North Clin Istanb 2023;10(3):281–288
doi: 10.14744/nci.2021.40225

Original Article UROLOGY

Mentalization and emotion regulation abilities in parents of children with nocturnal enuresis and its relationship with perceived caregiver burden

Tuncay Toprak,[1] Basar Ayribas,[2] Recep Burak Degirmentepe,[3] Mehmet Ozay Ozgur,[4] Mehmet Yilmaz,[2,5] Ayhan Verit[1]

[1]Department of Urology, University of Health Sciences, Fatih Sultan Mehmet Training and Research Hospital, Istanbul, Turkiye
[2]Department of Psychiatry, Kafkas University Faculty of Medicine, Kars, Turkiye
[3]Department of Urology, Karasu State Hospital, Sakarya, Turkiye
[4]Division of Pediatric Urology, Department of Urology, Hamidiye Sisli Etfal Training and Research Hospital, Istanbul, Turkiye
[5]Department of Urology, University of Freiburg – Medical Centre, Faculty of Medicine, Freiburg, Germany

ABSTRACT

OBJECTIVE: Various psychological factors play a role in the development of nocturnal enuresis (NE) which causes significant distress both on children and their parents. However, current studies cannot attribute a role to the psychiatric conditions that cause or result from NE. This study aims to reveal some psychiatric parameters related to the parents of patients with NE which may play a role in the etiopathogenesis of NE.

METHODS: Seventy-nine parents of primary 53 NE children and 78 parents of 44 healthy children were enrolled to the study. Parents of children with daytime voiding symptoms, additional comorbidity, or secondary enuresis were excluded from the study. Age- and sex-matched parents of healthy children with the absence of voiding symptoms were included as the control group. Parental Reflective Functioning (RF) Questionnaire, Interpersonal Emotion Regulation (ER) Questionnaire, and Zarit Caregiver Burden Scale were recorded to measure psychiatric conditions.

RESULTS: Parents of children with NE showed significantly poorer RF and ER abilities compared to the control group. Moreover, the perceived caregiver burden was also significantly higher in parents of NE patients. Correlation analyses also showed that RF and ER are negatively correlated with caregiver burden.

CONCLUSION: This study revealed that the parents of primary NE patients may have difficulty mentalizing and ER in interpersonal relationships. These difficulties may be a cause or a consequence of the NE. In addition, our findings showed that parents of NE patients perceive more caregiving burden. Therefore, it may be advisable for parents of NE patients to seek psychological counseling.

Keywords: Emotion regulation; mentalization; nocturnal enuresis; parents; perceived caregiver burden.

Cite this article as: *Toprak T, Ayribas B, Degirmentepe RB, Ozgur MO, Yilmaz M, Verit A. Mentalization and emotion regulation abilities in parents of children with nocturnal enuresis and its relationship with perceived caregiver burden. North Clin Istanb 2023;10(3):281–288.*

The International Children's Continence Society (ICCS) defines enuresis (or nocturnal enuresis [NE]) as wetting in discrete portions while asleep in a child older than 5. Primary nocturnal enuresis is defined as nocturnal wetting in a child who has never been dry on consecutive nights for longer than 6 months[1]. It is called monosymptomatic in the absence of lower urinary tract symptoms or a history of bladder dysfunction [2].

Received: September 23, 2021 *Revised:* November 02, 2021 *Accepted:* November 23, 2021 *Online:* June 22, 2023

Correspondence: Tuncay TOPRAK, MD. Saglik Bilimleri Universitesi, Fatih Sultan Mehmet Egitim ve Arastirma Hastanesi, Uroloji Klinigi, Istanbul, Turkiye.
Tel: +90 216 578 30 00 e-mail: drtuncay55@hotmail.com

The prevalence of NE is variable. It is above 10% among 6 years old, around 5% among 10 years old, and 0.5%–1% among teenagers and young adults [3].

