



The Role of Childhood Trauma in Developing Nail Biting and Trichotillomania Among Adolescents

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This study sought to examine the role of childhood trauma in developing nail biting and trichotillomania among adolescents. The sample (n=130) of this study was comprised of adolescents including both educated males and females. The scales that were used in the current study are The Childhood Trauma Questionnaire (Pennebaker & Susman, 2013), The Trichotillomania Scale for Children/adolescents (Tolin et al, 2008) and Nail-Biting Scale (Claes & Vandereycken, 2007). The study revealed the positive correlation between childhood trauma and nail biting. The study also found a positive correlation between childhood trauma and Trichotillomania. The findings of study will increase the understanding of the knowledge of critical age period of adolescence with respect to trichotillomania and nail biting. The findings of this study will help the psychologists, counsellors, psychiatrists and therapists to design and plan the therapeutic interventions for nail biting and Trichotillomania.

Keywords: *Childhood Trauma, Nail Biting, Adolescents, Trichotillomania*



Introduction

Childhood trauma

The term trauma comes from the Greek word trauma, which means "wound," "destruction," and "loss." Trauma is a term used in medicine to describe a grievous bodily harm, lesion, or shock that overwhelms the immune system of the body and necessitates medical intervention to heal. Psychological trauma, on the other hand, is defined as "a situation in which an event surpasses or exceeds a people's ability to safeguard his or her psychic welfare and dignity. As a result, defining psychological trauma is difficult, as it involves both objective and subjective components of the individual's response to the experience. When a kid feels extremely terrified by anything he or she is a part of or witnesses then this event is termed as trauma. Children and teenagers can be confronted with a variety of traumatic events and types of traumas (Cloitre et al., 2006).

As children get older, accidents happen to them. Some are evident, such as a natural catastrophe destroying a home, physical assault, or a parent's loss. Others, such as social violence or a parent's drug problems, can also shake a child's feeling of protection and welfare. For some youngsters, even something as basic as being in a vehicle accident or overhearing frequent, intense disagreements between their parents can be stressful. Childhood abuse is linked with numerous psychopathologies, comprising personality disorders, maladaptive and imprudent behaviors.

Trichotillomania

Trichotillomania is the recurrent pulling off hair from different areas of the body, other symptoms are as, repetitive efforts to decrease or halt the pulling of hairs. There is increase social, occupational and other functional impairments due to hair pulling.

An increase level of tension preceding the pulling or when to resist the impulse of pulling, Sensation of relief after hair pulling, visible loss of hair, to play with pulled hairs, Chewing, biting or eating pulled hairs, To pull specific kind (texture) of hairs, Pulling of hairs mostly occurs in private, Poor self-image, feeling of depression and sad (Begotka et al., 2004; Bhandare et al., 2016; Chamberlain et al., 2007; Diefenbach et al., 2005; Flessner et al., 2007; Sah et al., 2008; Watson et al., 2000; Woods et al., 2006).



Physical effects of Trichotillomania

As a result of hair pulling from the roots permanent damage to the skin and hair follicles can occur. Hair will grow back in many cases bring about in bald spots, if it does grow back it can grow in configuration that are prominently unlike from hair that was not pulled. The possibility of bleeding and infection increase when the hairs are pulled out and skin can breach. Painful inflammation of the eyelids can result with itches, swells and burns from the pulling of eyelashes. Swallowing of pulled hair can result in digestive problems as well (Kroks et al., 2018). Pereyra and Saadabadi, (2021) explained that eating one's own hair can result in a big, matted hairball called trichobezoar, in intestine. This can result in dropping of weight, nausea, abdominal issues and loss of life over time.

Psychological Effects

People with trichotillomania can also suffer from stress and they strive to hide it because to society's misinterpretation of the disorder and the attached ignominy. Some people have no symptoms in low-stress situations. When you leave this atmosphere, the "pulling" often reappears. Because of the low rate of reporting, some people with trichotillomania may believe they are the only ones who have this problem. The stress caused by hairpulling can lead to disrupted relationships with family and other relations. Internalizing negative emotions results at the end when the sufferer is left alone to deal with it. Trichotillomania can interfere with school, work, relationships and social activities. Significant distress due to negative emotional cycle of embarrassment, shame and guilt can be the consequences of the disorder when the sufferer is unable to stop this pulling behavior. In order to avoid the fear of judgment from the society, individuals isolate themselves (Rehm et al., 2016). Slikboer (2018) and colleagues stated that low self-esteem, which is often linked to being snubbed by classmates and a dread of socializing because of their appearance and the negative attention they may receive, can have an extra psychological effect. To avoid such attention, some persons with hair pulling disorder wear caps, periwigs, fake eyelashes, eyebrow pen, or shape their hair. Trichotillomania is a trivial issue for some people, only a source of aggravation. However, for many people, regret about hair pulling creates unpleasant alienation and emotional suffering, putting them at risk for a many other mental disorder as mood and anxiety disorder.

