

Frequency of Factors Associated with Nocturnal Enuresis in Children in Ubari, Daraj, and Kabaw, Libya

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ABSTRACT

The study aimed to determine the frequency of factors associated with nocturnal enuresis among children in the Daraj, Kabaw, and Ubari regions of Libya. A cross-sectional study of a sample of 453 parent participants was conducted using a nine-axis questionnaire. The study was conducted from February to December 2025. The children who took part ranged in age from 5 to 15 years. The number of males reached 253, and the number of females was 200. Children residing with their parents numbered 342. Among the sample, nocturnal enuresis occurred exclusively at night in 261 children (57.6%), during the day only in 21 (4.6%), and both day and night in 171 (37.7%). A family history of NE was reported in 62.7% of the sample. Key associated factors included high fluid consumption before sleep (79.2%), exposure to cold (61.6%), mood difficulties (52.1%), problems waking from sleep (51%), and the consumption of salty foods (67.3%). Statistically significant associations ($P < 0.05$) were identified between urinary and digestive system disorders and conditions such as nasal adenoids and chronic tonsillitis. The findings emphasize that lifestyle habits (fluid intake and diet), and environmental stressors significantly influence the persistence of NE. The study recommends enhancing parental awareness and developing educational guides on best practices to improve the quality of life for affected children.

Keywords: Factors, Frequency, Nocturnal enuresis, Kabaw, Darj, and Ubari.

تكرار العوامل المرتبطة بالتبول اللاإرادي الليلي لدى الأطفال في مناطق أوباري، درج، وكاباو، ليبيا

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ملخص البحث

هدفت هذه الدراسة إلى تحديد تكرار العوامل المرتبطة بالتبول اللاإرادي الليلي لدى الأطفال في مناطق درج، كاباو، وأوباري في ليبيا. أجريت دراسة مقطعية على عينة مكونة من 453 مشاركاً من أولياء الأمور باستخدام استبيان مُصمم من تسعة محاور، وذلك في الفترة من فبراير إلى ديسمبر 2025. تراوحت أعمار الأطفال المشاركين بين 5 و15 عاماً، حيث بلغ عدد الذكور 253 طفلاً، بينما بلغ عدد الإناث 200 طفلة، في حين بلغ عدد الأطفال المقيمين مع والديهم

342 طفلاً. أظهرت النتائج أن التبول اللاإرادي يحدث ليلاً فقط لدى 261 طفلاً (57.6%)، ونهاراً فقط لدى 21 طفلاً (4.6%)، بينما يحدث ليلاً ونهاراً معاً لدى 171 طفلاً (37.7%). كما أُبلغ عن وجود تاريخ عائلي للإصابة بالتبول اللاإرادي لدى 62.7% من أفراد العينة. ومن بين العوامل الرئيسية المرتبطة بهذه الحالة: استهلاك كميات كبيرة من السوائل قبل النوم (79.2%)، والتعرض للبرد (61.6%)، وصعوبات المزاج (52.1%)، وصعوبات الاستيقاظ من النوم (51%)، واستهلاك الأطعمة المالحة (67.3%). هذا وقد تم تحديد ارتباطات ذات دلالة إحصائية ($P > 0.05$) بين اضطرابات الجهاز البولي والهضمي وبعض الحالات المرضية مثل تضخم اللحمية والتهاب اللوزتين المزمن. وتؤكد النتائج أن عادات نمط الحياة (تناول السوائل والنظام الغذائي)، والضغط البيئي تؤثر بشكل جوهري على استمرار التبول اللاإرادي. وتوصي الدراسة بتعزيز وعي أولياء الأمور وتطوير أدلة إرشادية حول أفضل الممارسات المتبعة لتحسين جودة حياة الأطفال المصابين.

الكلمات المفتاحية: تكرار العوامل، التبول اللاإرادي الليلي، كاباو، درج، وأوباري.