Diagnosis consists of detailed medical history, clinical examination, frequency–volume charts, and appropriate investigations. Although the diagnosis of NE is relatively easy, the underlying pathogenesis of NE is multifactorial. Genetic factors, amount of urine production, nocturnal detrusor function, sleep and arousal cycle variations, psychiatric and psychological factors, and central nervous system-related factors are shown among the causes [4]. According to the ICCS, 20%–30% of the children with NE have at least one psychological/psychiatric disorder which was two times higher than non-wetting children [5]. Among the other etiological factors, psychiatric and psychological correlates of enuresis were extensively studied. In this regard, Coppola et al. [6] reported that children with NE show various psychological disturbances such as more insecure attachment parameters and lower self-esteem, although they do not differ from healthy controls in means of temperament. Relatedly, Van Herzeele et al. [7] showed that children with NE suffer from various neuropsychological problems, which are associated with sleep problems, and interestingly, successful treatment of enuresis helps to ameliorate these neuropsychological impairments. Among with the other psychiatric disorders, attention-deficit/hyperactivity disorder (ADHD) is highly associated with enuresis [8].

This close relationship between psychiatric disorders and enuresis in children leaded researchers to study psychological and psychiatric parameters in parents of children with enuresis. Egemen et al. [9] reported that mothers of children with enuresis have higher depression scores. Relatedly, Durmaz et al. [10] showed that mothers of children with enuresis have significantly more psychiatric symptomatology such as somatization, phobic anxiety, and depression. This study also suggested that mothers of children with enuresis have more history of adverse childhood experiences. Interestingly, it has been also showed that psychological interventions with parents improves treatment outcomes in children with enuresis [11]. Therefore, researchers suggest that parent and child interaction has an important role in treatment of enuresis and psychological support is needed in this debilitating condition [12].

In summary, although it was shown that several psychological and psychiatric problems are associated with enuresis in children, limited numbers of studies also imply the existence of such problems also in parents of children suffering from enuresis. Therefore, it may be suggested that studying the psychological correlates such as mentalization, emotion regulation(ER), and perceived caregiver burden, which may underlie such psychiatric problems in parents of enuretic children, can help to better understand psychodynamic aspects of NE. In this regard, the primary hypothesis of the current study is that parents of children with NE have different psychological profiles in means of mentalization and ER than parents of healthy children and this differentiation may be related to perceived caregiver burden of parents. Such a profiling can serve to implement more sophisticated psychological interventions to the parents of enuretic children. A better understanding of the psychological issues in parents of enuretic children can help to organize psychological interventions that have been shown to be an effective way to treat enuresis in children,so the primary aim of the current study was to determine the burden of the NE on caregivers and its relationship with parental mentalization abilities and ER.

Highlight key points

- Parents of children with nocturnal enuresis perceive significantly higher levels of caregiver burden.
- Parents of children with nocturnal enuresis have poorer mentalizing and emotion regulation abilities.
- Clinicians can encourage patients with nocturnal enuresis and their parents to be referred to psychiatric evaluation prior to medical treatments.

MATERIALS AND METHODS

This prospective, single-center, case–controlled study was conducted in accordance with the Helsinki Declaration. Ethical committee approval was obtained from the local ethics committee. (Fatih Sultan Mehmet Training and Research Hospital-KAEK 2020/20). Written informed consent was obtained from all participants. This study was conducted from December 2020 to March 2021 with a total number of 157 participants, 79 were parents of 53 children with NE and 78 were parents of 44 healthy children. Participants were recruited from outpatient clinics. Exclusion criteria for the NE group were secondary enuresis, as secondary EN may be resulted from various organic and non-organic causes, daytime voiding symptoms, and any other somatic or psychiatric disorder both in children and in parents. Age- and sex-matched parents of children with the absence of voiding

Table 1. Sociodemographic variables of participants

	Patient group	Control group	p
Parental measures			
n	79	78	
Sex (n males/females)	28/51	34/44	0.378
Age, mean±SD	36.97±7.74	39.33±7.77	0.051
Education (years), mean±SD	10.06±3.36	10.8±3.81	0.189
Variables of children			
n	53	44	
Sex (n males/females)	38/15	33/11	0.892
Age of patient, mean±SD	7.22±2.47	7.40±2.49	0.813
Symptom duration (years), mean±SD	2.81±2.30	–	
Number of enuresis per week, mean±SD	4.66±2.02	–	

SD: Standard deviation.

symptoms and admitted to the hospital for reasons such as circumcision and who did not have any additional disease were included as the control group.

