



ARAŞTIRMA / RESEARCH

Childhood masturbation behavior: symptom or disorder?

Çocukluk çağı masturbasyon davranışı: bozukluk mu semptom mu?

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Abstract

Purpose: This study aims to examine the sociodemographic characteristics and comorbidity of children with masturbation.

Materials and Methods: The medical records of the patients who applied with the complaint of masturbation were collected retrospectively. The records of children who applied to the clinic on the same dates and whose psychiatric examinations were considered normal were collected to form the control group. 98 patients and 101 healthy children included the study. Sociodemographic data, parental psychopathologies, comorbid disorders, and medical histories were examined and compared with the healthy control group.

Results: Having less than two siblings was higher in the patient group. Fathers' psychiatric disorders were higher in the patients' group. When participants only older than 6 years are evaluated, this difference was higher. When the participants older than 6 years were compared, the history of seizures was significantly higher in the patient group. 54.08% of the patients had a comorbid psychiatric disorder. The most common comorbidities were attention deficit and hyperactivity disorder (ADHD) (23.4%) and anxiety disorders (11.22%). The mean age of patients with ADHD was older than patients without ADHD.

Conclusions: In this study the frequency of preterm birth, epileptic seizure, and ADHD was higher in the patient group that older than 6 years of age. These results may suggest that patients older than 6 years of age may require further psychiatric and neurological examinations.

Keywords: childhood masturbation, attention deficit hyperactivity disorder, comorbidity

Öz

Amaç: Bu çalışma masturbasyon davranışı gösteren çocuk bireylerin sosyodemografik özelliklerini değerlendirmeyi amaçlamaktadır.

Gereç ve Yöntem: Polikliniğe masturbasyon davranışı yakınmasıyla başvuran hastaların tıbbi kayıtları geriye dönük olarak toplanmıştır. Aynı tarihlerde kliniğe başvuran ve ruhsal muayeneleri normal olarak değerlendirilen çocukların kayıtları kontrol grubunu oluşturmak üzere toplanmıştır. 98 hasta ve 101 sağlıklı çocuk çalışmaya dahil edilmiştir. Sosyodemografik veriler, ebeveyn psikopatolojileri, komorbid hastalıkları ve tıbbi geçmipleri incelenmiş ve sağlıklı kontrol grubuyla karşılaştırılmıştır.

Bulgular: Hasta grupta 2'den az kardeşe sahip olma oranı daha yüksekti. Babanın psikiyatrik hastalığı hasta grupta daha yüksekti. Sadece 6 yaşından büyük katılımcılar değerlendirildiğinde bu fark daha fazlaydı. 6 yaşından büyük katılımcılar karşılaştırıldığında, epileptik nöbet öyküsü hasta grupta anlamlı olarak daha yüksekti. Hastaların %54,08'i komorbid psikiyatrik bozukluğa sahipti. En sık komorbiditeler dikkat eksikliği ve hiperaktivite bozukluğu (DEHB) (23.4%) ve anksiyete bozuklukları (11.22%) olarak saptandı. DEHB olan hastaların ortalama yaşı DEHB komorbiditesi olmayanlardan daha büyüktü.

Sonuç: Bu çalışmada, erken doğum oranı, epileptik nöbet öyküsü ve DEHB sıklığının 6 yaşından büyük hasta grubunda anlamlı derecede daha yüksek saptanmıştır. Bu sonuçlar 6 yaşından büyük olgularda masturbasyon davranışı yakınmasının ileri psikiyatrik ne nörolojik değerlendirme açısından uyarıcı olması gerektiğini düşündürmektedir.

Anahtar kelimeler: çocukluk çağı masturbasyonu, dikkat eksikliği ve hiperaktivite bozukluğu, komorbidite

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INTRODUCTION

Childhood masturbation is the pleasurable behaviors that the child provides with genital stimulation by hands or by rubbing. It can be started before one year of age and often regresses after three years of age^{1,2}. Despite the incidence is not known in children, latent masturbation behavior is accepted as normal in adulthood and is seen in 90-94% of men and 50-60% of women^{3,4}. Although masturbation behavior is more common in males in adulthood, girls seem to be affected more frequently than boys in the case of childhood masturbation disorder. There is insufficient information on the etiology of the behavior. Some reports notice some factors including childhood abuse, neglect, deprivation, genitourinary system diseases, sleep disturbances, and early wean may be responsible for the etiology at the onset of the behavior⁵. In the clinical presentation of the disorder, the shear posture of the legs, and the behavior of rubbing the thighs together or rubbing the genital area to the bed or any object are observed⁶.