1. Introduction

Nocturnal enuresis (NE), a common childhood condition, is accompanied by significant emotional disturbances, including anxiety, guilt, and low self-esteem. It is noted that there is a large variation in the prevalence of nocturnal enuresis across diverse geographical and socio-cultural contexts, ranging between 2% and 75%, which highlights the influence of environmental and societal factors and the exacerbation of social stigma associated with emotional distress, which negatively affects self-perception and quality of life in general.[1]

Nocturnal enuresis in children 5 years of age and older, regardless of frequency, is associated with increased rates of behavioral problems. Although infrequent nocturnal enuresis may not require medical intervention, this condition should prompt healthcare providers to study behavioral problems in greater depth. Overweight, obesity, behavioral problems, and eating problems are particularly associated with gastrointestinal disorders (constipation).[2]

Arthritis does not directly affect the bladder or bowel for most people. It is the loss of mobility and joint stiffness that prevents a person from reaching the toilet in time. Constipation often occurs due to people with Rheumatoid Arthritis not being active, or the fact that they are limiting their fluid intake. Insufficient exercise is actually a common cause of constipation. Having a history of straining while having bowel movements can weaken the pelvic floor muscles, which are vital for bladder control. This condition is called stress incontinence.[3,4]

Urinary incontinence increases with obstructive sleep apnea, and children with bedwetting often suffer from sleep-related breathing disorders. It was indicated in this study that tonsillectomy may be the best treatment option for children who suffer from obstructive sleep apnea with bedwetting [5]. The analysis revealed that stubborn personality, sleep-wake disturbances, and bladder dysfunction significantly increased the risk of developing urinary incontinence ($P < 0.05$).[6]

The prevalence of constipation was 20%, nocturia was 62.9%, and bladder and bowel dysfunction were 5.2%. The results of this study showed that constipation had a significant effect on lower urinary tract disorders, as it was an important risk factor.[7,8]

Although it is a common condition, nocturnal bedwetting (after the age of 5-7 years) puts great psychological and social pressure on the child and his family, leading to low self-esteem and

low academic performance. The problem lies in the interaction of psychological (such as stress) and physiological (such as small bladder capacity or genetic factors) factors, with a lack of awareness among parents about the correct behavioral therapy methods, which prolongs the suffering. The importance of this study lies in identifying these most prevalent factors among the sample members, which can help parents increase their awareness and understanding of the problem of nocturnal enuresis in their children. This will contribute to improving their quality of life, highlighting treatments, and early detection of cases in their children who suffer from nocturnal enuresis. This study aims to determine the frequency of factors associated with nocturnal enuresis among children in the Daraj, Kabaw, and Ubari regions combined.

2. Materials and Methods

The descriptive approach (cross-sectional study) was used in this research due to its suitability for the nature of the research problem[9]. This approach was used to study the frequency of factors related to nocturnal enuresis among children in Daraj, Kabaw, and Ubari districts through a questionnaire distributed to parents, providing comprehensive information on this phenomenon. The study sample consists of parents of children aged 5 to 15 years who suffer from nocturnal enuresis. The targeted sample size was 482, of which 453 participants successfully completed the study. A non-probability convenience sampling technique was utilized to recruit participants from multiple accessible locations, including hospitals, pharmacies, schools, and public streets within the participating cities[10]. The study was conducted from February 2025 to December 2025.

3. Study Tool

A specially designed questionnaire was used to collect data on the frequency of factors related to nocturnal enuresis in children in Daraj, Kabaw, and Ubari areas. The questionnaire includes a set of axes that measure basic aspects. The reliability test for the questionnaire was found to be 0.83% Cronbach's alpha test of 51 items for 30 primary copies. The questionnaire was designed by researchers after obtaining approval from the university's arbitration committee and expressing their opinions about it. The first axis aims to collect basic information about the child, such as his age and type of residence. The second axis focuses on knowing the amount of fluids the child drinks before bed and whether he feels thirsty during sleep. The third axis includes the presence of diseases that may be linked to nocturnal enuresis, such as kidney disease, diabetes, autism, obesity, asthma, and epilepsy. This axis helps distinguish between nocturnal enuresis resulting from organic or psychological diseases. The fourth axis evaluates the presence of problems such as bladder dysfunction, recurrent infections, constipation, intermittent urination, and a sudden desire to urinate. The fifth axis deals with psychological problems such as mood difficulties, poor social communication, depression, and anxiety. The sixth axis collects information about sleep difficulties, apnea, snoring, tonsils, and waking problems, and this axis aims to determine the relationship between sleep disorders and nocturnal enuresis. The seventh axis includes assessment of attention deficit hyperactivity disorder, intellectual disability, and motor disorders. These factors may affect a child's bladder control or ability to wake up. The eighth axis focuses on the child's consumption of salty foods, stimulants, soft drinks, sweets, and medications. The ninth axis evaluates the child's exposure to psychological stress or changes in the environment, such as moving from one school to another

or problems inside the home. These situations may increase anxiety and are reflected in urination behavior.

