Prevalence of Masturbation and its Predisposing Factors in Children Referred to Psychiatric Clinic of Rafsanjan University of Medical Sciences

ABSTRACT

Introduction: Masturbation is accepted now as a normal part of human sexual behavior in childhood. But parents are still usually concerned about this behavior. The aim of this study was to collect data about prevalence of masturbation and evaluating its predisposing factors in children referred to pediatric and psychiatric clinics of Rafsanjan University of Medical Sciences, 2014.

Subjects and Methods: This was a cross-sectional study performed on 203 children aged between 6 month to 12 years who have referred to pediatric and psychiatric clinics in Rafsanjan. The information was being gathered through the questionnaires and also the interviews of a psychiatrist with the parents of children. Demographic data analysed by statistical software SPSS ver. 17. Chi-square and Exact-tests were used to analyze data.

Results: In this study from 203 children who have referred to psychiatric clinics, 30 children have masturbation, 12 boys (6%) and 18 girls (8.8%). The mean age of masturbation in children was 4±3.31 years. Masturbation in children living in rural areas was less than (2.3%) the children living in the city (18.1%). The duration of masturbation varied from 1min to 35 min and mean duration was 9.3±9.5 min. Living location and breastfed duration were significantly correlated with masturbation in children. There was not any significant relationship between the masturbation in children and age, sex, mother education, father education, social class, birth weight and genito-urinary tract infection.

Conclusions: Prevalence of masturbation is considerable in children between 6 month-12 years. It can be related with breastfeeding duration and living location.

KEYWORDS: Masturbation; Childhood; Prevalence

INTRODUCTION

Masturbation is a common behavior that is said 90-94% of males and 50-60% of females involve it during their lives [1]. It begins at the age around 6 months, reaching its peak in about 4-year age and go on in adulthood later [2]. Sexual behaviors may occur throughout childhood. Male infants in the first few days of their life getan erection. During preschool, masturbation is common in both men and women [3]. Recognizing this behavior in childhood is usually difficult because children do not use manual stimulation of the
genitalia and hand stimulation is also different from adults and they use other ways for this stimulation [1,2]. From 5-6 months of age, children recognize that they can have a good sense of touching some parts of their body like ears, hair, legs and genital organs (sexual organ) as well. In the early years of children's life they just have a good physical feeling and that is touching the genital organs this pleasure feeling is enough to become a habit. During the toilet training, the children focus on their sexual organs and this may start masturbating behaviors in children [4]. Children may rub genital area with their hands or other objects. Masturbation commonly occurs when a child is sleepy, tired and under tension or in watching TV [5]. Sexual feelings in children are different from adults and unlike adult; masturbation in children is not for the purpose of sexual arousal.

During childhood, many researchers use the term of playing with sexual organs instead of masturbating [6]. In some studies, the onset of masturbating is expressed at 2 months of age; however, masturbation is considered as abnormal behavior in childhood and infancy [1-3]. The repetition rate of this behavior has been reported 1 to 2 times a day and the length of that event was 2 minutes [7]. But masturbation may be mistaken for some diseases such as epilepsy [8] abdominal pain [9,10] and paroxysmal dystonia [2,11], and it can be appeared with sweating, flushing, tachypnea [2,12]. The appropriate use of information obtained from the video recorded by parents in addition to a medical history and physical examination helps to avoid unnecessary interventions [5,17]. The onset of forming the sexual memories is in three years and in some years later they will be remembered well. Prohibition of children from masturbation against their own desire has a negative effect on the children's sexual development [13]. The children who have been banned from masturbation by their parents encounter shame, guilt and anger, and also this action effects on sexual health in adulthood [13,14]. In a study done on 419 children, including 205 children aged 7 to 10 years and 214 children 11 to 13 years the results showed that with increasing age, sexual behavior such as touching genitals reduced but talking about sexual behavior increases [15]. According to Freud's sexual theory, sexual impulses present in newborn children and will be increased through the time and age of children [16].