Statistical Analysis

The G* Power software version 3.01 (Franz Faul, Kiel, Germany) was used for power analysis. Priori power analysis was based on the two independent sample t-tests. At a=0.05 significance level, to reveal a medium effect size (d=0.5) with 80% power, 42 participants in each study arm (totally 84 participants) were found to be necessary. The conformity of the parameters to the normal distribution was evaluated by Kolmogorov–Smirnov and Shapiro–Wilks tests. Independent samples t-test was used for normally distributed numeric variables. Mann–Whitney-U test was used for variables which are not normally distributed. Categorical variables were analyzed with the Chi-squared test. Pearson correlation coefficient (r) was used to determine the correlation between the continuous variables. IBM SPSS Statistics 24 (SPSS IBM, Chicago, Illinois, USA) program was used to analyze data. Statistically significance were accepted as p-values below 0.05

Measures

Interpersonal Emotion Regulation Questionnaire

Interpersonal Emotion Regulation Questionnaire (IERQ) was originally developed by Hofmann et al. [13] and consists of 20 items. It measures interpersonal ER in four different dimensions; social modelling, soothing, enhancing positive affect, and perspective taking. It has a 5-point Likert structure and scores range between 20 and 100. Higher scores indicate better ER abilities in social interactions. A Turkish version of IERQ has been validated in 2019 and it shows similar psychometric properties such as internal consistency and factor analysis similar to original form [14].

Parentalreflective Functioning Questionnaire

Parental Reflective Functioning Questionnaire (PRFQ) was designed to assess the mentalization abilities of parents which was developed by Luyten et al. [15] in 2017. It consists of 39 items and 3 subscales; PRFQ-High Low Scale measures interest and curiosity in mental states, PRFQ-Middle Scale measures certainty about mental states, and PRFQ-Low High Scale measures pre-mentalization, non-mentalization, and malevolent attributions. It has a 7-point Likert structure. Higher scores indicate greater mentalization abilities. Turkish validation study of PRFQ showed the reliability and validity of a 27-item scale, as some items showed lower loads to be validated. Nevertheless, both PRFQ and three subscales have been reported as reliable and valid to be used in Turkish population [16].

Zaritcaregiver Burden Scale

Zarit Caregiver Burden Scale (ZCBS) was originally developed by Zarit et al. [17] in 1980 to measure caregiver burden in various somatic and psychiatric disorders. With a 5-point Likert structure, ZCBS consists of 22 items.

Table 2. Comparison of measures between parents of children with nocturnal enuresis and healthy controls

Measures	Patient group Mean±SD	Control group Mean±SD	p
n	79	78	
PRFQ-IC	55.02±16.07	65.44±8.39	**0.000**
PRFQ-CM	19.11±7.24	19.29±6.75	0.872
PRFQ-PM	42.20±14.90	55.26±10.09	**0.000**
PRFQ-mean	38.74±9.75	46.32±5.13	**0.000**
IERQ-SM	17.41±5.44	19.52±4.14	**0.007**
IERQ-ST	13.74±4.12	14.97±3.88	0.057
IERQ-EPA	20.07±3.18	18.17±4.33	**0.002**
IERQ-PTA	11.29±3.02	12.74±3.37	**0.005**
IERQ-total	59.72±13.98	67.34±10.94	**0.000**
ZCBS	57.97±18.40	35.10±7.31	**0.000**

PRFQ: Parental Reflective Functioning Questionnaire; IC: Interest and curiosity; CM: Certainty about mental states; PM: Pre-mentalizing; IERQ: Interpersonal Emotion Regulation Questionnaire; SM: Social modeling; ST: Soothing; EPA: Enhancing positive affect; PTA: Perspective taking; ZCBS: Zarit Caregiver Burden Scale; SD: Standard deviation.