4. Results

Table (1): The distribution and ratios of sample variables

The variables	Number (N)	Present (%)
City		
Kabaw	80	17.7%
Daraj	180	39.7%
Obari	193	42.6%
Age Of the Child		
5-7 years	264	58.3%
8-11 years	125	27.6%
12-15 years	64	14.1%
Sex		
Males	253	55.8%
Females	200	44.2%
Type of child's residence		
With parents	342	75.5%
With grandparents	40	8.8%
With a single parent	71	15.7%
Urination period		
Night period	261	57.6%
During the day	21	4.6%
Both	171	37.7%
Urination occurs		
At home	393	86.8%
Outside the house	40	8.8%
Both	20	4.4%
Frequent urination		
Every night	177	39.1%
Several times a month	276	60.9%
Urinating in the family		
Yes	284	62.7%
No	169	37.3%

Table (1) : we note that the largest percentage of the samples was from the city of Ubari, at a rate of 42.6% and 193 of the total sample, followed by the percentage of the samples from the city of Daraj, which reached 39.7%, at a rate of 180, and the smallest percentage was for the samples from the city of Kabao, which reached 17.7%, at a rate of 80 of the total sample. We note that the largest percentage of the sample members was from the age of 5 to 7 years, with a percentage of 58.3% and 264 out of the total participating sample, followed by the percentage of participants from the age of 8 to 11 years, which reached 27.6% with 125, and the lowest percentage was for the ages of 12 to 15 years, which reached 14.1% with 64 out of the total participants. It is noted here that the older the age, the lower the percentage of those suffering from bedwetting, and this is very normal. The largest percentage of the sample's vocabulary was male, at a rate of 55.8%. The remaining percentage of the sample's vocabulary was female, reaching 44.2%. Children living with their parents constituted 75.5% of the total sample size,

followed by the percentage of participating children living with one parent at 15.7%, equivalent to 71, while the lowest percentage was for those living with a grandparent at 8.8%, equivalent to 40 of the total sample size.

The largest percentage of the sample members were those with whom nocturnal enuresis occurs at night, at a percentage of (57.6%) 261 of the total participating sample, followed by the percentage of participants with whom nocturnal enuresis occurs at night and day together (both) at a rate of (37.7%) 171, while the lowest percentage was for those with whom bedwetting occurs during the day at a rate of (4.6%) for 21 of the total sample members.

We note that the majority of the sample members urinate involuntarily at home, representing (86.8%) and 393 of the total sample, while the remaining percentage was distributed between those who urinate outside the home, representing (8.8%) and 40, and those who urinate in both places (home and outside the home together), representing (4.4%) and 20 of the total sample participants. The largest percentage of the sample (60.9%) had involuntary urination several times a month, representing 276 of the total sample, while the remaining percentage had involuntary urination every night, representing 39.1% of the total sample.

Table 2: Frequency, percentage, and arithmetic mean distribution of fluid (first part), food, and medication consumption (second part) habits among sample members who suffer from involuntary urination in the study population.