The key issue in family counseling is to reassure them about this behavior because masturbation is a natural event in the growth [17]. There are so many uncertainties in the nature and approach of this condition due to some reasons such as the lack of sufficient data on the prevalence and risk factors for this condition, few studies have been done in this area in the country, the difficult and often delayed diagnosis of it, and often pediatricians and general practitioners in the diagnosis of it have many ambiguities. The purpose of this study was to investigate the prevalence and factors associated with this condition in children referred to pediatric and psychiatric clinic of Rafsanjan University of Medical Sciences, 2014.

METHODS

This was a cross-sectional study. The participants consisted of children from 6 months to 12 years old referred to pediatric and children's health clinics in 2014. The ethical considerations were respected. After consulting with a statistical expert, the sample size was determined 203 children. Inclusion criteria for this study were children aged 6 months to 12 years referred to psychiatric and children's health clinics in Rafsanjan and the exclusion criteria was when parents were dissatisfied with taking part of their children in the study. We excluded chronic and major psychiatric and organic disease about our participants. The information was gathered through the questionnaires and also the interviews of a psychiatric with the parents of children. Finally, after gathering the data through questionnaires, filled in by parents, the data were analyzed through SPSS-17 then Chi-square and Exact-Tests were used. These data included age, sex, the birth order in the family, father or mother education, social class, place of residence, birth weight, duration of breastfeeding, urinary tract infections, the use of child care, onset age of masturbation, length of masturbation, masturbation frequency.

RESULTS

203 children (102 males and 101 females) (49.8%) divided into two age groups: 102 children (50.2%) in the age group of under 3 years and 101 children (49.8%) in the age groups of 3-12 years. 128 children were the first child and 75 children were the second child or later. According to the frequency of masturbation in children referred to the clinic, 30 children (14.8%) had masturbation behavior (95% CI: 9.9-19.7%). Of these 30 children, 12 (6%) were boys and 18 (8.8%) were girls. The mean age of children with masturbatory acts was 4 ± 3.31 years with a range from 0.5 to 12 years. The duration of this act was evaluated by parents; the minimum time period was 1 minute and the maximum was 35 minutes. The mean duration of masturbation was 3.9 minutes. In regard with the frequency of this behavior in a day, the lowest frequency of the event was 3-4 times per day (30%) and the highest was 5 or more times in a day (20%). According to the onset of age of this behavior, 30 children were investigated which the youngest age was 3 months and the oldest age of onset was 60 months.
The mean age of onset of this behavior in these 30 children was 17.63 months (Table 1). Rate of masturbation in children who were the first child was (16.4%) and in the second child and higher was (12%). This behavior in the first child was greater but according to chi-square test (P = 0.393), there was no significant relationship between masturbation and the birth order of child in the family (Table 1).

The frequency of masturbation in children with high educated fathers was 20.8 percent that had a higher rate of frequency and in children with elementary educated and illiterate fathers the frequency of masturbation was lowest (0%). There was not a significant relation between masturbating in children with father's education level (P = 0.158) and mother's education level (P= 0.787) (Table 1).

In this study, social class was determined based on family income, household size, mother's and father's occupation. The masturbating in the children with higher social classes 3 (16.2%) was more in comparison with the lower social classes 1 (14.5%). But there was not any significant relationship between masturbation and social classes (P = 0.841) (Table 1).

According to the results, masturbation in children living in rural areas was less than (2.3%) the children living in the city (18.1%). It was shown that there was a significant relationship between masturbation and children's place of residence (P=0.010). The results also show that masturbation in children had a relation with their residence that is in villages this behavior is less than cities. This may be due to the parents' lack of knowledge living in villages and their less attention to this behavior (Table 1).

The masturbation in children with the birth weight 2500g or more was 15.3%and in children with birth weight less than 2500g was 7.7 %. There was no significant relationship between masturbation and birth weight (P = 0.697) (Table 1). Masturbating in children who were breastfed for 2 years and more (3.3%) was less than children who were breastfed for less than 1 year (12.5%). The data was examined using Chi-square test and this relationship was significant (P = 0.035). Based on the findings, childhood masturbation has a significant correlation with the duration of breastfeeding. Therefore as breastfeeding lasts for more than 2 years, masturbation decreases (Table 1).

