05 level. Thus, it can be interpreted that there is no significant association between knowledge level of the mothers of primary school children and their demographic variables.

Association between attitude scores with selected demographic variables

The analysis of association between the selected demographic variables and the overall attitude score of mothers of primary school children reveals the following information. The $\chi^2$ value was computed to find association between the attitude level of mothers of primary school children on enuresis and its management and selected demographic variables. The calculated $\chi^2$ value for all variable is less than the table value. Variables had no significant association with attitude score at 0.05 level. Thus it can be interpreted that there is no significant association between attitude of the mothers of primary school children and their demographic variables.

Discussion

The findings of the study are discussed under the following headings: Demographic characteristics of the samples, Assessment of knowledge and attitude of mothers of school children, Correlation

Table 4: Section wise and overall attitude scores on enuresis and its management among mothers of school children (N=100)

<table>
<thead>
<tr>
<th>No</th>
<th>Attitude aspects</th>
<th>Total no of statements</th>
<th>Range</th>
<th>Mean attitude score</th>
<th>Mean (%)</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Positive statements</td>
<td>8</td>
<td>13</td>
<td>32.19</td>
<td>80.47</td>
<td>3.37</td>
</tr>
<tr>
<td>2</td>
<td>Negative statements</td>
<td>8</td>
<td>19</td>
<td>22.73</td>
<td>56.82</td>
<td>4.05</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>16</td>
<td>28</td>
<td>54.92</td>
<td>68.65</td>
<td>5.814</td>
</tr>
</tbody>
</table>

Table 5: Distribution of samples according relationship between knowledge & attitude scores (N=100)

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate</td>
<td>55</td>
<td>55</td>
</tr>
<tr>
<td>Moderate</td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td>Adequate</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Combined</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Neutral</td>
<td>91</td>
<td>91</td>
</tr>
<tr>
<td>Positive</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Combined</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
between knowledge and attitude of mothers of school children, Association between knowledge and attitude scores with demographic variables, and Discussion related to assumptions

Demographic characteristics of the samples
In the present study, the findings revealed that majority (51%) of the respondents belongs to the age group of 26-30 years, 33 percent of respondents are in the age between 31-35 years, 9 percent of respondents belongs to the age group of 36 and above years and 7 percent of respondents are in the age between 21-25.

The findings are supported by a similar study conducted on prevalence of enuresis presenting to a tertiary paediatric outpatient service and to assess parental recognition of enuresis in Australia. Of the 277 participants aged 5-16 years, 36.1 percent (n=95) were identified as enuresis by clinician based scoring method compared with 14.1 percent from parental reporting (p=0.003). The result shows that prevalence of enuresis was high among children as assessed by clinicians despite poor identification by parents (Mc Grath et al, 2008).

Knowledge and attitude of mothers of primary school children on enuresis and its management
The present study confirms that the highest (60%) mean knowledge score of respondent found in the aspect of knowledge on clinical manifestation of enuresis and the least (40%) mean knowledge score found in the aspect of prevalence and classification of enuresis. The findings are supported by a similar study conducted on knowledge and attitude of mother on bed wetting problem in Derby, which shows that high value of children with enuresis are receiving the care from the hospital and remaining children are staying back in home.

The results of the study led to the formulation of recommendations to improve services available to children with enuresis, their parents and carers (Lottmann, 2007).

Correlation of knowledge and attitude of mothers regarding enuresis and its management
The present study confirms that correlation between knowledge and attitude was found that r=0.184 positive correlation.

The study findings are supported by a study conducted on knowledge and attitude of parents towards enuresis in children in South West Nigeria. The result shows that all parents were aware about enuresis but only 9.8 percent correctly identified it as a health problem. A statistical significant proportion of the parents desire to discuss with health practitioners (p=0.015).

Association between knowledge and attitude of mothers regarding enuresis and its management with selected variables

Among the demographic variables analysed in this study, it is found that there is no association found at 0.05 levels between knowledge and attitude of mothers regarding enuresis and its management with selected variables.

Discussion related to assumptions
The present study confirms that 79.9 percent of mothers had moderate knowledge and 91 percent of mothers had neutral attitude regarding enuresis and its management. Also, there is a positive correlation between knowledge and attitude of mothers of school children. Further, no significant association was found between knowledge and attitude with demographic variables.

Recommendations
On the basis of the findings of the study following recommendations have been made:
- An experimental study may be conducted with structured teaching programme.
- A similar study can be conducted (a) on a large scale. (b) in other backward districts, taluks, villages etc. (c) among teachers of Primary school children.
- The comparative study can be conducted on mothers of urban and rural areas.

Implications
The study has implications for nursing education, practice, administration and research.

Nursing Education
Nurse educators plays a major role in preparing mothers to improve knowledge on nocturnal enuresis and its management and early identification of health problems in children to achieve better future.

Nursing Practice
The findings of the present study may provide opportunity to Health professionals especially community health nurses to give health teaching on nocturnal enuresis and its management. This may also help the mothers to identify the health problems of the children in their earlier stages and cure them easily.

Nursing Administration
Nursing administration is very important in the supervision and management of nursing profession. The nurse administrators need to organize continuing nursing programmes for nursing personnel and motivate them to conduct school health camp with parents of primary school children which are beneficial to the community. The findings of the study also helps the nursing administrators to plan adequate teaching time to be allowed for the personnel for self-mastery during the course so that they can apply in imparting their knowledge to mothers of primary school children.
The present study indicates that the knowledge and attitude regarding nocturnal enuresis among mothers of primary school children is limited. There are ample opportunities for nursing researchers to enhance their knowledge and contribute it to the nursing profession especially in the area of nocturnal enuresis.

References