Table 3. Correlation analyses of measures in patient and control groups and total sample

Measures	IERQ-total	ZCBS
Total sample (n=157)		
PRFQ-mean	**0.506****	**-0.702****
IERQ-total		**-0.436****
ZCBS		
Patient group (n=79)		
PRFQ-mean	**0.665****	**-0.744****
IERQ-total		**-0.503****
ZCBS		
Control group (n=78)		
PRFQ-mean	-0.091	0.024
IERQ-total		0.247
ZCBS		
Correlations between ZCBS and symptom parameters in patient group		
	BWQ	SD
ZCBS	0.132	**-0.249***
BWQ		**-0.299****

*: P<0.05 (two-tailed); **: P<0.01 (two-tailed); PRFQ: Parental Reflective Functioning Questionnaire; IERQ: Interpersonal Emotion Regulation Questionnaire; ZCBS: Zarit Caregiver Burden Scale; BWQ: Bed-wetting frequency; SD: Symptom duration.

Higher scores indicate a greater burden on caregivers. Turkish validation study was conducted with relatives of schizophrenia patients in 2009 by Ozlu et al. [18]and it showed that ZCBS is a valid and reliable tool to assess caregiver burden. In this study, participants from patient group asked to think the disease-related burden of their children and control participants were asked to think overall burden of their children in means of daily experiences.

RESULTS

There was no significant difference between parent groups in terms of ages (p=0.051), gender, and education years (p=0.189), as shown in Table 1. The mean age for children with NE was 7.22±2.47 and for control subjects 7.40±2.49. The children also did not differ in mean of age (p=0.813). Mean duration of symptoms was 2.81±2.30 years and mean frequency of bed-wettingwas 4.66±2.02 in a week.

The mean reflective functioning (RF) scores of the patient group were55.02±16.07 in interest and curiosity in the mental states dimension, 19.11±7.24 in certainty about the mental states dimension, and 42.20±14.90 in pre-mentalization, non-mentalization, and malevolent attributions dimension. Mean PRFQ score for patient group was 38.74±9.75. In contrast, healthy controls scored in three dimensions as 65.44±8.39, 19.29±6.7, and 55.26±10.09, respectively. Mean PRFQ score for control group was 46.32±5.13. The groups differed significantly in all scores except interest and curiosity in mental states, as shown in Table 2.

The scores of IERQ in different dimensions were as follows; 17.41±5.44 vs. 19.52±4.14 in social modeling (p=0.007); 13.74±4.12 vs. 14.97±3.88 in soothing (p=0.057); 20.07±3.18 vs. 18.17±4.33 in enhancing positive affect (p=0.002); and 11.29±3.02 vs. 12.74±3.37 in perspective taking (p=0.005). Mean total IERQ scores differed significantly between groups. (59.72±13.98 vs. 67.34±10.94 for patient and control group,respectively (Table 2).

Groups also differed in means of caregiver burden, as the patient group scored 57.97±18.40 and control subjects scored 35.10±7.31 in ZCBS (p=0.000).

Correlation analyses of three measures were reported in the total sample, patient group, and control group separately, as shown in Table 3. Significant negative correla-

Table 4. Comparison of measures between mothers and fathers of children with nocturnal enuresis and healthy controls

Comparison of measures between mothers of children with nocturnal enuresis and healthy controls			
Measures	Patient group Mean±SD	Control group Mean±SD	p
n	51	44	
PRFQ-IC	52.82±17.22	67.18±7.86	**0.000**
PRFQ-CM	18.60±7.37	17.47±6.69	0.439
PRFQ-PM	39.54±15.05	56.04±10.54	**0.000**
PRFQ-Mean	36.92±10.29	46.28±5.52	**0.000**
IERQ-SM	16.76±5.68	19.72±3.37	**0.003**
IERQ-ST	13.74±4.55	14.97±3.97	0.167
IERQ-EPA	18.13±4.45	20.27±2.88	**0.008**
IERQ-PTA	10.88±3.01	12.95±3.28	**0.002**
IERQ-Total	59.09±14.91	67.97±10.17	**0.001**
ZCBS	61.80±18.99	36.09±7.93	**0.000**
Comparison of measures between fathers of children with nocturnal enuresis and healthy controls			
n	28	34	
PRFQ-IC	59.03±13.10	63.20±8.64	0.138
PRFQ-CM	20.03±7.03	21.64±6.16	0.340
PRFQ-PM	47.03±13.59	54.26±9.54	**0.017**
PRFQ-Mean	42.04±7.82	46.37±4.66	**0.009**
IERQ-SM	18.60±4.84	19.26±5.01	0.604
IERQ-ST	13.75±3.27	14.97±3.81	0.187
IERQ-EPA	18.25±4.19	19.82±3.58	0.116
IERQ-PTA	12.03±2.94	12.47±3.50	0.598
IERQ-Total	60.85±12.27	66.52±11.98	0.072
ZCBS	50.50±14.99	33.82±6.31	**0.000**