Item First part	Yes	No	standard deviation	arithmetic mean	Degree of approval
Drink fluids before bedtime	359 79.2%	94 20.8%	0.40	1.79	High
The amount of water exceeds 3 cups before bed	196 43.4%	257 56.7%	0.49	1.43	Low
The child feels thirsty during sleep	208 45.9%	245 54.1%	0.49	1.45	Low
General arithmetic average	1.55				High
Item Second part	Yes	No	standard deviation	arithmetic mean	Degree of approval
Foods that contain a high percentage of salt, such as potatoes and chips	305 67.3%	148 32.7%	0.46	1.67	High
Stimulants: Tea/Coffee	156 34.4%	297 65.6%	0.47	1.34	Low
soda drink	218 48.1%	235 51.9%	0.50	1.48	Low
sweets	272 60%	181 40%	0.49	1.60	High
Medications for apnea	52 11.5%	401 88.5%	0.31	1.11	Low
Diuresis medications	52 11.5%	401 88.5%	0.31	1.11	Low
General arithmetic average	1.38				Low

Table (2): The habit of drinking fluids before bed in the study sample turned out to be high, with an arithmetic mean of 1.79 (79.2%) for 359 participants, followed by children feeling thirsty during sleep 208 (45.9%), with a low arithmetic mean of 1.45. Drinking more than 3 cups of water before bed is a habit, with 196 (43.4%) doing so, with an arithmetic average of 1.43. Here, we note that the habit of drinking water before bed may be a factor in increasing the

rate of involuntary urination in the study sample, with a high arithmetic mean of 1.55.

The degree of approval score is high, 1.67, for 305 (67.3%) of participants who consume foods containing salt in large quantities, followed by sweet foods, with a high arithmetic average of 1.60, for 272 (60%) participants. It has also been noted that salty and sweet foods increase the demand for drinking water, especially when they are eaten in the evening, which increases the chances of involuntary nocturia. Drinking tea, coffee, and soft drinks is also a clear consumption.

Table 3: Frequency distribution, percentages, and Arithmetic mean of diseases (first part), urinary and digestive system (second part), suffered by children who suffer from involuntary urination

Item First part	Yes	No	standard deviation	arithmetic mean	Degree of approval
Diabetes	78 17.2%	375 82.8%	0.37	1.17	Low
Autism	35 7.7%	418 92.3%	0.26	1.07	Low
Obesity	120 26.5%	333 73.5%	0.44	1.26	Low
Asthma	36 7.9%	417 92.1%	0.27	1.07	Low
Tumors	14 3.1%	439 96.9%	0.17	1.03	Low
Epilepsy	27 6%	426 94%	0.23	1.05	Low
kidneys	34 7.5%	419 92.5%	0.26	1.07	Low
Rheumatism	116 25.6%	337 74.4%	0.43	1.25	Low
General arithmetic average	1.12				Low
Item Second part	Yes	No	standard deviation	arithmetic mean	Degree of approval
bladder dysfunction	128 28.3%	337 71.7%	0.45	1.28	Low
Recurrent urinary tract infections	132 29.1%	321 70.9%	0.45	1.29	Low
bouts of constipation	86 19%	367 81%	0.39	1.18	Low
Dysuria (difficulty or effort during urination)	95 21%	358 79%	0.40	1.20	Low
Intermittent urination	155 34.2%	298 65.8%	0.47	1.34	Low
Urgency to urinate	133 29.4%	320 70.6%	0.45	1.29	High
sudden urge to urinate	238 52.5%	215 47.5%	0.49	1.52	Low
Diagnosis in functional defecation disorders	34 7.5%	419 92.5%	0.26	1.07	Low
Problems with diuresis hormone secretion	55 12.1%	398 87.9%	0.32	1.12	Low
General arithmetic average	1.25				Low

Table (3) : The reported frequency of obesity, rheumatism, and diabetes notably high compared to other conditions, Within the study sample, obesity was reported in 26.5% (120 out of 453 children), rheumatism in 25.6% (116 children), and diabetes in 17.2% (78 children). It is crucial to emphasize that these figures are based exclusively on parents' self-reports rather than confirmed clinical diagnoses. and it is likely that the high frequency of some of these conditions is due to their direct relationship to involuntary urination, like diabetes can directly increase the frequency of urination and subsequently contribute to nocturnal enuresis, the unexpectedly high percentage of reported rheumatism is likely attributable to self-reporting bias. Parents may have misinterpreted or confused general joint or bone pain—often exacerbated by exposure to cold weather—with actual clinical rheumatism.