Nail biting

Snyder and Friman (2012) reported that is the habit of putting in the fingers into the mouth and linking up with the teeth and nails. Several people used their teeth to groom their nails when they don't have nail scissors, but this can be dangerous. In clinical nail biting individuals intensively bite their nails and nail beds that results in bleeding, scarring and infection in fingers. It is



generally known to be a meek habitual practice that does not cause any impairments in social, personal and occupational life. If this behavior comes to the extent that it started causing problems in daily functioning of the victim and chronic damage to the nails and fingers. Nail biting can cause result in damaging of the nails, paronychia and bacterial infection. This is a very common problem in children and adolescents and its rate of effectiveness rises in adolescents and declines in later. Nail biting is a problematic oral behavior and grooming disorder marked by continuous, apparently involuntary nail-biting that causes damage to the fingers and neighboring cells.

Nail biting is not the reliant on gender in kids below 10 years but its effect on boys is more than girls in adolescents (Baghchechi et al., 2020; Tanaka et al., 2008). Nail-biting can be an unconscious habit or a deliberate behavior. It usually starts in early infancy and gets worse as adolescence approaches. Although it may persist into adulthood, the behavior usually diminishes with age and, in many cases, ends in adolescent years. Nail biting has a wide range of behavior including putting nails into the mouth in a way that damaged or bleeding nails and result in physical damage and is considers as a self- mutilated behavior (Krejc, 2000). Although nail-biting is very widespread, the distinction between "normal" and "pathological" nail-biting isn't clear all the time. According to the DSM-5 pathological nail biting is supposed to cause clinically substantial anguish, inhibits the functioning in at least one imperative life realm, and is specified by repeated, unsuccessful attempts to stop the behaviors. Those who experience significant embarrassment, remorse, or worry as a result of their nail-biting, are unable to quit, and discover that it is interfering with one or more aspects of their lives should seek help. Sometimes the nail bitten to its lost and cuticle along with nail bed is chewed (Ghanizadeh, 2008). Early therapy is required for nail-biting in order to stop the damage of nail bed and eternal nail shortening (Lee, 2009).

Etiological Factors

There is a controversy about the roots of nail biting, several studies relate it to behavior problems (Ghanizadeh et al., 2008) but some did not agree to it (Teng et al., 2004). Some studies suggested that anxiety found in children with nail biting is not a trait it is a state and the trait which is supplemented with nail biting is expressed oral aggression. There is environmental etiology for Nail biting and other oral habits and also the danger factors for development of malocclusion, particularly in children mature than preschool ages (Winocur et al., 2006; Winebrake et al., 2018). Nail biting may increase because of inadequate motor activity (Dufrene et al., 2005).

Some studies deny the role of anxiety in developing the nail biting behavior, according to it nail biting usually occurs due to boredom or occupied with a challenging task rather than anxiety. Nail biting patients do not bite their nails when they are involved in societal interactions or while



they are scolded for their behavior (Dufrene et al., 2005; Williams et al., 2007; Wu et al., 2021). Chewing gum and smoking in adulthood is suspected to be substitute of nail biting in childhood (Tanaka et al., 2008).

Physical effects of nail biting

Dented and deformed nails and skin, skin contaminations, fungiform infections, and mouth pain or tooth mutilation are all physical effects of nail-biting. Individuals who ingest the bitten nails run the risk of developing stomach or gastrointestinal illnesses. Microbes can transport into the body by biting the nails and thereby raising risk of intestinal infections or digestive disorders. Fingernails are robust, and biting has been shown to have no long-term impact on growth after the activity is stopped. Long-term infections of the skin, abdomen, or intestines are the most dangerous, but they are frequently curable. In some circumstances, nail-biting can cause tooth damage (such as chipped teeth), which would necessitate dental treatment.

Childhood traumas, Nail biting and Trichotillomania

There is often the history of childhood abuse in the patients with compulsive skin picking (Misery et al., 2012). Zimmerman (2001) reported that physical and sexual abuse during childhood predicted in emotional impairments and invalid expression of emotions through behaviors (Clayton, 1997; Turner & Paivio, 2002).

