REVIEW ARTICLE

Treatment of Child Gratification Disorder

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Abstract

Objectives
Gratification disorder is a group of self-stimulatory behaviors tending to form a habit. These normal behaviors are common and have various differential diagnoses, including epilepsy. Hence, misdiagnosis may lead to performing unnecessary workups and treatments. In this article, we systematically reviewed available treatment options for gratification disorder.

Materials & Methods
We systematically searched Scopus, MEDLINE, and Embase for related articles published from the beginning to 12th May 2021. We followed the search strategy in all electronic databases using keywords [“Self-gratification” AND “treatment”], [“child” AND “masturbation” AND “treatment”], [“Pediatric” AND “masturbation” AND “treatment”], [“infantile” AND “masturbation” AND “treatment”], [“Benign” AND “Infantile” AND “Dyskinesia” AND “treatment”].

Results
The primary search yielded 241 studies. Five studies fulfilled the inclusion criteria and were used in the systematic review. None of the studies provided a good level of evidence. These studies indicated that behavioral therapy, escitalopram, and aripiprazole could be considered treatment options.

Conclusion
Although pediatricians are familiar with gratification behaviors, their optimal management is overlooked. In addition to parental education
**Introduction**

Infantile and pediatric self-gratification is a benign phenomenon. Gratification disorder, also known as “infantile masturbation” or “benign idiopathic infantile dyskinesia,” comprises a group of self-stimulatory behaviors with a tendency to form a habit (1-4). These movements are often considered “disorders” because they are normal behaviors in early childhood (5, 6). Although masturbation or self-stimulation of the genitalia is typical human behavior, little has been published on gratification disorder (masturbation) in early childhood (1, 7). Misdiagnosis is more probable when there is no apparent genital manipulation, and movements are described as staring, shaking, and moving limbs for minutes (1). Misdiagnosis may result in unnecessary workups and antiepileptic treatments (8-11).

Masturbation is a non-openly discussed taboo, especially in African societies. Its occurrence in infancy may lead to procedures to control libido and future sexual behaviors, such as female genital cutting (8, 12). Educating and counseling the parents are often the only suggested measures as gratification in infants is usually benign and tends to resolve spontaneously by two years of age (2, 13). Besides, attempts to stop this behavior are not helpful and may even reinforce it (14). Recurrent daily friction in the perineal area may result in irritation. In addition, parents may know this habit as a disease and feel embarrassed if it occurs in public (15, 16).

Sometimes it may result in useless investigations and non-appropriate therapeutic measures. In addition, in some societies, such behaviors are considered a stigma and may be annoying to parents. This study aimed to perform a systematic review to examine proper treatments and family management based on available literature.

**Materials & Methods**

This study utilized a systematic literature search based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (17, 18) (Fig.1). The junior authors (MS, MF, and MR) individually searched electronic databases including Scopus, MEDLINE (from PubMed), and Embase from beginning to 12 May 2021 for related studies. The same search approach was utilized in all electronic databases. The keywords used in the search were [“Self-gratification” AND “treatment”], [“child” AND “masturbation” AND “treatment”], [“Pediatric” AND “treatment”], and [“Infantile” AND “treatment”].

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and behavioral therapy, escitalopram and aripiprazole can be used as treatment options for this issue. We need to perform well-designed randomized controlled trials to obtain adequate evidence on the efficacy of these measures.

**Keywords:** Self-gratification; Pediatric; Infantile; Masturbation; Gratification Treatment

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AND “masturbation” AND “treatment”],
[“infantile” AND “masturbation” AND
“treatment”], and [“Benign” AND “Infantile”
AND “Dyskinesia” AND “treatment”]. All
titles and abstracts were examined to determine
the publications’ relevance. Exclusion criteria
included non-original studies, animal studies, and
non-English papers. The authors also checked the
reference lists of the included papers or pertinent
reviews found in the electronic search. All the
three junior authors independently examined the
searched sources and participated in all rounds of
the review (screening, eligibility, and inclusion).
The full texts of all papers meeting the inclusion
criteria and any articles in doubt were reviewed.
Disagreements about the review were settled
after a conversation with the principal author (the
first author). All the authors were aware of the
journal’s titles, authors, or research institutes. All
authors assessed the methodological quality of
the included studies. The class of evidence was
defined following the Levels of Evidence - Wiley
Online Library (19) (Appendix 1).
Standard Protocol Approvals, Registrations, and
Patient Consent:
The Shiraz University of Medical Sciences’
Institutional Review Board approved this
systematic review.

