



**CHILDREN WITH PRIMARY NOCTURNAL ENURESIS, THEIR BACKGROUND FACTORS AND PARENTING FACTORS IN AN URBAN DISTRICT**

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**ABSTRACT**

An exploratory survey to identify the prevalence of nocturnal enuresis among children aged 5 to 12 years was undertaken in the villages of 4 PHCs in a district in Bangalore, Karnataka. Door-to-door survey was done and oral report of mother was elicited. Majority of children with nocturnal enuresis were in the age group of 5-10 years 85.82%. While 35.07% were males, more than half (64.93%) were females. Among them, 10.4% of the children had 4 wet nights per week, 12.7% had 5 wet nights and 6% had 6 wet nights and majority of the children reported all 7 nights as wet nights. The Mean Nocturnal Enuresis among children in this study is  $6.37 \pm 1.06$ . Parents report permissive style, yet there is reporting of resorting to punitive methods and shaming as well as criticising the child.

**KEYWORDS :** Enuresis, Primary Nocturnal Enuresis, Parenting

**INTRODUCTION:**

Enuresis as a childhood developmental issue has drawn much attention from researchers in the paediatric and child health services especially in the last two decades. ICCS defines nocturnal enuresis as any discreet amount of wetting at night in a child aged five years or over. It is considered to be primary enuresis if the child has been previously dry for less than six months, and secondary if the child has been dry for a period of at least six months<sup>1</sup>. Nocturnal enuresis is considered as a common problem with its description deeply embedded in paediatric practice of all times; ancient and modern, traditional and contemporary medicine.<sup>2</sup>

**MATERIAL & METHODS:**

An exploratory survey to identify the prevalence of nocturnal enuresis among children aged 5 to 12 years was undertaken in the villages of 4 PHCs in a district in Bangalore, Karnataka. Door-to-door survey was done and oral report of mother was elicited. After two weeks, mothers were visited to confirm the frequency of NE for accuracy. Screening was performed based on ICCS guidelines for confirming Primary Nocturnal Enuresis among children. Expert validated structured interview schedule nocturnal enuresis diary was used for recording frequency of bedwetting; determining background factors of children and parents. Weekly nocturnal enuresis diary was used to confirm the frequency of nocturnal enuresis.

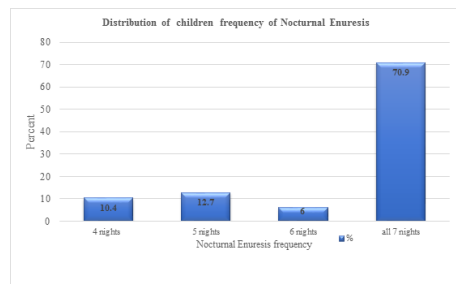
**RESULTS:**

From the villages in four Primary Health Centre areas, 161 children were identified and finally, 134 children were accurately recording. The distribution of children was according to their age. Majority of them were in the age group of 5-10 years 85.82%, while 35.07% of them were boys and more than half of them 64.93% were females. Most of them 97.01% had completed immunisation according to age on records and only 2.99% presently reported as incomplete immunisation. Most of them did not report any allergy 94.03% and only 5.97% had reported allergies to cold weather and dust etc. Majority 78.36% of their BMI were < 18.5 while only 21.64% had BMI ranging 18.6-24.9.

Regarding their relevant history: Birth weights -- none reported low birth weight; 5.22% reported as < 2.5kg, while 30.60% reported 2.5- 3 kg and most of them reported >3 kg 64.18%. Majority of them had 68.66% FTND normal delivery and 31.34% had LSCS. Most of the children were born full term 96.27% and only small number reported pre term 3.73%. Order of birth -- half of them 49.25% 1<sup>st</sup> child, 41.04% 2<sup>nd</sup> child. Only very small number of children were 3<sup>rd</sup> child 8.96% and 4<sup>th</sup> child 0.75% respectively. With regards to duration of breastfeeding half of them 50% reported having breastfed their children for over 12-17 months. Nearly half 42.54% more than 18 months,

and only 6.97% had breastfed children for less than 11 months.

Children who were toilet trained at age 1 year was 0.75%; by 2 years, majority of them 91.80% and only 7.40% toilet trained at 3 years of age. Most children were not reported as any delayed milestones 92.54% and only a small number were having minor or negligible delay in speech and walking 7.46%. Majority of the children 79.10% did sleep with their parents or siblings while only 20.90% slept alone. Most children 91.05% did not have a sibling with history of nocturnal enuresis and only a small percentage of them 8.95% had on siblings with nocturnal enuresis. Most of them seem to be deep sleep 78.36% and only 21.64% were not deep sleepers. Most children 91.05% did not have any sleep disturbances while a small percentage of them 8.95% had apparent sleep disturbance as reported. Most of the children did not seem to have snoring 92.54% and a small number of them 7.46% had snoring while asleep. Nightmares were not present in majority of the children 70.15%; and 1/3<sup>rd</sup> of them 29.85% seemed to have nightmares. Majority of them 82.09% did not have fear of darkness and small number of children 17.91% reported having fear of darkness.