The results showed that there was no significant relation between higher rate of masturbation in children with urinary tract infections (15.7%) and children without such infection ,masturbating less frequently(5.6%). Not statistically (P = 0.483) (Table 1).

Based on the results, masturbation in children who were sent to kindergartens was lower (9.7 %) than those who were not (17%). There was no significant relationship between childhood masturbation and going to kindergartens (P = 0.174) (Table 1).

| Groups Variables          | Masturbating | Not Masturbating | Total | P-Value |
|---------------------------|--------------|------------------|-------|---------|
| **Child birth order**     |              |                  |       |         |
| First child - NO(%)       | 21 (16.4)    | 107 (83.6)       | 107 (83.6) | 0.393   |
| Second child and older - NO(%) | 9 (12)      | 66 (88)          | 66 (88) |         |
| **Parent's educational level** |           |                  |       |         |
| Illiterate & elementary educated- No (%) |            |                  |       |         |
| Father                    | 0 (0.0)      | 12 (100)         | 12 (100) | 0.787# |
| Mother                    | 2 (20)       | 8 (80)           | 10 (100) |         |
| Middle & high school level- No (%) |            |                  |       |         |
| Father                    | 19 (13.8)    | 119 (86.2)       | 138 (100) |         |
| Mother                    | 18 (13.6)    | 114 (86.4)       | 132 (100) |         |
| Higher education- No (%)  |              |                  |       |         |
| Father                    | 11 (20.8)    | 42 (79.2)        | 53 (100) |         |
| Mother                    | 10 (16.4)    | 51 (83.6)        | 61 (100) |         |
| **Social class**          |              |                  |       | 0.841   |
| Class1-NO (%)             | 8 (14.5)     | 47 (85.5)        | 55 (100) |         |
| Class2- NO (%)            | 9 (12.7)     | 62 (87.3)        | 71 (100) |         |
| Class3- NO (%)            | 11 (16.2)    | 57 (83.8)        | 68 (100) |         |
| **Location**              |              |                  |       | 0.010   |
| City- NO (%)              | 29 (18.1)    | 131 (81.9)       | 160 (100) |        |
| Village- NO (%)           | 1 (2.3)      | 42 (97.7)        | 43 (100) |         |

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DISCUSSION

Among 203 children studied, 30 children (14.8%) had masturbation behavior (95% CI: 9.9-19.7%). Among them including 11.8% males and 17.8% females. In a study conducted by Najafi and his colleagues in Isfahan (2011) on 100 children who were referred to counseling clinics in Isfahan, 50 had masturbating behaviour, of whom 33 were females and 17 were males [18]. In a study was done by Hijam Shamoon in Saudi Arabia on 15 children with masturbation problem in 2015, 40% were males and 60% were females [19]. In a study that was conducted by Nechay and colleagues in Scotland (2004) on 31 children who were diagnosed to have masturbation, 11 were males and 20 were females [1]. In another study performed by Ulna in Turkey on 61 children with masturbation problem compared with two control groups consisted of 61 children who had been referred to the pediatrics outpatient clinics, 43 children of the study group stated that most of the reported cases of childhood masturbation were related to females and revealed that some factors such as social and cultural factors and anatomical differences had a great influence on these differences [20]. In the cited studies such as the present study, they have shown a higher prevalence of masturbation in females.

According to the age range, 203 children were divided into two age groups, 0.5-2.99 years and 3-12 years, respectively. Among 30 children with masturbation, 13 children were in the age range of 0.5-2.99 years and 17 were in the age range of 3-12 years. According to the age of the onset of masturbation in 30 children, the youngest age of starting this behavior was 3 months and the oldest age of onset was 60 months. And the mean age of onset this behavior in these 30 children was 17.63 months. In the study was conducted by Heitham and colleagues in Saudi Arabia (2010) on 13 children with masturbation, the youngest age was 4 months and the oldest age was 36 months [12]. In a study conducted by Peorodoo in Sweden (2013), masturbating on 19 female children was investigated and it was shown that the ages of masturbation were between the ages of 3 to 15 months and this behavior was followed over 8 years. The mean age at which masturbation onset was 10.4 months [7]. In a study by Shamoon on 31 children, diagnosed with masturbation, the youngest age of symptom onset was 2 months and the oldest age of showing these symptoms was 60 months. Also, the average age of these symptoms were 12 months [1]. These results were in line with the results of the present study.

