Pakistan Journal of Social Research
ISSN 2710-3129 (P) 2710-3137 (O)
Vol. 3, No. 4, December 2021, pp. 675-683
www.pjsr.com.pk

THE RELATIONSHIP BETWEEN BOREDOM AND BODY FOCUSED REPETITIVE BEHAVIOR DISORDERS AMONG ADOLESCENTS

Wajiha Yasir
Department of Psychology, Hazara University Mansehra
wajeehayasir@gmail.com

Syeda Farhana Kazmi
Chairperson, Department of Psychology, Hazara University Mansehra
s.farhanakazmi@gmail.com

ABSTRACT
This study was conducted to inspect the relationship between Boredom and Body Focused Repetitive Behavior Disorders among adolescents (excoriation, trichotillomania, nail biting). 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 Trichotillomania Scale for Children/adolescents (Tolin et al., 2008), *The skin picking scale* (Snorrosam et al., 2012) *and Nail -Biting Scale* (Claes & Vandereycken, 2007). *The scales that were used in the current study are Short Boredom Proneness Scale (SBPS) (Struk et al., 2016*) *The Trichotillomania Scale for Children/adolescents* (*Tolin et al., 2008), The skin picking scale* (*Snorrosam et al., 2012*) *and Nail -Biting Scale* (*Claes & Vandereycken, 2007*). *The study concluded the positive relationship of anxiety with BFRBD. The findings of study will increase the understanding of the knowledge of critical age period of adolescence with respect to Body focused repetitive disorders. The findings of this study will help the psychologists, counsellors, psychiatrists and therapists to design and plan the therapeutic interventions for BFRBD.*
Keywords: Body focused repetitive behavior disorder, Trichotillomania, Excoriation, Adolescents

INTRODUCTION
Body focused repetitive behavior disorders are problematic and recurring behaviors that can cause physical damage to one's body along with the social and functional impairments. Trichotillomania, excoriations and nail biting are some of the leading disorders that are included in BFRBD (APA, 2013; O'Connor et al., 2003). The repetitive and chronic pulling of hairs that results in baldness or hair loss are termed as trichotillomania. In excoriation there is excessive and repeated picking of skin resulting in the damage to the skin tissues. Nail biting refers to the repetitive putting of fingers into the mouth causing harmful damage to the nails, bleeding and severe infection (APA, 2013). People suffering from BFRBs describe an inability to control their behaviors, as well as significant distress and psychosocial impairment (APA, 2013; Roberts et al., 2013; Snorrason et al., 2012; Teng et al., 2002). All these disorders are characterized by the common features in terms of impulsiveness, chronic and compulsive nature (Lochner et al., 2002; Bohne et al., 2005; Snorrason et al., 2012). The co-occurrence symptoms of BFRBD are depression, anxiety disorder, obsessive compulsive disorders etc. (Abramowitz & Jacoby, 2015; Arnold et al., 1998; Calikusu et al., 2003; Christenson & Mitchell, 1991; Greenberg et al., 2017; Houghton et al., 2016; Woods et al., 2006). BFRBD are those conditions that have been associated with negative emotions that heads to the occurrence of maladaptive behaviors (Burton & Abbott, 2017).

Boredom
Boredom is the unpleasant state of emotion that generally happens in the situation that is unoccupied meaningless, unchallenging and inactive (Eastwood et al., 2012; Chan et al., 2018; Van Tilburg & Igou, 2011, 2013; Van Tilburg & Igou, 2012). The transitory experience of boredom arises frequently that can have both positive and negative consequences (Chin et al., 2017; Kılıç et

al., 2019; Pekrun et al., 2014; Mann & Cadman, 2014; Van Tilburg et al., 2013; Fahlman et al., 2009; Goldberg et al., 2011). Although boredom is the one of most negative emotions yet it is the amongst the most understudy construct and only 4751 published research were on boredom from 1864 to 2020(Clarivate Analytics, 2020). In spite of the fact that it is the focus of scholarly interest boredom is very common emotion and among 3867 Americans, 63% experienced boredom at least once during a 10-day span including teenagers (adolescents) (Chin et al., 2017).