Masturbation behavior is typically observed as grunting, irregular breathing, and flushing of the face followed by sweating and fatigue. During the behavior, the child's eyes are fixed at the same point, but the behavior can be interrupted by any distractions. Although the association of the behavior with any psychiatric disorder is not known, in one study it was reported that children with childhood masturbation were more likely to develop attention deficit and hyperactivity disorder than the control group⁷.

In the current literature, data on childhood masturbation disorder are limited, and this study aims to examine the sociodemographic characteristics, comorbid psychiatric disorders, and medical resume of children with masturbation behavior.

MATERIALS AND METHODS

The medical records of the patients who applied to Mersin University Faculty of Medicine Child and Adolescent Psychiatry Outpatient Clinic between 2009 and 2017 with the complaint of masturbation behavior were examined retrospectively. The inclusion criteria were determined as being under the age of 10, the sociodemographic data form was available and complete, and the complaint of masturbation during the first interview. Exclusion

criteria were considered as being over 10 years of age, moderate or severe mental retardation, severe autism diagnosed, and inaccessibility of file data. Children older than 10 years were not included in the study to exclude normal masturbation behavior due to adolescence. Likewise, the files of children who applied to the clinic for counseling for psychosocial stressors (sibling birth, migration, divorce, parental loss) and were not diagnosed with any psychiatric disorder by psychiatric examination were collected retrospectively. The inclusion criteria were determined as being under the age of 10, the sociodemographic data form was available and complete, having no complaint or psychiatric diagnosis during the first interview. Exclusion criteria were considered as being over 10 years of age, inaccessibility of file data, having a current or past psychiatric diagnosis, having a psychiatric complaint.

For this study, ethics approval was obtained from the Clinical Research Ethics Committee of Mersin University Rectorate with the decision dated 12.05.2016 and numbered 162/9.

Procedure

Age, sex, number of siblings, duration of breastfeeding, family psychiatric disorders, and comorbid medical diseases were investigated and compared among groups. Also, comorbid psychiatric disorders are evaluated for the patient group. Moreover, the follow-up file records of the patients who applied with the complaint of masturbation were also evaluated in terms of subsequent psychiatric disorders. The control group could not be evaluated because the follow-up files were not available.

To evaluate the effect of the age factor on the variables, the groups were re-grouped as over 6 years old and under 6 years old. Here, the age of six is considered to be the age limit, which corresponds to the period in which the play age ends, the phallic period ends and the school-age begins. The variables were compared among the patients over 6 years old and under 6 years old. Thus, it was aimed to determine the differences between patients over 6 years old and under 6 years old.

Moreover, patients younger than 6 years of age were compared with controls younger than 6 years of age and patients older than 6 years of age were compared with controls older than 6 years of age. Thus, it was aimed to evaluate the differences of these patient

groups with the control groups in the same age group.

Finally, based on the findings, the patient group was re-grouped as those with and without ADHD according to DSM-IV diagnostic criteria. Parents' notification, teacher's feedback form and notes of clinical observations were considered for that purpose. The same variables were compared again for these two groups. Thus, the differences of the group with ADHD were tried to be evaluated.

Statistical analysis

The distribution of continuous variables was examined by the Kolmogorov-Smirnov test. Independent group samples were used for independent variables and the Mann-Whitney U test for non-normal variables. Descriptive statistics for continuous variables are given as mean + -standard deviation or median (minimum-maximum) depending on the distribution pattern. The relationships between categorical variables were examined by Pearson Chi-Square or Fisher's Exact test and indicated by frequency and percentage. Statistical analysis was performed with the SPSS v.22 package program and the significance level was considered as 0.05.

