

A Survey on Prevalence of Primary Nocturnal Enuresis and Its Risk Factors in Chinese University Students (#102)



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Introduction

It is well known that the prevalence of primary nocturnal enuresis (PNE) decreased with age and many factors such as gender, family history, inhabitation(living in rural or urban areas), arousal difficulty has been found to be involved in its development [1]. However, the PNE prevalence and changes of its risk factors with growth of child are still unclear. We hypothesis that the prevalence of PNE will not continue decrease and some of risk factors might change in adolescent. Consequently, the aim of present study is to investigate the PNE prevalence and its risk factors in Chinese adolescent by a survey in university students.

Methods

A total of 13,417 first grade students (aged 18-22 years, 4,256 boys and 9,129 girls) from two universities in Henan province was involved in this study from Sep. 2018 to Dec. 2018. They come from 23 provinces and 368 cities all over the country. An anonymous questionnaire was used to collect the following information: ①gender, date of birth, inhabitation(living in rural or urban areas), weight; ②Whether the bedwetting continue to now after 5 years old; ③PNE frequency; ④PNE family history; ⑤easy to wake up at night or not? ⑥Whether the PNE influence psychology, life and sleep; ⑦Have ever received treatment or not? ⑧Whether exist frequent, urgency and incontinent? The PNE criteria in this study is one who continue bedwetting at least one time per month and never stopped more than 3 months. Exclusion criteria were obvious organic diseases such as lower bladder urinary tract obstruction, neurological diseases, and incomplete questionnaires.

Results

A total of 13,874 questionnaires (93.7%) were collected and 13,385 of which (90.4%) was qualified for statistical analysis. The overall prevalence of PNE was 1.15%, 1.1% in boys and 1.2% in girls. The PNE prevalence in different age group is ranged from 0.93% to 1.46% and no significant difference between them ($p > 0.05$) (Table 1). The prevalence was 1.0% in urban areas and 1.2% in rural areas (difference between them is no significant), 7.9% with family history and 0.9% with no family history (difference between them is significant), 3.85% with urgency, 1.87% with urgency history and 0.9% with no urgency history, 7.69% with UI, 4.61% with UI history and 0.92% with no UI history. Prevalence of MPNE and NMPNE is 66.4% (101/152cases) and 33.6% (51/152cases) of all PNE cases. A total of 27% (41cases) of PNE occurred daily, 29.6%(45cases) weekly, and 43.4%(66cases) monthly; 21% of PNE has history of seeking treatment; 65.6% shown psychological burden, 45% feel life troubles and 54.3% influence on sleep.

Table 1. Prevalence of PNE in Chinese adolescents

Age (years)	Boys			Girls			Total			χ^2	P
	n	PNE (%)	PNE (%)	n	PNE (%)	PNE (%)	n	PNE (%)	PNE (%)		
18	1180	8	0.68	2359	25	1.06	3539	33	0.93	1.24	0.27
19	1248	15	1.20	2387	25	1.05	3635	40	1.10	0.18	0.67
20	1030	10	0.97	1992	23	1.15	3022	33	1.09	1.41	0.24
21	459	5	1.09	1393	22	1.58	1852	27	1.46	0.58	0.45
22	339	7	2.06	998	12	1.20	1337	19	1.42	1.34	0.25
Total	4256	45	1.1	9129	107	1.20	13385	152	1.14	0.34	0.56

Conclusions

PNE prevalence decrease with age in children until the adolescent and its risk factors of PNE are genetic, day time frequent/urgency/urinary incontinence as well as lacking of treatment in Chinese adolescent. The PNE induced a significant impact on the physical and mental health in adolescent.

References

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