SD: Standard deviation; PRFQ: Parental Reflective Functioning Questionnaire; IERQ: Interpersonal Emotion Regulation Questionnaire; IC: Interest and curiosity; CM: Certainty about mental states; PM: Pre-mentalizing; SM: Social modeling; ST: Soothing; EPA: Enhancing positive affect; PTA: Perspective taking; ZCBS: Zarit Caregiver Burden Scale.

tions were found between PRFQ and IERQ and ZCBS scores. Correlations between disease severity parameters such as duration of symptoms and bed-wetting frequency in a week and ZCBS were also calculated. The correlation coefficient between duration of symptoms and ZCBS was −0,249 (p:0,027) and between bed-wetting frequency and ZCBS was 0.132 (p:0.246). There was a significant relationship between duration of symptoms and bet-wetting frequency with a correlation coefficient of -0.299 (p=0.007).

As further analysis, the mean scores of measures were compared between mothers of enuretic children and healthy controls, as well as between fathers of two study groups. Although the significance between the two mother groups revealed similar results with the overall comparison of parents, fathers of enuretic children differed significantly only in mentalization and caregiver burden scores, but not in ER measures, as shown in Table 4.

DISCUSSION

NE is regarded as a chronic medical disorder which has distressing effects on both children and their parents [9]. Various studies show that NE has deteriorating impacts on the self-esteem and overall competencies of children and causes significant caregiver burden on parents [10, 19].

Our results show that parents of children with NE had relatively low mentalization abilities and experience more difficulties with ER in interpersonal relationships compared to parents of healthy children. These psychological factors are also related to the perceived caregiver burden of parents, as both RF and ER abilities were negatively correlated with perceived burden of disease. This finding seems to in line with the literature, as some studies showing that negative maternal attributions to NE and intolerance of mothers to the symptoms of enuretic children was associated with greater perceived caregiver burden [20]. Relatedly, some studies have shown that almost half of the parents of children with NE approach to the symptoms with frustration and anger, and this attitude is a determining factor in the success of the treatment [21]. Moreover, it was also known that children with NE may become the subject of domestic violence, as Sapi et al. [22] reported that 48.5 of the children with NE in their sample were physically punished because of their symptoms. In this regard, we believe that our results showed that parents of NE patients perceive significantly higher levels of caregiver burden compared to health controls deserves an attention. As previous studies have also showed the significant deteriorating effects of NE on parents and it was a well-replicated finding, our results contribute to this line research [23].

We suggest that results from the current study may help to better understand the attitudes of parents toward their children with NE. One of the measures used in the study was PRFQ and it is a widely used tool to assess parents' ability to perceive their children as a psychological agent, namely perceiving them as meaningful, understandable, and predictable subjects [15]. Several

studies showed that poor RF (mentalizing) abilities of parents were related to various psychiatric and somatic disorders in children. For example, Ensink et al. [24] reported that maternal RF abilities are negatively correlated with externalizing and internalizing problems of children. Relatedly, it was also shown that low mentalizing abilities of mothers increase the risk of conduct disorder and oppositional defiant disorder in children [25]. Parental RF seems to play a role also in obesity, Pazzagli et al. [26] showed that low RF of mothers was a predictive factor for the morbidly increased body mass index in children. As well-known comorbidity with NE, parental RF seems to be important also in ADHD. Results of the study from Mazzeschi et al. [27] showed that parents of ADHD patients had lower scores in PRFQ compared to health controls. In the light of the aforementioned studies, we believe that low mentalization abilities in parents of children with NE may be related with increased prevalence of various psychiatric disorders in these individuals, as Durmaz et al. [10] showed that mothers of children with enuresis have significantly more psychiatric symptomatology such as somatization, phobic anxiety, and depression. This study also suggested that mothers of children with enuresis have more history of adverse childhood experiences. This finding should be discussed with the findings from Scohber et al. [28] study, as they showed that children with enuresishave more insecure attachment profiles compared to healthy controls.

