

Prevalence of common habit disorders in children aged 3- 13 years

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Correspondence Author: Miami K. Yousif, CABP, Dep. of Pediatrics, College of Medicine, Iraq**Conflicts of Interest:** Nil**Abstract**

Background: Habit disorders are a heterogeneous group of repetitive behaviors that serve no recognizable social function. The accurate prevalence for childhood habits is extremely difficult to estimate because of the various classes of habits.

Objectives: to know the prevalence and characteristics of common habit disorders in children.

Methods: An observational study was done included 277 children aged 3-12 years, data was collected by direct interviewing of children's parents or relatives. A questionnaire was completed including nine common habit disorders. Data was analyzed using SPSS (Statistical Package of Social Sciences) version 20.

Results: The study shows that 127 children (55.9%) were found to have one or more habit disorder, 51.2% females and 48.8% males. One hundred children (44.1%) were normal. The commonest habit was chewing on the end of the pencil (35.4%) and the least common was head banging (10.2%). The study shows that thumb sucking, breath- holding and pica developed at earlier age (1-2 year) while nail biting, hair pulling, skin- picking and head banging originate later (3-5) years, and chewing on the end of the pencil dominates habit disorders in school aged children.

Conclusion and recommendation: The study has demonstrated that habit disorders are common in children,

early detection of habit disorders and early treatment will prevent further emotional, psychological and physical damage. Reinforcement through blaming, punishing or threat can increase the behavior.

Key words: Habit, Pica, Thumb, Nail Biting

Introduction

Habit Disorders can be defined as repetitive behaviors that serve no recognizable social function, but may negatively affect the individual ^[1]. They can include behaviors like thumb or digit sucking, nail biting, chewing of the end of the pencil, head banging, eating habit disorder like pica, breath holding attacks and others. The prevalence of habit disorders is not known although they are common, parents of preschoolers reported that up to 60% of children show one or more habitual behaviors. These behaviors are typically related to self – soothing in young children ^[2]. Thumb sucking is an innate reflex and one of the most common security and self-soothing mechanisms ^[3]. The incidence of thumb sucking among children decreases with age ^[4]. In most cases, the habits cease spontaneously between two and four years of age ^[3]. Prolonged digit sucking habit may affect the occlusion and orofacial skeletal system. Frequency and duration of the habit, intensity of the sucking, relationship of the dental arches, and the child's state of health are the factors effective in the development of dental and skeletal problems ^[5]. Nail biting, or onychophagia, is defined as

the habit of biting one's nails and is a common oral habit in children and young adults^[6]. The prevalence is as high as 45-60%^[7]. Nail biting is embarrassing, unattractive, socially undesirable, and can predispose to the development of paronychia^[6].

PICA is an act or habit of eating non-food items such as stone, bricks, chalk, soap, paper, soil etc. There are many theories behind it such as iron and zinc deficiency etc.^[8]

Pica is a potentially deadly form of self-injurious behavior most frequently exhibited by individuals with developmental and intellectual disabilities^[9]

Self-injurious habits such as self-biting or head banging can occur in up to 25% of normally developed toddlers^[2].

Head banging is a rhythmic motor activity that may occur in normal infants and young children, as well as in children with underlying psychiatric or neurologic disease. Once underlying pathology has been excluded, parents should be reassured about the benign nature of the activity.^[10]

Head-banging may be recognized by a rolling of the head from side to side, or pounding the head up and down on the pillow. Episodes tend to occur at a frequency of 0.5-2 movements per second and last less than 15 minutes, episodes can be triggered by stress^[11]

Breath holding spell (BHS), a stereo typed sequence of clinical events, is not an uncommon clinical presentation and is a frightening experience for the parents. During the spell, the child cries excessively because of frustration, pain, or both. At the end of prolonged expiration, they become apneic for several seconds and become either blue [cyanotic spells] or pale [pallid spells] and some children can experience both^[12]. Some of habit disorders are harmless and temporary, others are pathological or self-injurious and may carry health threat^[13]. Early detection of habit disorders will be helpful to correct them to prevent further personality maladjustment^[14].

Childhood habits that do not interfere with every day functioning often require no treatment. However, those that cause substantial distress, social isolation or physical injury may warrant a therapeutic intervention which may include behavioral therapy, pharmacotherapy, self-monitoring and relaxation training^[7].

There are no previous studies assessing habit disorders in Basra city, so this study was conducted to provide an overview of the prevalence of common habit disorders in children aged 3-12 years, their sex distribution and the age at which each habit originates and remit to identify the relation between the reaction of their families (reinforcement by different ways of punishment, threat or forceful prevention) and the duration of habit. Although many of habit disorders are relaxing or tension reducing activities, some of them are painful and others carry health threat, so their detection will help to prevent further damage.