Availability of Data and Material
Data sharing does not apply to this article.

Results
The primary search yielded 241 studies. Five
studies met the inclusion/exclusion criteria and
were used in the systematic review (20-24) (Fig.
1). Table 1 shows a summary of these studies.
None of the studies provided a good level of evidence. The summary of related studies indicated that behavioral therapy, escitalopram, and aripiprazole could be possible treatments for this disorder (20-24). Two studies, including one prospective cohort study of 54 patients diagnosed with self-gratification habits, recommended that behavioral therapy could be used for the beneficial management of childhood masturbation (20, 21). Two other studies, as case reports, showed that medications such as escitalopram and aripiprazole are effective for treating child gratification (22, 23). In another case series, two management steps were recommended: 1) reassurance alongside informing the parents about the harmless nature of the activity and 2) managing the anxiety of the children’s mothers (24).
Figure 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Flow Diagram of the study

Table 1. Summary of the studies

| Author /year/country | Method | Result | Limitation | Level of evidence |
|----------------------|--------|--------|------------|-------------------|
| H. Ayaydın/2018/Turkey [13] | A case repost of a 33-month girl with autism disorder | Escitalopram resolved her masturbatory behavior after three weeks | Case report | 4 |
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| Author /year/country | Method                                                                 | Result                                                                 | Limitation               | Level of evidence |
|---------------------|------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------|-------------------|
| Biswajit/2020/India [14] | A prospective cohort study of 54 patients diagnosed with self-gratification habits | Sixteen (29.63%) children were referred for behavioral therapy and all of them responded well in next one year. | Small sample size        | 2b                |
| Franić/2011/Croatia [15] | A case report of a 14-month girl with infantile masturbation | The therapeutic plan was conceived at two levels. The first one was behavioral modification of the child, which was done by distraction of attention during attacks. The second goal was to diminish her mother’s level of anxiety. | Case report              | 4                 |
| Fleisher/1990/USA [16] | Case series of five girls, 7 to 27 months of age, with masturbatory posturing | Management consisted of convincing the parents about the harmless nature of the action, which then lessened the reinforcing effect of their responses. | Case series              | 4                 |
| Kul1/2013/Turkey [17] | A case report of seven-year and two-month old female patients with clinical presentation of childhood masturbation | 4 mg aripiprazole resolved her masturbatory behavior after three months | Case report              | 4                 |

### Appendix 1

| Level | Therapy/Prevention or Etiology/Harm Study | Prognosis Study |
|-------|------------------------------------------|----------------|
| 1a    | Systematic review of randomized controlled trials | Systematic review of prospective cohort studies |
| 1b    | Individual randomized controlled trial | Individual prospective cohort study |
| 2a    | Systematic review of cohort studies | Systematic review of retrospective cohort studies |
| 2b    | Individual cohort study | Individual retrospective cohort study |
| 2c    | “Outcomes research” | “Outcomes research” |
| 3a    | Systematic review of case-control studies |  |
| 3b    | Individual case-control study |  |
| 4     | Case series (with or without comparison) | Case series (with or without comparison) |
| 5     | Expert opinion | Expert opinion |
| NA    | Animal studies and basic research | Animal studies and basic research |
Discussion
This systematic review aimed to examine the management of self-gratification or masturbatory habits. Although these paroxysmal behaviors are prevalent among children, their true prevalence is not addressed in scientific papers (20, 21, 23, 24). A study suggested several diagnostic criteria, including 1) onset after the age of three months and before three years, 2) stereotyped episodes of variable duration, 3) vocalizations with quiet grunting, 4) facial flushing with diaphoresis, 5) pressure on the perineum with characteristic posturing of lower extremities, 6) no alteration of consciousness, 7) cessation with distraction, 8) normal examination, and 9) normal laboratory studies (15). Infantile gratification and masturbation should always be considered a differential diagnosis of epilepsy in infants and children, as well as abdominal pain and movement disorders. A detailed history and video recording are encouraged for a correct diagnosis (8, 20, 25, 26). Possible sexual abuse, genital irritation, familial stress, emotional deprivation, and lack of breastfeeding may positively correlate with childhood masturbation and self-gratification behavior (3, 27-29).