Apart from the RF, measuring the ER in parents of children with NE was another aim of the current study. As a closely related parameter to RF, ER was accepted as an important factor for in childrearing as it enables thoughtful and adaptive caregiving [29]. Because of the close relationship between ER of children and ER of their parents, we believe that ER abilities may play an important role in pathogenesis of NE [30]. In one of the few studies focusing ER abilities in parents of NE patients, Durmaz et al. [10] reported that mothers of NE patients showed high levels of neuroticism, a personality trait which was also closely related to ER difficulties. Similar to RF, ER was also found to be closely related to various psychiatric and somatic conditions. Sanders et al. [31] reported that difficulties in parental ER may moderate depressive symptoms in children. As a frequently seen comorbidity with NE, parental ER abilities seems to play a role also in ADHD symptomology [32]. Moreover, various studies also showed that ER is an important mediator in development of anxiety disorders in children [33]. Apart from psychiatric disorders in children, studies also showed that parents who had children with somatic disorders such as congenital heart diseases suffer from ER difficulties [34]. Although there has been no study found directly examining parental ER in NE, an interesting line of research point that children with NE show significantly higher levels of internalizing problems such as anxiety and depression [35]. This finding should be thought in light of well-replicated finding of close relationship between internalizing problems in children and parental ER [36].

Our findings also implicate that in means of ER, the mothers of children with NE may differ from the fathers of children with NE, as the significance between measure scores were found to be statistically significant in comparison of mothers of both study groups, unlike in comparison of fathers. Possible explanation for this dissociation may be the number of participants between fathers and mothers in both study groups. In the current study, the numbers of mothers in both groups were higher than the numbers of fathers. Nevertheless, in means of caregiver burden and mentalization, the difference between patient and control groups remained statistically significant. These finding can be interpreted as a possible independence of the caregiving burden and mentalization from ER abilities. Moreover, it should be noted that most studies in this topic were conducted with the mothers of children with NE and it may be suggested to conduct similar studies with higher numbers of fathers.

In summary, the current study showed that parents of children with NE perceive significantly higher levels of caregiver burden and it may be related to poorer mentalizing and ER abilities of these subjects. These findings may help clinicians to encourage both patients and their parents to be referred to psychiatric evaluation prior to medical treatments. The authors of the current study believe that such a psychiatric evaluation can be helpful to implement more personalized and sophisticated medical and psychological treatments to the patients and their parents, when necessary.

Limitations

One of the main limitations of this study was that only parents of primary enuresis patients were included. Therefore, our findings cannot be generalized to all enuresis patients. On the other hand, since it is known that secondary enuresis can be associated with both psychological and physiological stressors, such a limitation provided a better definition of these parameters.

Another limitation of the study was that the present measures were not frequently used in previous studies with NE. Especially, ZCBS was classically used in studies with various disorders in adults and elderly patients. Therefore, the items of the measures could be not specifically focusing on problems related to NE. Nevertheless findings from the current study show that ZBCS can also be a helpful tool to study caregiver burden in NE, as significant differences were found between patient and control groups.

Conclusion

In this study, we revealed that the parents of primary NE patients may have difficulty mentalizing and ER in interpersonal relationships. These difficulties may be a cause or a consequence of the NE. In addition, this study showed that parents of NE patients perceive more caregiving burden. Therefore, it may be advisable for parents of NE patients to seek psychological counseling.

Ethics Committee Approval: The Fatih Sultan Mehmet Training and Research Hospital Clinical Research Ethics Committee granted approval for this study (date: 12.11.2020, number: KAEK 2020/20).

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study has received no financial support.

Authorship Contributions: Concept – TT; Design – BA; Supervision – TT; Materials – TT, BA; Data collection and/or processing – RBD, MOO; Analysis and/or interpretation – BA; Literature review – MOO, MY; Writing – RBD, MOO, TT, BA; Critical review – AV.