Methods

An observational cross-sectional study has been carried out to know the prevalence of common habit disorders in children aged 3-12 years living in Basra,

The collection of the data was started from November 2014 to February 2015. The population was taken from Basra maternity and child hospital and from school survey. A special questionnaire was prepared which included age, sex, type of habit, age of onset, whether it disappeared or still present and family response (ignore or reinforce). The questionnaire was filled by the researchers by direct interviewing of parents or children's relatives. Data from the questionnaire was analyzed using SPSS (Statistical Package of Social Sciences) version 20 and expressed as numbers and percentages.

Results

The total number of children participated in the study was 227, aged 3-12 years, including 117(51.5%) females and

110 (48.5%) males. One hundred thirty- nine (61.2%) were school- aged, 88 (38.8 %) were preschoolers. One or more habit disorder was found in 127 children (55.9%) including sixty- five females (51.2%) and 62 (48.8%) males. Table (1) represents the characteristics of the study population according to age, sex and presence or absence of a habit disorder. The study focused on nine common habit disorders, including one eating habit disorder (pica) and one disruptive behavior (breath holding attack) as presented in figure (1). The commonest habit disorder was chewing on the end of the pencil (35.4%) and the least common was head banging (10.2%) as shown in figure (2). The study showed that thumb sucking, nail biting, hair pulling, chewing on the end of the pencil and pica were more common in females, while skin picking, head banging, hitting or biting, and breath holding were more in males. Sex predilection of each habit is shown in figure (3) Children with habit disorders were categorized based on the age of onset of the habit as: group I: between 1-2 years, group II: between 3-5 years and group III: above 5 years. Specific habit disorders were found to be more common in certain age groups as presented in table (2).

Many families (33.6%) were reinforcing their children's bad habits, for example through shouting, hitting or blaming, while others (66.4%) were ignoring. Results are summarized in table (3). The mean duration of each habit and its relation to family reaction is presented in table (4). The durations of most habit disorders were reduced by ignoring the condition while reinforcing the child leads to persistence of his habit for a longer duration.

Table (1): The characteristics of the study population according to age, sex, and presence of habit disorder.

School age	139	61.2
Sex:		
Male	110	48.5
Female	117	51.5
Habit:		
Yes	127	55.9
No	100	44.1
sex:		
Male with habit	62	48.8
Female with habit	65	51.2

Fig (1): percentage of each habit among the study population

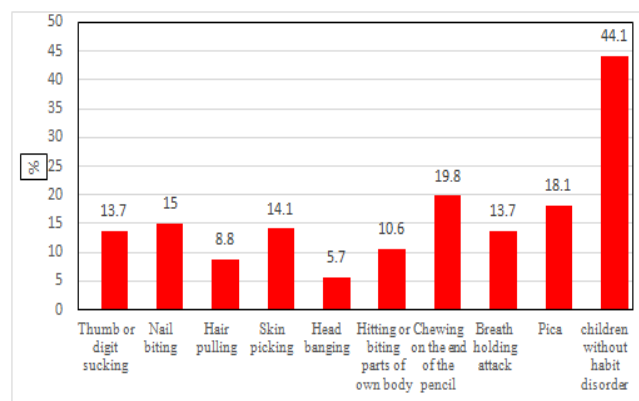


Figure (2): Percentage of each habit among children with habit disorders

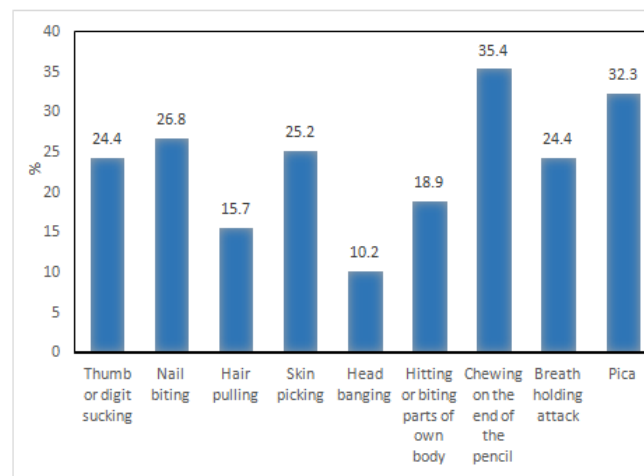


Fig (3) Sex predilection of each habit.