Gratz and colleagues (2002) found that in a sample of non-clinical university students, the participants who reported moderate to severe self-harm behavior had greater incidental rate of insecure attachment in the course of early childhood, childhood separation, emotional negligence and sexual exploitation. There is a history of traumatic events and sexual abuse and mistreatment in childhood in the patients of trichotillomania (Neziroglu et al., 2008). Trichotillomania is also associated with different previous traumatic events in early childhood and trichotillomania is the coping strategy of the patient to intrusive thoughts related to trauma (Ozten et al., 2015).

There are various studies that established a link between the onset of obsessive compulsive disorder (trichotillomania, excoriation, nail biting etc.) and childhood abuse and exploitation and negligence (Freeman & Leonard, 2000; Fricke et al., 2007; Mathews et al., 2008; Montgomery et al., 2003; Speckens et al., 2007; Hart et al., 2005; Lochner et al., 2002). Sexual abuse experiences, physical torture before 18, and emotional neglect is the core factor in developing different types of obsessive and compulsive behaviors (Hart et al., 2005; Lochner et al., 2002).

The risk factors for different psychological disorders including trichotillomania and nail biting can be the maltreatment and traumatic events during early childhood that might lead to inapt coping approaches against negative emotions and tension releasing behavior as self-inflicted skin



diseases, is linked with these diseases (Öztürk et al., 2008). According to epidemiological and clinical studies the childhood traumatic experiences are more prevailing among patients suffering with obsessive compulsive disorder or community subjects who reported high levels of obsessive compulsive symptoms as compared to normal subjects (Boger et al., 2020; Caspi et al., 2008).

The traumatic events during early childhood have a very vital role in the developing self-infliction by pulling and picking observed in trichotillomania patients and this might serve as an unconscious call for help as these patients cannot cope with their emotional problems. There is a vital connection between sexual exploitation in pre adolescents' period and self-injurious behaviors including skin picking, hair pulling and other self-harm behaviors (Gupta, 2006).

Williams et al. (2007) reported that childhood traumas are positively correlated with anxiety and depression in skin patients. Emotional negligence and childhood abuse were also often found in the patients. The result of this study also found that that childhood traumatic events can play a vital role in the development of trichotillomania and nail biting and the comorbid psychiatric problems. Another study also found that the stressful traumatic events during childhood seems to play a more key role than the comorbid psychiatric illnesses throughout development of trichotillomania (Snorrson et al., 2012). Inappropriate care, negligence or abuse through the early childhood predict high danger of self-injurious behaviors that result in the development of many psychosomatic and psycho dermatological disorders. Dermatological lesion due to self-mutilation are usually observed in the cases of childhood abuse or neglect and chronic posttraumatic stress disorder. During the initial stages of life if there is exposure to severe stress effects the glucocorticoid, noradrenergic and other response systems activated by the stress.

Different mental problems as depressive thoughts, substance abuse and stress related disorder including irritable bowel syndrome, chronic fatigue syndrome and fibromyalgia are associated with negative childhood experiences. Wrong coping approaches against negative emotions and tension releasing behaviors self-inflicted skin diseases can be result from severe childhood traumas and abuse (Teicher, 2002; Willemsen, 2009).

According to Misery et al. (2012) majority of the patients with trichotillomania have peculiar personal snags before they started to engage in these disorders. Childhood abuse during the childhood has also been reported by the patients of the study. The happening of the self-infliction via pulling hairs is the outcome of traumatic experiences of early childhood as these patients cannot handle with these emotional difficulties. And theses self-harm behaviors may possibly serve as an unconscious plea for help. Negative self-esteem, low confidence and feelings of inability and uselessness can also be result from the early childhood traumatic events, including verbal, physical, sexual and emotional abuses which may lead to self-harm behaviors (kayaalp et al., 2008; Koo & Lee, 2003; Gupta & Lanius, 2005)The trichotillomania the mean of resolving stress and underlying psychopathologies that are caused by childhood abuse and post-



traumatic stress (Arnold, 2002; Gupta & Lanius, 2005; kayaalp et al., 2008; Koo & Lee, 2003). Lower income, female gender and childhood physical and emotional abuse are reported to be associated with hair pulling behavior (APA, 2013; Kayaalap et al., 2008).

Methodology

Research Design

Cross sectional research design is used in the current study.

Sample

The sample of this study was comprised of adolescents including both educated males and females. only educated males and females were included in the current study. Trichotillomania and nail biting are not very common disorder that's why only 280 expected cases were identified in time period of almost 6 months. Purposive sampling technique was be used for selection of sample. The sample was selected from both diagnosed adolescents and adolescents from general population. The reason for selecting sample from these two population is due to the fact that most of the people suffering from trichotillomania and nail biting do not take health services in this particular culture. The participants (both male and female) who has obtained scores on trichotillomania and nail biting scale greater than the cut off scores were selected as a sample of the study. The areas for sample collection were Abbottabad, Mansehra, Haripur, Mardan, Swabi, Peshawar, Rawalpindi, Islamabad, Jhelum, Karachi.