RESULTS

98 patients and 101 healthy children included the study. Sixty-six girls (67.3%) and 32 boys (32.7%) had masturbation behavior problem. The mean age of the patient group was 5.49 ± 2.25 years and the mean age of the control group was 5.23 ± 2.25 years. There was no significant difference between patient and control groups. Sixty-six children (62.2%) in the patient group were younger than 6 years. In the analysis, the mean maternal age of the patient group was 27.77 ± 6.69 , the mean paternal age was 31.88 ± 5.73 , and the median duration of breastfeeding was 11 (0-48) months. In the control group, the mean maternal age was 28.06 ± 5.51 , the mean paternal age was 31.92 ± 5.92 , and the median duration of breastfeeding was 12 (0-36) months. No significant difference was found between the groups ($t=0.339$ and $p=0.735$, $t=0.052$ and $p=0.958$, $U=4669$ and $p=0.830$, respectively). Overall, 70 (71.4%) of the patients and 56 (55.4%) of the controls were the first child, and the proportion of being the first child was statistically significantly higher in patients ($\chi^2=5.470$ and $p=0.019$). There were 81 (82.7%) patients

without siblings or one sibling in the patient group, while this number was 68 (67.3%) in the control group and this difference was statistically significant ($\chi^2=6.210$ and $p=0.013$).

When the psychopathological conditions of the mother were examined, the rate of psychopathology in the patient group was 17.3% ($n=17$), while this rate was 14.9% ($n=15$) in the control group. The difference between these ratios was not statistically significant ($\chi^2=0.230$ and $p=0.632$). Depression was the most common maternal psychiatric disorder in both the patient and control groups. When the psychopathology of the fathers was compared, the presence of psychopathology in the patient group was 13.3% ($n=13$), whereas this rate was found to be 3% ($n=3$) in the control group, and this difference was statistically significant ($\chi^2=7.130$ and $p=0.008$). In the patient group, 4 of the fathers had depression, 2 had the obsessive-compulsive disorder, 1 had panic disorder, 2 had a personality disorder, 4 had an alcohol addiction, but in the control group 1 had a personality disorder, 1 had alcohol dependence and 1 had a tic disorder. When the psychopathologies in the other relatives were compared, the presence of psychopathology was found in 38.8% ($n=38$) of the patient group and 21.8% ($n=22$) of the control group and this rate was statistically significant ($\chi^2=6.820$ and $p=0.009$).

When the antenatal status of the groups was examined, there was no significant difference between the groups in terms of the delivery method ($\chi^2=0.884$ and $p=0.347$). The number of preterm infants was 15 (15.3%) in the patient group and 5 (5.0%) in the control group. The preterm delivery rate was significantly higher in the patient group ($\chi^2=9.411$ and $p=0.004$).

There was no significant difference between the groups in terms of comorbid medical diseases ($\chi^2=0.081$ and $p=0.776$). A history of seizures was found in 7 (7.1%) in the patient group and 2 (2%) in the control group, but there was no statistically significant difference between groups ($\chi^2=3.070$ and $p=0.097$) (Table-1).

When premorbid stressors were investigated, 3 patients in the patient group and 2 patients in the control group had a history of sexual abuse. Besides, the rate of environmental stress factors in the patient group was 20.4% ($n=20$). It was thought that comparison with the control group would not provide healthy data since it was known that the

patients in the control group were generally referred to as counseling for the prevention of a psychosocial stress factor. The most common stress factors observed in the patient group were parental separation (n= 5) and sibling birth (n= 4). No masturbation behavior was observed in the sibling in the control group, whereas it was 3.06% (n= 3) in the patient group.

Then, the patients younger than 6 years (n=61) and the patients older than 6 years (n=37) were compared. Preterm delivery history was significantly higher in patients younger than 6 years ($\chi^2=6.992$ and $p=0.033$) (Table-2). There were no significant differences in other sociodemographic data.