Regarding urinary and digestive symptoms, a sudden urge to urinate showed a high frequency, with an arithmetic mean of 1.52, reported in 52.5% of the study sample. Intermittent urination had an arithmetic mean of 1.34. It should be noted that the overall mean for this axis was relatively low (1.25 out of 2).

Table (4): Frequency, percentage, and arithmetic mean distribution of sample members with internal psychological (first part) and developmental disorders (second part)

Item First part	Yes	No	Standard deviation	Arithmetic mean	Degree of approval
Difficulty in mood	236 52.1%	217 47.9%	0.50	1.52	High
Inability to socialize	155 34.2%	298 65.8%	0.47	1.34	Low
depressed	74 16.3%	379 83.7%	0.37	1.16	Low
anxiety	206 45.5%	247 54.5%	0.49	1.45	Low
General arithmetic average	1.36				Low
Item Second part	Yes	No	standard deviation	arithmetic mean	Degree of approval
attention deficit	215 47.5%	238 52.5%	0.49	1.47	Low
hyperactivity	200 44.2%	253 55.8%	0.49	1.44	Low
Intellectual disability (language/speech)	78 17.2%	375 82.8%	0.37	1.17	Low
Disorders of motor function	73 16.1%	380 83.9%	0.36	1.16	Low
General arithmetic average	1.31				Low

Table (4): It is clear that the degree of approval was high in the paragraph related to mood difficulty, with an arithmetic mean of 1.52, and an average of 52.1% of the study sample showing this symptom. while anxiety is more agreeable in items with a low agreeability score,

with an arithmetic mean of 1.45. It can be seen that the overall average of the paragraphs in this axis was also low, with an average of 1.36.

The degree of agreement was low. Motor function disorders, which is the least agreeable paragraph in paragraphs with a low approval score with an arithmetic mean of 1.16, while attention deficit, which is the most agreeable paragraph in paragraphs with a low approval score with an arithmetic mean of 1.47. It can be seen that the general average of the paragraphs in this axis was also low, with an average of 1.31.

Table (5): Frequency, percentage, and arithmetic mean distribution of sample members' answers about sleep disorders (first part) and the reality of the environment (second part)

Item First part	Yes	No	Standard deviation	Arithmetic mean	Degree of approval
Problems waking up from sleep	231 51%	222 49%	0.50	1.51	High
trouble sleeping	160 35.3%	293 64.7%	0.47	1.35	Low
sleep apnea	68 15%	385 85%	0.35	1.15	Low
Sleep duration disorders	104 23%	349 77%	0.42	1.22	Low
having a snooze	120 26.5%	333 73.5%	0.44	1.26	Low
Excess adenoids in the nose	112 24.7%	341 75.3%	0.43	1.24	Low
snoring	158 34.9%	295 65.1%	0.47	1.34	Low
Chronic or intermittent tonsillitis	142 31.3%	311 68.7%	0.46	1.31	Low
General arithmetic average	1.29				Low
Item Second part	Yes	No	Standard deviation	Arithmetic mean	Degree of approval
Cold	279 61.6%	174 38.4%	0.48	1.61	High
A stressful situation at school or home (effort allowance)	132 29.1%	321 70.9%	0.45	1.29	Low
Replace his school with another one	108 23.8%	345 76.2%	0.42	1.23	Low
Replace the house with another one	99 21.9%	354 78.1%	0.41	1.21	Low
Pressures at school	163 36%	290 64%	0.48	1.36	Low
The child has been exposed to trauma (psychological or physical)	108 23.8%	345 76.2%	0.42	1.23	Low

Psychological disorders in parents	81 17.9%	372 82.3%	0.38	1.17	Low
Poor housing conditions	87 19.2%	366 80.8%	0.39	1.19	Low
toilet training	134 29.6%	319 70.4%	0.45	1.29	Low
General arithmetic average	1.28				Low

Table (5): The study sample showed an average of 51% showing this symptom of problems waking up from sleep, with an arithmetic mean of 1.51. It is also noted that the degree of agreement was low.

A low approval score of 1.15, difficulty sleeping, is the most agreeable paragraph in paragraphs with a low approval score, with an arithmetic mean of 1.35. It can be seen that the overall average of the statements in this axis was also low, with an average of 1.29. This is very normal, given that most of the statements in this axis have a low degree of agreement.