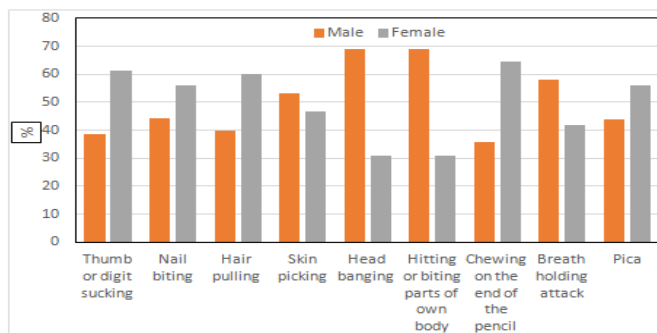


Table (2): Age of onset of each habit

Type of habit	Total No. of children	1-2 years		3-5 years		Above 5 years		Total %
		No.	%	No.	%	No.	%	
1 Thumb or digit sucking	31	25	80.6	5	16.1	1	3.2	100
2 Nail biting	34	12	35.3	13	38.2	9	26.5	100
3 Hair pulling	20	8	40	10	50	2	10	100
4 Skin picking	32	8	25	18	56.3	6	18.8	100
5 Head banging	13	5	38.5	6	46.2	2	15.4	100
6 Hitting or biting parts of own body	24	8	33.3	9	37.5	7	29.1	100
7 Chewing on the end of the pencil	45	10	22.2	13	28.9	22	28.9	100
8 Breath holding attack	31	18	58.1	10	32.3	3	9.7	100
9 Pica	41	26	63.4	11	26.8	4	9.8	100
Total	271	120		95		56		

Table (3) family reaction (ignore vs reinforce) towards habits.

Type of habit	Total No.	Ignore		Reinforce		Total %
		No.	%	No.	%	
1 Thumb or digit sucking	31	17	54.8	14	45.2	100
2 Nail biting	34	19	55.88	15	44.12	100
3 Hair pulling	20	14	70	6	30	100
4 Skin picking	32	22	68.75	10	31.25	100
5 Head banging	13	8	61.5	5	38.5	100
6 Hitting or biting parts of own body	24	18	75	6	25	100
7 Chewing on the end of the pencil	45	32	71.1	13	28.9	100
8 Breath holding attack	31	25	80.6	6	19.4	100
9 Pica	41	25	60.97	16	39.02	100
Total	271	180		91		

Table (4): Relation between the duration of each habit & family reaction.

Type of habit	Mean of duration	Mean of duration with reinforcement	Reinforce%	Mean of duration with Ignorance	Ignore %
1 Thumb or digit sucking	2.935	3.25	45.2	2.676	54.8
2 Nail biting	2.727	3.2	44.12	2.355	55.88
3 Hair pulling	2.922	4.041	30	2.442	70
4 Skin picking	2.562	2.725	31.25	2.488	68.75
5 Head banging	2.134	1.85	38.5	2.312	61.5
6 Hitting or biting parts of own body	2.062	2.25	25	2.00	75
7 Chewing on the end of the pencil	2.144	2.365	28.9	2.054	71.1
8 Breath holding attack	3.406	2	19.4	3.744	80.6
9 Pica	2.425	2.825	39.02	2.19	60.97

Discussion

The study aimed to investigate the prevalence and characteristics of nine various habit disorders among preschool and school aged children in Basra province. It was found that (55.9%) of those children exhibit one or more habit disorder.

The study reported that (24.4%) of children with habit disorders have thumb or digit sucking, this rate is higher than that recorded in 2008 by a study involving sample of school students in Al-Mahmoodia city, Baghdad Iraq (22.2%)^[15] and according to the mentioned study, females were more affected (54.3%) as compared with males (45.7%). These results are in approximation with those in the current study (females 61.3% and males 38.7%).

In other study; Oral habits in school going of Delhi^[16], the prevalence of thumb sucking was only (0.7%), this may be due to differences in study sample. They reported that females outnumbered males, a result which is similar to our finding.

In this study, the prevalence of nail biting habit was (26.8%) while it was reported as (44.1%) in a study about childhood habits in India [8], and in another study in Karad district, India, [17] was reported as (5.8%).

The current study showed that (18.1%) of the enrolled children were suffering from pica, this result is higher than that found in a study about prevalence of pica among children attending pediatric clinic at El-Menoufiya university hospital (7.2%) [18] they found that males are affected more than females, (63.2%) and (36.8%) respectively, while in this study only little difference was observed, males (49.9%) and females (51.1%).

The study demonstrated that (35.4%) of the study participants had chewing on the end of the pencil, which is significantly higher than that reported in a study about childhood habits in India (9.3%) [19] The main concern about pencil chew is that it is unhygienic.

Head banging is seen in many healthy infants and children, it usually does not signal underlying problem, but can be a part of underlying problem like autism spectrum disorder, developmental delay or neurological problems. This study showed that (10.2%) of the participated children had this behavior with a male to female ratio 2:1. Most children engaged in this behavior to relax and to help soothe themselves or if they are in pain or as a way to get attention.

Although, most of these habits aren't a terrible cause of concern, having one or more habit can be a source of guilt or shame in the child or may expose him to peer teasing. It is important to catch them early in childhood because some of them may continue to adulthood. Most of these habits can be modified by habit reversal and behavior therapy techniques.

Conclusion and recommendation

The study has demonstrated that habit disorders are common in children. Ignoring of the condition gives a

better outcome while reinforcement through blaming, punishing or threat can increase the behavior. The study recommended that treatment should be accomplished by education of parents, siblings, relatives and teachers, they should encourage the child to break the habit, never punish him or forcefully prevent his habit, this will further damage him emotionally.

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