Table 1. Demographic and clinical features of groups

		Patients (n=98)	Controls (n=101)	p
Age, mean \pm ss		5.49 \pm 2.25	5.23 \pm 2.25	p=0.438
Maternal Age, mean \pm ss		27.77 \pm 6.69	28.06 \pm 5.51	t=0.339 p=0.735
Paternal Age, mean \pm ss		31.88 \pm 5.73	31.92 \pm 5.92	t=0.052 p=0.958
Breastfeeding, median (min-max)		11 (0-48)	12 (0-36)	U=4669 p=0.830
Gender	Male	32 (32.7%)	37 (36.6%)	$\chi^2=0.348$ p=0.555#
	Female	66 (67.3%)	64 (63.4%)	
Number of Siblings	<2	81 (82.7%)	68 (67.3%)	$\chi^2=6.210$ p=0.013#
	\geq 2	17 (17.3%)	33 (32.7%)	
Being the First Child	First Child	70 (71.4%)	56 (55.4%)	$\chi^2=5.470$ p=0.013#
	Not First Child	28 (28.6%)	45 (44.6%)	
Mother's Psychiatric Disorder	Yes	17 (17.3%)	15 (14.9%)	$\chi^2=0.230$ p=0.632#
	No	81 (82.7%)	86 (85.1%)	
Father's Psychiatric Disorder	Yes	13 (13.3%)	3 (3.0%)	$\chi^2=7.130$ p=0.008#
	No	85 (86.7%)	98 (97.0%)	
Relatives' Psychiatric Disorder	Yes	38 (38.8%)	22 (21.8%)	$\chi^2=6.820$ p=0.009#
	No	60 (61.2%)	79 (78.2%)	
Delivery Method	c/s	56 (57.1%)	51 (50.5%)	$\chi^2=0.884$ p=0.347#
	Natural	42 (42.9%)	50 (49.5%)	
Delivery Time	Preterm	15 (15.3%)	5 (5.0%)	$\chi^2=9.411$ p=0.004*
	Term	80 (81.6%)	96 (95%)	
	Postterm	3 (3.1%)	0 (0.0%)	
Comorbid Medical Disease	Yes	22 (22.4%)	21 (20.8%)	$\chi^2=0.081$ p=0.776#
	No	76 (77.6%)	80 (79.2%)	
History of Seizure	Yes	7 (7.1%)	2 (2.0%)	$\chi^2=3.070$ p=0.097&
	No	91 (92.9%)	99 (98.8%)	

#: Pearson chi-square test, #: Fisher's exact test

Table 2. Differences between the patients over 6 years of age and under 6 years of age

		\leq 6 years (n=61)	>6 years (n=37)	p
Delivery Time	Preterm	12 (19.7%)	3 (8.1%)	$\chi^2=6.992$ p=0.033*
	Term	49 (80.3%)	31 (83.8%)	
	Postterm	0 (0.0%)	3 (8.1%)	

#: Pearson chi-square test, #: Fisher's exact test

When the patients younger than 6 years (n= 61) and the controls younger than 6 years (n= 66) were compared, the preterm delivery rate was significantly higher in the patient group ($\chi^2=6.964$ and $p=0.008$). Being the first child was significantly higher in the patient group (n=50, 82.0%) than the control group (n=43, 65.2%) ($\chi^2=4.572$ and $p=0.032$). The history

of seizures was similar between groups. ($p= 0.671$). For patients, the presence of fathers' psychiatric disease was significantly higher than controls (n=8, 13.1% vs. n=1, 1.5%, $\chi^2=6.478$ and $p=0.014$) (Table-3). The other sociodemographic data were similar between groups.

Table 3. Differences between the patients and the controls ≤ 6 years of age

		Patients ≤ 6 years (n=61)	Controls ≤ 6 years (n=66)	p
Being the First Child	First Child	50 (82,0%)	43 (65,2%)	$\chi^2=4.572$ $p=0,032^{\#}$
	Not First Child	11 (28,0%)	23 (34,8%)	
Father's Psychiatric Disorder	Yes	8 (13,1%)	1 (1,5%)	$\chi^2=6.478$ $p=0,014^{\#}$
	No	53 (86,9%)	65 (88,5%)	
Delivery Time	Preterm	12 (19,7%)	3 (4,5%)	$\chi^2=6.964$ $p=0,008^{\&}$
	Term	49 (80,3%)	63 (95,5%)	

$\#$: Pearson chi-square test, $\&$: Fisher's exact test

When the patients older than 6 years (n= 37) and the controls older than 6 years (n= 35) were compared, there was no significant difference between groups in terms of the preterm delivery rate ($\chi^2=3.209$ and $p=0.242$). Being the first child was similar between the groups (n=13, 37.1% vs. n=20, 54.1%) ($\chi^2=2.072$

and $p=0.150$). The history of seizures was significantly higher in patients ($\chi^2=4.006$ and $p=0.045$) (Table-4). The presence of fathers' psychiatric disease was similar between the groups older than 6 years (n=5, 13.5% vs. n=2, 5.7%, $\chi^2=1.247$ and $p=0.430$).