Also, the table (5) showed that the degree of agreement was high. Cold, with an arithmetic average of 1.61, and an average of 61.6% of the study sample was exposed to cold. The degree of agreement was also low, ranked from lowest to highest, as follows: psychological disorders in the parents, poor housing conditions, replacing one house with another, replacing one school with another, the child being exposed to trauma (psychological or physical), a stressful situation inside the school or home (effort allowance), toilet training, and stress at school. Psychological disorders among parents are the least agreeable paragraphs, with a low approval score of 1.17, while school stress is the most agreeable paragraph, with a low approval score with an arithmetic average of 1.35. From the same perspective, it can be noted that the overall average of the statements in this axis was also low, with an average of 1.28.

Table (6): Spearman test to analyze the relationship between the two axes of study: a child's fluid consumption habits and urinary and digestive system disorders

The two axes of the relationship	sample	significance level	Relationship value (R)
A child's fluid consumption habits (before and during sleep) and disorders of the urinary and digestive systems	453	0.000	0.180

Table (6) it is clear that there is a statistically significant relationship at the morale level of 0.05 between the second and fourth axes: the child's fluid consumption habits before and during sleep and disorders of the urinary and digestive systems, given the morale level, which is (0.000), which is a value smaller than 0.05 By observing the value of the relationship, which is 0.180, it becomes clear that the relationship is positive (weak direct correlation), and this means that the more fluids are consumed during and before sleep, the greater the disorders of the urinary and digestive systems.

Table (7): Spearman test to analyze the relationship between disorders of the urinary and digestive systems (adenoids– tonsillitis)

The two axes of the relationship	sample	Relationship value (R)	Significance level
Disorders of the urinary and digestive systems, and an excess of adenoids in the nose	453	0.245	0.000
Disorders of the urinary and digestive systems and chronic or intermittent tonsillitis	453	0.243	0.000

There is a statistically significant relationship at the morale level of 0.05 between urinary and digestive system disorders and the infection with excess nasal adenoids, given the morale level, which is (0.000), which is a value smaller than 0.05 By observing the value of the relationship, which is (0.245), it becomes clear that the relationship is positive (weak direct correlation), and this means that the more disorders of the urinary and digestive systems there are, the greater the possibility of developing excess adenoids in the nose.

There is a statistically significant relationship at the morale level of 0.05 between the fourth axis (urinary and digestive system disorders) and the incidence of chronic or intermittent tonsillitis, given the morale level, which is (0.000), which is a value smaller than 0.05 By observing the value of the relationship, which is (0.243), it becomes clear that the relationship is a positive relationship (weak direct correlation), which means that the more disorders of the urinary and digestive systems there are the greater the possibility of developing chronic or intermittent tonsillitis.

5. Discussion

Children are able to control their bladder at night around the age of 4-6 years, and the general prevalence of nocturnal enuresis decreases with age. Many children suffer from nocturnal enuresis at school age, as the ages of children in this study ranged from 5 to 15 years. The largest proportion of the sample was concentrated in the age group between 5 and 7 years (264 children), followed by 8-11 years (125 children), and 12-15 years (64 children). It was noted that the older the children, the lower the percentage of those suffering from nocturnal enuresis, which is consistent with previous literature [11]. The number of males was 253 (55.8%), and the number of females was 200 (44.2%), of whom 342 children were residing with their parents (75.5%). The frequency of nocturnal enuresis occurred every night (39.1%) and several times a month (60.9%). This aligns with a study [12], which stated that the severity of the recurrence was once a week. We note that the majority of the sample members had previously suffered from bedwetting in the family (at least one parent), at a rate of 62.7%. Therefore, genetics may play a significant role in increasing the risk of nocturnal enuresis in children, a finding supported by previous studies [13].