REFERENCES

1. Austin PF, Bauer SB, Bower W, Chase J, Franco I, Hoebeke P, et al. The standardization of terminology of lower urinary tract function in children and adolescents: Update report from the standardization committee of the International Children's Continence Society. Neurourol Urodyn 2016;35:471–81. [CrossRef]
2. Butler R, Heron J; Alspac Study Team. Exploring the differences between mono- and polysymptomatic nocturnal enuresis. Scand J Urol Nephrol 2006;40:313–9. [CrossRef]
3. Nevéus T, Läckgren G, Tuvemo T, Hetta J, Hjälmås K, Stenberg A. Enuresis--background and treatment. Scand J Urol Nephrol Suppl 2000;206:1–44. [CrossRef]
4. Nevéus T. Pathogenesis of enuresis: towards a new understanding. Int J Urol 2017;24:174–82. [CrossRef]
5. Van Herzeele C, De Bruyne P, De Bruyne E, Walle JV. Challenging factors for enuresis treatment: psychological problems and non-adherence. J Pediatr Urol 2015;11:308–13. [CrossRef]
6. Coppola G, Costantini A, Gaita M, Saraulli D. Psychological correlates of enuresis: a case-control study on an Italian sample. Pediatr Nephrol 2011;26:1829–36. [CrossRef]
7. Van Herzeele C, Dhondt K, Roels SP, Raes A, Hoebeke P, Groen LA, et al. Desmopressin (melt) therapy in children with monosymptomatic nocturnal enuresis and nocturnal polyuria results in improved neuropsychological functioning and sleep. Pediatr Nephrol 2016;31:1477–84.
8. von Gontard A, Equit M. Comorbidity of ADHD and incontinence in children. Eur Child Adolesc Psychiatry 2015;24:127–40. [CrossRef]
9. Egemen A, Akil I, Canda E, Ozyurt BC, Eser E. An evaluation of quality of life of mothers of children with enuresis nocturna. Pediatr Nephrol 2008;23:93–8. [CrossRef]
10. Durmaz O, Kemer S, Mutluer T, Bütün E. Psychiatric dimensions in mothers of children with primary nocturnal enuresis: A controlled study. J Pediatr Urol 2017;13:62. [CrossRef]
11. Sá CA, Martins de Souza SA, Villela MCBVA, Souza VM, de Souza MHF, de Figueiredo AA, et al. Psychological intervention with parents improves treatment results and reduces punishment in children with enuresis: a randomized clinical trial. J Urol 2021;205:570–6. [CrossRef]
12. Roccella M, Smirni D, Smirni P, Precenzano F, Operto FF, Lanzara V, et al. Parental stress and parental ratings of behavioral problems of enuretic children. Front Neurol 2019;10:1054. [CrossRef]
13. Hofmann SG, Carpenter JK, Curtiss J. Interpersonal Emotion Regulation Questionnaire (IERQ): scale development and psychometric characteristics. Cognit Ther Res 2016;40:341–56. [CrossRef]
14. Gökdağ C, Sorias O, Kıran S, Ger S. Adaptation of the interpersonal emotion regulation questionnaire to the Turkish language and investigation of its psychometric properties. [Article in Turkish]. Turk Psikiyatri Derg 2019;30:57–66. [CrossRef]
15. Luyten P, Mayes LC, Nijssens L, Fonagy P. The parental reflective functioning questionnaire: development and preliminary validation. PLoS One 2017;12:e0176218. [CrossRef]
16. Karabulut D, Ilhan A, Kumru A, Arıkan G. Erken Çocukluk Döneminde Ebeveyn İçsel Düşünme İşlevselliği Ölçeği'nin Türk Örnekleminde Görülen Sosyometrik Yapısı. 2016.
17. Zarit SH, Reever KE, Bach-Peterson J. Relatives of the impaired elderly: correlates of feelings of burden. Gerontologist 1980;20:649–55.
18. Ozlu A, Yildiz M, Aker T. A reliability and validity study on the Zarit Caregiver Burden Scale. [Article in Turkish]. Noro Psikiyatr Ars 2009;46 Suppl:38–42.
19. Theunis M, Van Hoecke E, Paesbrugge S, Hoebeke P, Vande Walle J. Self-image and performance in children with nocturnal enuresis. Eur Urol 2002;41:660–7. [CrossRef]
20. Butler RJ, Brewin CR, Forsythe WI. Maternal attributions and tolerance for nocturnal enuresis. Behav Res Ther 1986;24:307–12. [CrossRef]
21. Tai TT, Tai BT, Chang YJ, Huang KH. Parental perception and factors associated with treatment strategies for primary nocturnal enuresis. J Pediatr Urol 2017;13:272. [CrossRef]
22. Sapi MC, Vasconcelos JS, Silva FG, Damião R, Silva EA. Assessment of domestic violence against children and adolescents with enuresis. J Pediatr (Rio J) 2009;85:433–7. [CrossRef]
23. Landgraf JM, Abidari J, Cilento BG Jr, Cooper CS, Schulman SL, Ortenberg J. Coping, commitment, and attitude: quantifying the everyday burden of enuresis on children and their families. Pediatrics 2004;113:334–44. [CrossRef]
24. Ensink K, Bégin M, Normandin L, Fonagy P. Parental reflective functioning as a moderator of child internalizing difficulties in the context of child sexual abuse. Psychiatry Res 2017;257:361–6. [CrossRef]
25. Meins E, Centifanti LC, Fernyhough C, Fishburn S. Maternal mind-mindedness and children's behavioral difficulties: mitigating the impact of low socioeconomic status. J Abnorm Child Psychol 2013;41:543–53. [CrossRef]