Procedure

The sample was collected from the different hospitals and educational institutes. After taking permission from the administration of each department of the participating institutes was sought and the booklet of the scales was shown to the administrative authorities. Informed consent along with the demographic sheet and questionnaires was distributed to the students (adolescents) who were in accordance with research inclusion criteria. Scales were distributed within group setting and individual setting. The participants were given surety of confidentiality of their given information. The obscurities of the questionnaires were made clear to the respondents at the spot. The maximum time required to respond the questionnaire was 60 to 90 minutes. Initially 280 questionnaires were distributed and 180 were answered and recollected. Among these only 130 fulfilled the required criteria for trichotillomania and nail biting.



Instruments

The Childhood Trauma Questionnaire

It is developed by Pennebaker and Susman (2013) which is the short survey of six early age traumatic experiences that are death, divorce, sexual abuse and illness or others. It is 7-point Likert scale from not all traumatic to extremely traumatic category. The Cronbach alpha reliability of the current study data is 0.79.

The Trichotillomania Scale for Children/adolescents

This scale was developed by Tolin et al. (2008) with 12 item scale that has two version, one is for children or adolescents and the other is parent version. This is three-point Likert scale of response categories from 0 to 2. The reliability of Trichotillomania Scale for Children (TSC) is .82 and validity is .74 (Tolin et al., 2008). The reliability of the scale for current study data is 0.98.

Nail Biting Scale

This scale is developed by Claes and Vandereycken (2007) and is the sub scale of a new self-reporting questionnaire: the Self-Injury Questionnaire - Treatment Related (SIQ-TR) which not only measures the taxonomic specifications of Self injurious behavior, but also the affective back ground and outcomes along with the functions of every single type of SIB distinctly. This is five-point Likert scale with the response categories from 0 (no urge) to 4 (constant urge). The reliability of the nail biting scale is .77 (Claes & Vandereycken, 2007). The reliability of the scale for current study data is 0.88.

RESULTS

Once the process of data collection completed, the data of 130 selected cases was entered into Statistical Package for Social Sciences (SPSS 23.0 for Windows) which is the computer program for analyses of the quantitative data. The objective of the study was to instigate the role of childhood trauma in developing nail biting and trichotillomania, different statistical analyses were used to attain a number of results.

Table 1

The characteristics of Demographic variables of the sample with Nail biting and Trichotillomania

variables	N	%
gender male		
	61	46.9
female	69	53.1
age 13-16		
	62	47.7
17-19	68	52.3
Family system		
nuclear	91	70
Joint	39	30
Education		
FA	55	42.3
BS	75	57.7
Area rural		
	46	64.6
urban	84	35.4
Siblings		
2	23	17.7
3 or more	107	82.3
Sample		
clinical	59	36.6
Non clinical	71	63.4

Note. FA = Faculty of Arts, BA = Bachelor of Arts

Table 1 illustrates the demographic characteristic of the sample of the present study. The males were 39.1%, females 44.2%, nuclear family 58.3%, joint 25.0%, faculty of arts 35.3%, bachelor of arts 57.7%, rural areas 29.5%, urban 64.6%, clinical sample 17.7 and non clinical sample 100.0%.



To see the psychometric properties and descriptive statistics of the scales of the study, the Cronbach's Alpha reliabilities, Mean, Standard Deviation, Range and Skewness were computed.

Table 2

Psychometric properties of the scales

Scales	<i>M</i>	<i>SD</i>	Range	Cronbach's α
7.CTQT	38.45	16.53	20-53	.79
8.TRI	6.43	8.95	0-23	.98
10.NB	10.80	12.07	0-27	.88

Note. Ctqt = Childhood traumatic event scale, Tri = Trichotillomania scale, Nb = Nail biting scale

Table 2 demonstrates the psychometric properties and descriptive statistics for the scales of the study. Means and standard deviation were computed to show the average scores of participants on all study scales. Value of skewness indicates distribution of scores among variables. value of skewness on all the scales indicates that the distribution curve is slight tailed and pointed. The Alpha reliability of Childhood trauma scale is .79, Trichotillomania scale is .98 and Nail biting scale is .88. Absolute value for skewness is less than 2 (-3 to +3) that shows the normal distribution of data and parametric testing can be assessed (Brown,2006). Therefore, judgment was taken to go on for further analysis with normality achieved.