Fluid consumption habits among children before or during sleep were high and these habits affect the increased frequency of nocturnal enuresis in children; we note that the habit of drinking water before bed may be a factor in increasing the rate of involuntary urination in the study sample, as shown by a study [14]. Furthermore, parents reported multiple co-occurring conditions among the children, such as rheumatism, diabetes, and obesity. The high frequency of these reported diseases in the sample is likely intertwined with nocturnal enuresis risk factors; for instance, diabetes increases the frequency of urination, and obesity is linked to poor physical

activity and metabolic changes [15,16]. However, it is crucial to note that the rates of these co-occurring conditions rely on parental self-reporting rather than confirmed clinical diagnoses.

Urinary and digestive system disorders were found to have a significant impact on the occurrence of nocturnal enuresis, with recurrent urinary tract infections reported in children in the sample. We also find that the diagnosis of functional defecation disorders was repeated among the sample members, and problems with the secretion of diuretic hormone in 55 members of the sample. We find these results consistent with [17,18]. Internal (psychological) disorders in the study sample also represent mood difficulties, depression, and anxiety at successive rates. These rates are likely internal psychological disorders that have an impact on increasing bedwetting among the sample members, and this is what we observed in one study. [19]. Sleep disorders that were evident in the results included problems waking up from sleep, 231 (51%) of the sample members, which is a high percentage and represents a disorder in the study sample, and this is what was demonstrated by the study [20], which showed that low sleep quality in general is significantly linked to urinary incontinence.

Tonsillitis (31.3%) and nasal polyps (24.7%) were also disorders that increased the chances of bedwetting in the study sample. We also found that there was a relationship between nasal polyps and urinary system disorders in the children in the sample, with statistical significance in the Level of significance ($P < 0.05$) [18,19].

Developmental disorders such as attention deficit hyperactivity disorder may be disorders that increase symptoms of nocturnal enuresis in children [20,21]. Sample members consume foods high in salt, sweet foods (sweets), and soft drinks. These percentages have a clear effect on increasing the risk factor for nocturnal enuresis [22]. The reality of the environment in which the child lives and the situations to which he is exposed are considered risk factors, such as exposure to cold, as well as school pressures, and this is consistent with the study [23,24]. There is a statistically significant relationship at a Level of significance of 0.05 between fluid consumption habits and disorders of the urinary and digestive systems, which means that these disorders are risk factors for nocturnal enuresis in the children of the sample, and this was confirmed by a study [25].

6. Study Limitation

The limitations of the study were the difficulty parents had in accepting the idea of participation and some parents' denial of their children's bedwetting. Some participants feared that their information would be leaked, despite the focus on data confidentiality, which affected their response. The geographical distance between members of the research team made it difficult to coordinate and hold meetings. Also, it is important to note that the frequencies of medical conditions such as rheumatism, diabetes, and obesity in this study were based solely on parents' self-reports via questionnaires, without validation from clinical diagnoses or medical records. The exceptionally high reported rate of rheumatism (25.6%) may reflect, among other possible factors, parents' misinterpretation of common childhood musculoskeletal issues (e.g., growing pains or winter-related joint aches) as clinical rheumatism. Therefore, these figures represent parent-perceived morbidity rather than strictly confirmed clinical rates.

7. The study recommends

conducting further scientific research on nocturnal enuresis, its causes, and how to reduce it among children in the study population, and organizing scientific conferences and workshops to educate parents on how to deal with it. Preparing a scientific guide on appropriate foods and best practices for dealing with children who suffer from nocturnal enuresis

8. Acknowledgment

This research was conducted taking into account all ethical aspects, as the necessary approvals were obtained from the competent authorities in the relevant hospitals and medical centers, as well as the approval of the people who received the questionnaires in public places, with a commitment not to harm or influence the participants. Care was also taken to ensure the confidentiality of information and data collected from parents and that it was not used for any purpose outside the scope of scientific research. Approval was also obtained from the Scientific Committee for Scientific Research of (NU) Nalut University, Department of Public Health - College of Medical Technology.

9. Conclusions:

The study results show a diverse frequency of risk factors that may increase the persistence of nocturnal enuresis in children. In this study, the frequency of factors associated with nocturnal enuresis in children aged 5 -15 years was consistent with previous studies. Such as previous family history. The presence of diseases such as diabetes and obesity, growth and sleep disorders, psychological factors, and lifestyle. It has also been shown that there is a relationship between nasal polyps and urinary system disorders in children.

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