Table 4. Differences between the patients and the controls over 6 years of age

		Patients >6 years (n=37)	Controls >6 years (n=35)	p
History of Seizure	Yes	4 (10,8%)	0 (0,0%)	$\chi^2=4.006$ $p=0.045^{\&}$
	No	33 (89,2%)	35 (100,0%)	

$\#$: Pearson chi-square test, $\&$: Fisher's exact test

36,7% of the patients had a comorbid psychiatric disorder at the first examination (n=36). The most common comorbid psychiatric disorders were ADHD (29,2%), nail eating (14,6%), enuresis nocturna (14,6%), respectively. By examining the following medical reports of the patients, it was seen that the rate of diagnosing a new psychiatric disorder was 25.5% (n=25). The most common new psychiatric disorders were ADHD (36,0%), anxiety disorders (28,0%), and motor tic disorder (20,0%), respectively. As a result of follow-up, in total, 54,08% of the patients had a comorbid psychiatric disorder. The most common comorbidities were ADHD (23,4%), anxiety disorders (11,22%), enuresis nocturna (7,14 %) and nail eating (7,14 %).

Of the patients, 36.7% (n=36) had a comorbid psychiatric disorder during the first examination. The

most common comorbid psychiatric disorders were ADHD (n=14, 38.9%), nail eating (n=5, 13.9%), enuresis nocturna (n=3, 8.3%), and speech delay (n=3, 8.3%), respectively. By examining the following medical reports of the patients, it was seen that the rate of diagnosing a new psychiatric disorder was 19.4% (n=19), and there were 25 new diagnose for these 19 patients in total. The most common new psychiatric disorders were ADHD (n=9, 36.0%), anxiety disorders (n=7, 28.0%), and motor tic disorder (n=5, 20.0%), respectively. As a result of follow-up, in total, 45.9% (n=45) of the patients had at least one comorbid psychiatric disorder, and there were 73 different comorbid diseases. The most common comorbidities were ADHD (n=23, 31.5%), anxiety disorders (n=11, 15.1%), enuresis nocturna (n=7, 9.6%) and nail eating (n=7, 9.6%).

When the patients with ADHD (n=14) compared with the patients without ADHD (n=84, patients with no comorbid disease + with a comorbid disease other than ADHD), the mean age of children with ADHD was 7.00 ± 1.11 , and the mean age of children without ADHD was 5.24 ± 2.30 . The difference between the groups was also statistically significant ($t=4.540$ and $p<0.001$).

DISCUSSION

Masturbation behavior is accepted as a behavioral pattern to have pleasure by stimulation of the genital area by hands. Although masturbation disorder is not included in the American Psychiatric Association classification, masturbation behavior has been included in the World Health Organization classification as a component of some behavior disorders⁸. It is not yet clear whether it is a disorder in itself or a component of any disorder. The behavior is known to be self-extinguishing by age. It has been reported that this behavior may persist longer than expected and disrupts functionality. Although this behavior spontaneously extinguishes by age, there are also cases may cause social life to be challenging or requiring the use of antipsychotic drugs such as risperidone or olanzapine^{9,10}.

There is no population-based frequency study on childhood masturbation behavior. In our study, the rate of admission to our clinic with masturbation behavior in childhood was 0.4%. The rate of girls in the patient group was found to be higher following the general literature, although there were articles on the contrary¹¹. Although this may be explained by the fact that masturbation behavior in girls causes more anxiety and a search for solutions in families due to cultural factors. It seems difficult to predict the true gender relationship unless there are community-based studies^{7,12}.