Table 3

The correlation coefficient Between Childhood Traumatic events , Trichotillomania and Nail biting (N=130)

<i>Scales</i>	<i>M</i>	<i>SD</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1. Tri	6.43	8.93	--	-.54**	-.40**	.22**
2.Nb	10.80	12.07		--	-.51**	.21*
4.CTQT	35.71	7.10				--

Note. Tri = Trichotillomania scale, Nb = Nail biting scale, CTQT = Children traumatic scale

Table 3 shows the positive correlation between trichotillomania and childhood traumatic scale (.22**). According to the table there is a positive correlation between nail biting scale and childhood traumatic scale (.21*). There is negative correlation found between trichotillomania scale, excoriation (-.40**) and nail biting scale (-.54**).

Discussion

Childhood Traumas, Trichotillomania and Nail biting

The present study manifested that childhood traumatic events are positively correlated with Trichotillomania and Nail biting (Table 3). The results of the current research supported the findings of previous studies that claimed the positive relationship between the childhood traumatic events and onset of Trichotillomania and Nail biting (Arnold, 2002; Caspi et al., 2008; Freeman & Leonard, 2000; Fricke et al., 2007; Gupta & Lanius,



2005; Hartl et al., 2005; kayaalp et al., 2008; Koo & Lee, 2003; Lochner et al., 2002; Mathews et al., 2008; Montgomery et al., 2003; Speckens et al., 2007; Snorrson et al., 2012). One consistent factor that has been identified as a significant predictor of self harm behaviors including nail biting, skin picking or hair pulling, among adolescents is adversative childhood experiences (Franzke et al., 2015; Glassman et al., 2007; Gratz, 2006; Kaess et al., 2013; Zetterqvist et al., 2014). Yates (2009) observed that up to 80% of people who engaged in self-harming behaviors had a history of stressful and traumatic events during childhood, such as emotional, physical, and sexual abuse; emotional and physical neglect; caregiver risk factors such as addiction or substance use, mental illness, incarceration, separation or divorce; and aggressive treatment of the mother (Saul et al., 2014). Several analyses and meta-analyses have been conducted to describe the link between childhood traumatic experiences and self-harm behaviors (Ford & Gómez, 2015; Lang & Sharma-Patel, 2011; Maniglio, 2011; Smith et al., 2014). The adolescents with a history of traumatic experiences are more likely to engage in self harm behaviors such as nail biting, skin picking and trichotillomania, Parallel results have been found among adolescent inpatients (Bifulco et al., 2014; Kaess et al., 2013; Thomassin et al., 2016). An increasing number of researches identified that children who experienced or witnessed domestic violence or their parents are suffering from any kind of mental disorders, are more prone to develop self harm behaviors (Armiento et al., 2016). Ozten et al. (2015) described that childhood trauma might play a Vitol part in commencement of both trichotillomania and excoriation.

Studies that have found a relationship between self harm behavior such as biting, pulling or scratching and history of adverse childhood experiences. The adolescents having the history of adversative experiences have difficulty in coping with their previous traumatic experiences and consequently get engaged in self harm behaviors in order to regulate/ manage their affect and emotion, this fact is the fundamental element of theory of affect regulation (Messer & Fremouw, 2008; Suyemoto, 1998). According to this theory self harm behavior originates as prerequisite to control traumatic experiences, aggression or other stress full incidents that cannot be articulated through words (Suyemoto, 1998). Numerous researches supported the theory of affect regulation to describe behavior among children and adolescents that have gone through any type of traumatic experiences (Joiner et al., 2007; Nock & Prinstein, 2005; Noll et al., 2003).

Individuals suffering from trichotillomania also show the history of adverse childhood experiences and patients of trichotillomania scored higher on emotional neglect, demonstrating that some features of childhood trauma may be common to these disorders (Lochner et al., 2002). History of sexual abuse and rape in childhood is also one of the



prognosticators of Skin picking. Individuals who are engaged in excoriation disorder may pass through different types of abuses either physical or verbal, and in order to distract the aversive thoughts associated with these incidents, they started to indulge in different sorts of compulsive behaviors that are particularly focused on their body (Favaro et al., 2007; Arnold et al., 2001; Hyes et al., 2009).

According to Boughn and “Holdom (2003) revelation to interactive social violence is found to be high during the preliminary stage of the trichotillomania and approximately 76% of patients with trichotillomania have a history of at least one distressing life incident (Gershuny et al., 2003, 2006; Shusterman et al., 2009).



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