According to child birth order, in our study, 128 children were the first child, 75 children were the second child and 75 children were more than second. In children who were the first child masturbation was more. No study has investigated the relationship between child order in family and children masturbation. But some studies have showed that emotional distress and stressful events such as the birth order was found to be a predisposing factor for masturbation [21,22]. Usually in big families where children receive less attention from their parents and their trainings in sex education and also the child's sibling sexual behavior may affection him.

According to the father's education level of 203 children who were participated in this study, about 6% of fathers had primary education or illiterate and 67.9 % of them had middle school or high school education, and 26.1 % had a higher education.

Table 1: Relative frequency of childhood masturbation.

| Birth weight          |   |   |   |
|----------------------|---|---|---|
| < 2,499 grams - NO (%) | 1 (7.7) | 12 (94.3) | 13 (100) |
| ≥2,500 grams - NO (%) | 29 (15.3) | 161 (84.7) | 190 (100) |

| Breast feeding period |   |   |   |
|----------------------|---|---|---|
| ≤1year- NO (%)       | 8 (12.5) | 56 (87.5) | 64 (100) |
| >1year≤2year- NO (%)  | 21 (21.9) | 75 (87.1) | 96 (100) |
| >2year- NO (%)        | 1 (3.3) | 29 (96.7) | 30 (100) |

| Urinary tract infection |   |   |   |
|-------------------------|---|---|---|
| Yes - NO (%)            | 29 (15.7) | 156 (84.3) | 185 (100) |
| No - NO (%)             | 1 (5.6) | 17 (94.4) | 18 (100) |

| Going to kindergartens  |   |   |   |
|-------------------------|---|---|---|
| No- NO (%)              | 9 (12) | 117 (83) | 141 (100) |
| Yes- NO (%)             | 9 (12) | 53 (90.3) | 62 (100) |

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Based on the results above, the numbers of masturbations in children who their father had higher education level were 20.8%, indicating more frequent masturbation among them and the least masturbation were seen among children whose their father had primary education or illiterate. With respect to the mother's education level, out of 203 children attending in this study, about 5% of the mothers had primary education or illiterate, around 65% of mothers had middle school and high school education and 30% had a higher education. Masturbating in children whose mothers were illiterate and had a primary education was higher (20%) and the least masturbation was among children who their mothers had middle school and high school education (13.6%). We did not find any studies considering the parents' education as a predisposing factor, but some studies which have been performed earlier, had shown that counseling and educating school-age children have had a positive effect on their behavior of masturbation [17,23]. Since spending more time with children and paying attention to them will help in better management masturbation, so these children should not be punished and blamed because of masturbating [22]. When the education level of parents is higher it is more likely that children will have better education and training and this behavior can be controlled better.