Our systematic review revealed that pediatricians significantly overlook the management of childhood gratification habits. There is no well-designed clinical trial to explore appropriate treatment strategies for childhood gratification habits in the literature. A few existing studies have explored the management of self-gratification habits. This review suggested that despite the benign nature of the entity, due to various religious and cultural taboos, it can cause enormous anxiety and guilty feelings among parents and family members. Therefore, parental education, breastfeeding with tactile stimulus, behavioral therapy, and medications such as escitalopram and aripiprazole, if needed, may help patients with gratification habits (20-24). Even situations that are excluded from medical diagnoses and need no further intervention could be a source of significant distress. “Benign and simply overemphasized form of normal development” could result in severe disarrangement in the mother-child relationship and had to be a target of therapeutic intervention (21). In another study, the authors recommended the instruction of parents to try to interrupt gratification behaviors by distraction and engagement in other activities or plays. Scolding or threatening the infant is not appropriate as efforts to stop the behavior forcefully will only reinforce it and possibly instill a sense of shame or wrongdoing as the infant gets older (13, 30).

Limited literature is available concerning the long-term follow-up of children with gratification. Only one study with a long-term follow-up (mean 7.1 years) showed that four (21%) children developed features suggestive of Attention Deficit Hyperactivity Disorder (ADHD).

In Conclusion
Although pediatricians are familiar with gratification behaviors, their optimal management is overlooked. Parental education, behavioral therapy, escitalopram, and aripiprazole can be good candidates for future studies of the management of childhood self-gratification behaviors. We need well-designed, randomized controlled trials to obtain the desired evidence on the efficacy of non-medical or medical management of children with these behaviors. Investigators should calculate the appropriate sample size when designing such clinical trials.
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None

Author’s Contribution

Hamid Nemati: Designed and conceptualized the study; analyzed the data and revised the manuscript. Farzad Ahmadabadi: drafted and revised the manuscript. Others: analyzed the data and revised the manuscript.