Parental psychopathology is known to increase susceptibility to psychological disorders and behavioral problems in childhood¹³. In this study, while the psychopathology of the mother was similar among the groups, it was found that the psychopathology of the father and other relatives was more common in children with masturbation behavior. This may indicate a genetic predisposition shared with different psychiatric disorders. On the other hand, the presence of the father's psychopathology was similar between the groups over 6 years of age, but it was significantly higher in

the patient group younger than 6 years than the control group. This may indicate the importance of the relationship with the father during infancy and play age. Studies are reporting that father's participation and interest in infant care in the first years of life have positive effects on intellectual development, social entrepreneurship, impulse control skills, and the ability to establish empathy¹⁴. Paternal depression is suggested as associated with approximately a doubling of the risk of child's emotional and behavioral problems by many studies¹⁵. Father psychopathology can be thought to reduce the quality of the relationship with the child causing masturbation behavior.

In this study, having less than 2 siblings was found to be higher in children with masturbation behavior than in the control group. It is possible to think that children who have more than one sibling can have a higher probability of playing a game and social interaction. The desire can obtain from this social interaction. This situation seems to be supported by the extinction of masturbation behavior by increasing social interaction¹⁶.

Masturbation behavior up to the age of 5-6 is generally accepted as a more normal behavior pattern, while masturbation behavior that continues after the age of 6 is considered to require clinical evaluation¹⁷. In this study, when the patients over and under 6 years of age were compared, the preterm birth rate was found to be higher in cases over 6 years of age. Also, the presence of relative's psychopathology and the history of epileptic seizures was higher in patients over 6 years of age compared to controls, but not in cases under 6 years compared to controls. These differences are point neurodevelopmental processes. This may suggest that masturbation behavior after 6 years of age may be related to a neuropsychiatric background. This may be based on a delay or a deficiency in maturation. Larger and prospective studies are needed on this subject.

In our study, the prevalence of psychiatric disorders, except for ADHD in children with masturbation behavior was consistent with general population prevalence. On the other hand, the incidence of ADHD was found to be 23.4% in total and this rate is considerably higher than the general population prevalence. There are a limited number of studies supporting the relationship between ADHD and masturbation behavior, and our study supports this relationship⁷. The fact that the mean age of patients

with ADHD was higher than that of patients without ADHD supports that the diagnosis of ADHD should be considered especially in advanced age masturbation behavior. Although the underlying common mechanism of this linkage is not known, this may be related to poorer delicacy and impulse control in children with ADHD. Nevertheless, awareness of family and educators may be an important factor in this finding. Changing the expectation of both family and society from the child with the onset of school age may reduce the acceptability of the existing symptoms.

The main limitations of this study are that it is a retrospective file study, failure to follow up the control group, it was made with data based on parental notification, and psychiatric examinations of the parents were not performed.

Childhood masturbation behavior is accepted as a normal behavior pattern for most clinicians and behavioral methods such as distraction and nursery are recommended to families. Nevertheless, persistent masturbation can put both family and clinician in a difficult position. It is not clear in which cases additional treatment should be applied.

In this study, which is the largest sample in the literature on masturbation behavior, the frequency of preterm birth, epileptic seizure, and ADHD was higher in the patient group over 6 years of age. These results may suggest that patients over 6 years of age may require further clinical examination. Under 6 years, increasing the social interaction in these children seems to be effective in the extinction of masturbation behavior. The situations decreasing playing a game or social interaction seem to be more common in patients under 6 years of age. However, advanced psychiatric and neurological examinations in children with masturbation behaviors over 6 years of age seem to be important for avoiding underlying diagnoses.

Also, the prevalence of ADHD in children with masturbation behavior is higher than that of the general population. This result may be suggesting masturbation behavior to be an early predictor of ADHD, but larger sample, prospective, and longitudinal studies are needed.

Yazar Katkıları: Çalışma konsepti/Tasarım: GGA, PD; Veri toplama: PD; Veri analizi ve yorumlama: PD; Yazı taslağı: PD, GGA; İçeriğin eleştirel incelenmesi: PD, GGA; Son onay ve sorumluluk: PD, GGA; Teknik ve malzeme desteği: -; Süpervizyon: GGA; Fon sağlama (mevcut ise): yok.

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