In terms of social class, children in this study were divided into three social classes: 28% in class 1, 37% in class 2, and 35% in the class 3. Of all children with masturbation, 16.20% where in class 3 and 7.12% of these children were in class 2. We did not find any study which considered the social class as a predisposing factor in masturbation among children. But because some studies have mentioned stress and social exclusion as predisposing factors in masturbation [25,24]. It is possible that masturbation is more visible in children who live in lower social class families. In respect of the place of residence, in 203 children who were referred to the clinic 78.8% lived in Rafsanjan, and 21.2% lived in villages near Rafsanjan. Children living in the urban area (Rafsanjan) had more childhood masturbation (18.8%) than children living in rural areas (2.3%). In the present study, there was a significant relationship between masturbation in children and the place of residence. This could be due to fewer knowledge or less attention to masturbation behaviors of families living in rural areas or because of the less cultural and educational reasons and less access to educational materials in rural areas. According to the birth weight, 4.6% of children had a birth weight less than 2,499 grams and 93.6% had a birth weight more than and equal to 2,500 grams. The mean birth weight of children referred to the clinic was 3.117 grams. Frequency of masturbation in children with more than 2,500 g birth weight was higher (15.3%). However, the frequency of masturbation in children with weight birth less than 2,499 grams was lower (7.7%). Some studies have shown that behavioral problems such as ADHD and psychiatric disorders in children with low birth weight have also increased [25,24]. According to breastfeeding, 190 children who were breastfed divided into 3 groups, 31.5% of children were breastfed for 0.5-12 months, 47.3% for 13-24 months, and 24.77% for 25 months. The lowest frequency of masturbation was seen among children who were breastfed for more than 2 years (3.3%). In this study, the relationship between masturbation and the duration of breastfeeding was significant. In a study done by Unalin Turkey (2000), the results showed that the duration of breastfeeding in children with masturbation was shorter than the control groups. The onset of masturbation in 85.2% of children was associated with an event, including a stressful life event such as weaning, birth of a sibling and the separation from their parents [20]. The investigations showed that masturbation in children is a mechanism that reduces negative emotions. Also, masturbation occurs in children who are suffering from a severe lack of external stimuli, such as children with emotional problems or some orphans [23,5]. Embracing the child by his mother during breastfeeding and a close relationship with a child can calm him and it may reduce masturbation in children. With respect to the urinary tract infection, 8.9% out of 203 children who were referred to the clinic had a urinary tract infection and 91.1% did not have this infection. In 30 children with childhood masturbation 15.7% did not have an infection and 6.5% had a urinary tract infection. Urinary tract infection occurred because of incorrect toilet training (3) and that is because of low awareness of the family. The symptoms of a urinary tract infection can cause a condition similar to masturbation. We did not find any study that investigated the relationship between urinary tract infection and masturbation.

Among children who were referred to the clinic 30.5% of the children had gone to kindergartens and 69.5% had not gone. The youngest age to start kindergarten was 1 month and the oldest age was 60 months. Masturbation in children who did not go to kindergartens was 17% and in children who were gone to kindergartens was 9.7%. The results showed that the frequency of masturbation in children who did not go to kindergartens was higher. Some investigators have declared that because of more familiarity of children with their peers and seeing their behaviors, the children showed their interest in other children's sexual organs and they were influenced by their peers [26]. So, they inferred that masturbation in children who were sent to kindergartens may be higher. But in our study children who were...
gone to kindergartens showed less masturbation behaviours. In this study, the minimum duration of masturbation was 1 minute and the maximum duration was 35 minutes. The mean duration was 3.9 minutes. In a study conducted by Nechayin Scotland (2004) the length of time for masturbation was variant from 30 seconds to 2 hours and an average of that time was 9 minutes [1]. In a study was done by Hiyam (2005), the mean length of event was 7 minutes [19]. Heithum in Saudi Arabia (2010) reported the mean length of event was 3.9 minutes [12]. In this study, the frequency of events in children varied from 10 times a day to 3 times a month. regarding the frequency of this event in a day, the maximum frequency was 3-4 times a day (30%) and the minimum frequency was 5 times and more (20%). In a study performed by Omranifard and colleagues (2013) in Isfahan, the repetition of masturbation in the experimental group who underwent behavior therapy and treatment with Risperidone was 2.7 ± 0.9 times a day and in the control group who were just behavior therapy was 2.6 ± 0.9 times per day [27]. In Nechay and Hiyam’s studies, the repetition of masturbation varied from 10-12 times a day to 1-3 times per week [2,19]. With respect to the duration of time and repetition frequency, if the duration of this event is longer and the repetitions are more, it can indicate that a person is under a lot of stress or family fails in controlling child’s behavior. These conditions can cause the masturbation behavior to be continued in older ages and so behavioral consequences in these children may be higher.

**CONCLUSIONS**

Prevalence of masturbation is considerable in children between 6 month-12 years. It can be related with breastfeeding duration and living location.

**SUGGESTIONS**

A) A study can be performed with a larger sample size and a wider area to find the more significant relationships. B) Another study can take other predisposing factors. C) A similar study can be conducted in the early teens. Also a follow-up study can be done on children with masturbation to explore the consequences of this behavior.

**CONFLICTS OF INTEREST**

No

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