**Figure 1 Distribution of children according to severity of Nocturnal Enuresis**

Figure 1 depicts that most children had severe form of nocturnal enuresis. Among them, 10.4% of the children had 4 nights per week of bedwetting, while 12.7% had five nights, and 6% had 6 nights. Majority of the children included for the study had reported all night's bedwetting. The Mean NE  $6.37 \pm 1.06$ .

**Table 1. Distribution of parents' background factors and Nocturnal enuresis related parameters**

Background factors	Mother N= 134 Frequency (%)	Father N= 127 Frequency (%)

Age	20-24	15 (11.19)	-
	25-29	60 (44.78)	16 (12.60)
	30-34	39 (29.10)	42 (33.07)
	35-39	20 (14.93)	47 (37.01)
	40-44	-	18 (14.17)
	>45	-	4 (3.15)
Education	No formal education	30 (23.39)	23 (18.11)
	Primary School 1-4 class	-	3 (2.36)
	Middle School 5- 7 class	15 (11.19)	23 (18.11)
	High School 8-10 class	64 (47.76)	54 (42.52)
	PUC	16 (11.94)	10 (7.87)
	Diploma	1 (0.75)	4 (3.15)
	Degree	6 (4.48)	7 (5.52)
Post Graduate	2 (1.22)	3 (2.36)	
Employed	Not Employed	88 (65.67)	6 (4.72)
	Self-employed/ Employed	46 (34.33)	121(95.28)
History of Nocturnal Enuresis	positive for Self	8 (5.97)	1 (0.79)
	positive for Siblings	8 (5.97)	5 (3.94)
Parenting style	Permissive	111 (82.84)	104
	Moderate	6 (4.48)	(81.89)
	Strict	11 (8.21)	11 (8.66)
	Very strict	6 (4.48)	5 (3.94)
Punishment	Does indulge often	31 (23.13)	5 (3.94)
	Uses hand to beat	93 (69.40)	77 (60.63)
	Uses cane to strike	41 (30.60)	50 (39.37)
Response to Bedwetting	Criticise	11 (8.21)	9 (7.09)
	Shames	17 (12.69)	9 (7.09)

Regarding the parents' background factors, majority of the mothers 73.88% were aged between 25-34 years, while most fathers 70.08% were aged between 30-39 years. Among parents, slightly more than half of them among mothers 59.70% and fathers 60.63% were educated up to middle and high school. Nearly one-third of the parents 65.67% were not of consanguineous marriage and only 1/3 of the parents were consanguineous 34.33%. Most of the parents were presently married and cohabiting 92.54% and 5.22% were widowed and 2.24% divorced. Father's parenting role was considered either negligible 43.31% or supportive 54.33% by most mothers. Most of the fathers were engaged in playing 78.74%, while only 21.26% of fathers were engaged with all other parenting tasks. Most parents considered themselves permissive or liberal and do not punish children. When specific questions were asked, over 1/3 and over half of them reported as resorting to punitive methods. However, only a small percent of parents' shame 12.69% or criticize 7.09% the child for bedwetting.

## DISCUSSION

It was found that majority of the children were found to be in the age group of 5-10 years which is consistent with other studies.<sup>2,3,4</sup> Present study found more female children which is different from institution and community based studies which may be attributed to natural preference of male children for treatment. Factors of children such as birth weight, type of birth, term at birth, birth order, BMI as well as parenting attitude and negative parenting behaviour including punishment for wetting behaviour have been found to be significantly associated in other studies.<sup>3,5,6</sup> In this study, parents reported readily punishing their children which is also found to be similar in other studies.<sup>6,7</sup> This study found parent strategy and positive approach were significantly associated with nocturnal enuresis frequency. Rao, in a study combining medication with parenting behaviour modification, found positive practices as helpful and desirable<sup>8</sup>

## CONCLUSION

Majority of children with nocturnal enuresis wet the bed on all days, and as held before in this region, it is not predominantly

seen among boys. A small fraction of parents' report family history of nocturnal enuresis for self or their own siblings. Despite parents' common belief that primary nocturnal enuresis is a simple developmental issue, parents still experience stigma and often resort to punishment.

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