26. Pazzagli C, Germani A, Buratta L, Luyten P, Mazzeschi C. Childhood obesity and parental reflective functioning: Is there a relation? Int J Clin Health Psychol 2019;19:209–17. [CrossRef]
27. Mazzeschi C, Buratta L, Germani A, Cavallina C, Ghignoni R, Margheriti M, et al. Parental reflective functioning in mothers and fathers of children with adhd: issues regarding assessment and implications for intervention. Front Public Health 2019;7:263. [CrossRef]
28. Schober JM, Lipman R, Haltigan JD, Kuhn PJ. The impact of monosymptomatic nocturnal enuresis on attachment parameters. Scand J Urol Nephrol 2004;38:47–52. [CrossRef]
29. Schultheis AM, Mayes LC, Rutherford HJ. Associations between emotion regulation and parental reflective functioning. J Child Fam Stud 2019;28:1094–104. [CrossRef]
30. Bariola E, Gullone E, Hughes EK. Child and adolescent emotion regulation: the role of parental emotion regulation and expression. Clin Child Fam Psychol Rev 2011;14:198–212. [CrossRef]
31. Sanders W, Zeman J, Poon J, Miller R. Child regulation of negative emotions and depressive symptoms: the moderating role of parental emotion socialization. J Child Fam Stud 2015;24:402–15. [CrossRef]
32. Mazursky-Horowitz H, Felton JW, MacPherson L, Ehrlich KB, Cassidy J, Lejuez CW, et al. Maternal emotion regulation mediates the association between adult attention-deficit/hyperactivity disorder symptoms and parenting. J Abnorm Child Psychol 2015;43:121–31. [CrossRef]
33. Hurrell KE, Hudson JL, Schniering CA. Parental reactions to children's negative emotions: relationships with emotion regulation in children with an anxiety disorder. J Anxiety Disord 2015;29:72–82. [CrossRef]
34. De Stasio S, Boldrini F, Ragni B, Bevilacqua F. Sleep quality, emotion regulation and parenting stress in children with congenital heart disease. Mediterr J Clin Psychol 2019;7:1–20.
35. Van Hoecke E, Hoebeke P, Braet C, Walle JV. An assessment of internalizing problems in children with enuresis. J Urol 2004;171:2580–3. [CrossRef]
36. Kim-Spoon J, Cicchetti D, Rogosch FA. A longitudinal study of emotion regulation, emotion lability-negativity, and internalizing symptomatology in maltreated and nonmaltreated children. Child Dev 2013;84:512–27. [CrossRef]