Conflict of interest

None

References

1. Nechay A, Ross L, Stephenson J, O’regan M. Gratification disorder (“infantile masturbation”): a review. Archives of disease in childhood. 2004;89(3):225-6.
2. Pandurangi A, Pandurangi S, Mangalwedhe S, Mahadevaiah M. Gratification behavior in a young child: Course and management. Journal of the Scientific Society. 2016;43(1):48-50.
3. Ajlouni HK, Daoud AS, Ajlouni SF, Ajlouni KM. Infantile and early childhood masturbation: Sex hormones and clinical profile. Ann Saudi Med. 2010;30(6):471-4.
4. Dhafer S, Sharquie K, Hamdi KA, Noaimi AA. Clinical Descriptive Study of Masturbatory Behavior Among Infants and Preschool Children: A Recent Observation From Iraq. Cureus. 2020;12.
5. Mink JW, Neil JJ. Masturbation mimicking paroxysmal dystonia or dyskinesia in a young girl. Mov Disord. 1995;10(4):518-20.
6. Moktan S, Karki U, Bista I, Devkota N. Gratification Disorder Associated With Perineal Irritation in Young Children: Management and Short-Term Outcome. Journal of Psychosexual Health. 2021;2631831821102321.
7. Dhafer S, Sharquie K, Al Hamdi K, Noaimi A. Clinical Descriptive Study of Masturbatory Behavior Among Infants and Preschool Children: A Recent Observation From Iraq. Cureus. 2020;12(12):e11819.
8. Otaigbe BE. Infantile masturbation in an African female: is this a justification for female genital cutting? World J Pediatr. 2008;4(2):148-51.
9. Dandipala SC, Mandapuram P, Chennagi AK. Gratification phenomena in children: a report of nineteen children and review of the literature. 2021. 2021;8(2):4.
10. Shuper A, Mimouni M. Problems of differentiation between epilepsy and non-epileptic paroxysmal events in the first year of life. Arch Dis Child. 1995;73(4):342-4.
11. Doust ZK, Shariat M, Zabandan N, Tabrizi A, Tehran F. Diagnostic Value of the Urine Mucus Test in Childhood Masturbation among Children below 12 Years of Age: A Cross-Sectional Study from Iran. Iran J Med Sci. 2016;41(4):283-7.
12. Mazidi M, Riahi F. Pathological Childhood Masturbation in Children Who Referred to a Child and Adolescent Psychiatric Clinic. Journal of Comprehensive Pediatrics. 2020;In Press.
13. Jan MM, Al Banji MH, Fallatah BA. Long-term outcome of infantile gratification phenomena. Can J Neurol Sci. 2013;40(3):416-9.
14. Arafat SMY, Khan ST. Childhood Masturbation: A Case Report from Bangladesh. Journal of Psychosexual Health. 2019;1(3-4):280-2.
15. Yang ML, Fullwood E, Goldstein J, Mink JW. Masturbation in infancy and early childhood presenting as a movement disorder: 12 cases and a review of the literature. Pediatrics. 2005;116(6):1427-32.
16. Leung AKC, Robson LM. Childhood Masturbation. Clinical Pediatrics. 1993;32(4):238-41.
17. Hutton B, Salanti G, Caldwell DM, Chaimani A, Schmid CH, Cameron C, et al. The PRISMA extension statement for reporting of systematic reviews incorporating network meta-analyses of health care interventions: checklist and explanations. Annals of internal medicine. 2015;162(11):777-84.
18. Moher D, Liberati A, Tetzlaff J, Altman DG. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. Int J Surg. 2010;8(5):336-41.
19. Library WO. level Of Evidence 2021 [Available from: Https://onlinelibrary.wiley.com/pb-assets/assets/23788038/Levels_of_Evidence-1519834967260.pdf/. Updated June 8 2021 6(5): 893-898.
20. Biswas B, Konar M, Sil A. Self-gratification Habits among Children Under Five Years of Age: A Prospective Cohort Study. Journal of Clinical and Diagnostic Research. 2020;14:SC01-SC5.
21. Franić T, Franić I. Infantile masturbation - Exclusion of severe diagnosis does not exclude parental distress - Case report. Psychiatria Danubina. 2011;23:398-9.
22. Ayaye1n H, Ulgar. Diagnosis and treatment of early childhood masturbation in a case of autism spectrum disorder: a case report. erciyes medical journal. 2018; 40(2): 110-2.
23. Kul M, Baykan H, Kandemir H. A Case of Excessive Masturbation Treated with Aripiprazole. Bulletin of Clinical Psychopharmacology. 2013; 24(1):93-96.
24. Fleisher DR, Morrison A. Masturbation mimicking abdominal pain or seizures in young girls. J Pediatr. 1990;116(5):810-4.
25. Deda G, Çaksen H, Suskan E, Gümüs D. Masturbation mimicking seizure in an infant. The Indian Journal of Pediatrics. 2001;68(8):779-81.
26. Ubuane P, Salisu M, Oyinlade A, Akinola A, editors. Infantile Masturbation in a Nigerian Child: A Case Report of a Rare Seizure Mimic2021. 7 (1):
27. Ibrahim A, Raymond B. Gratification disorder mimicking childhood epilepsy in an 18-month-old Nigerian girl: A case report and review of the literature. Indian journal of psychological medicine. 2013;35(4):417-9.
28. Kellogg ND. Clinical report—the evaluation of sexual behaviors in children. Pediatrics. 2009;124(3):992-8.
29. Unal F. Predisposing factors in childhood masturbation in Turkey. Eur J Pediatr. 2000;159(5):338-42.
30. Singh H, Walia S, Kaur B. Gratification Disorder &#8211; A Seizure Mimicker. Indian Pediatrics Case Reports. 2021;1(2):135.