Boredom is condition of restlessness and fatigue due to the lack of interest (Merriam-Webster, 2020). According to psychological perspective defining of boredom is not merely the component that include the subjective experience rather then it focuses on the causes of the boredom. According to Westgate and Wilson (2018) when people are unable to engage their attention goal-oriented activity, they feel bored. They have proposed a model to explain the boredom that is Meaning and Attention. According to this model boredom arises from the contradiction between cognitive demands and available mental resources (attention component) and or conflict between activities and valued goals (meaning component). Therefore, when people are unable to pay attention to an activity or find it meaningless, they become bored.

The people who are not much capable to maintain constant attention they get bored more frequently and they are found to be more impulsive and less purposeful in life as compared to the people who are more capable to maintain constant attention (Fahlman et al., 2009; Goldberg et al., 2011; Isacescu et al., 2017; Malkovsky et al., 2012; Mercer-Lynn et al., 2013). The boredom is linked to various mental health issues and different problematic behaviors (Al-Saggaf et al., 2019; Biolcati et al., 2016; Crockett et al., 2015; Elhai et al., 2018; Elpidorou, 2017; Fahlman et al., 2009; Goldberg et al., 2011; Lee & Zelman, 2019; Ksinan et al., 2019; MercerLynn et al., 2013; Oxtoby et al., 2019; Sommers & Vodanovich, 2000; Skues et al., 2016; Wolniewicz et al., 2020).

Emotion Regulation Model (ER)

The focus of this model is on negative reinforcement in BFRBD and the function of BFRBD is supposed to be mitigation from negative emotions. The relief strengthens and perpetuates the behavior. The role of painful emotional experiences in generating the occurrence of BFRBD and the part of the body focused repetitive behavior in modeling emotional arousal in maintain and reinforcing the behaviors, is combined in in emotional regulation model. According to this model the persons with BFRBD have trouble in controlling particular emotions and engross in body focused behaviors to avoid and reduce aversive affects. Trichotillomania, excoriation and nail biting continue in spite of negative outcomes as they are negatively reinforced by diversion or escape from problematic or challenging events or undesired emotions, the ER model also proposes that individuals with BFRBD are described by a general deficit in ER that supports the adoption of maladaptive coping approaches (Snorrason et al.,2010). BFRBD episodes fallout from a drive to halt experiencing a given emotional state and a deficiency of alternative techniques for managing with the state (Shusterman et al., 2009).

Stimulus Regulation Model

The stimulus regulation model is based on the observations of Penzel (2002). The basic observation of his study was that individual with trichotillomania pull out hair in two conditions; when they are overstimulated because of stress or to positive and negative exhilaration and when they are under stimulated because of boredom or inactivity.

According to Penzel in the individuals with Bfrbds there is mal functioning in “nervous system mechanism” that makes the internal levels of stress stable and balanced, and Bfrbds is an attempt to “externally regulate” the “internal state of sensory imbalance”. There is same level of environmental stimulation for both individuals with BFBRD and for normal individuals, yet the individuals with BFRBD have the nervous system that have distinct threshold for “physiological stimulation” (Penzel, 2002). The persons with BFRBD experiences excitement from behavior that other person’s experience as agonizing. The intensity of the power of the physiological sensation of picking, biting and pulling in under stimulated individuals with BFRBD, provides relief.in overstimulated individuals the sensation provides diversion from the cause of overstimulation.

According to Penzel the BFRBs develops because hairs, nails and skin are in reach and in easy approach all the time, the parts of the body where trichotillomania occurs are rich spots of

nerves endings providing "good stimulation source, Excoriation and nail biting are to lesser extent, Skin, nails and hairs are Hair are enormously exciting to touch and stimulating as well.

1. BFRBD may be performed nearly automatic and without much attention, as tendencies to BFRBD may be present in the brain as a part of an old grooming program.
2. BFRBD may be pleasurable and rewarding.

These behaviors can be performed in both situations, either alone or in company of others.

Boredom and BFRBD

According to Penzel (2003) excoriation disorder serve to regulate high and low arousal states. The high arousal states including tension and anxiety and low arousal states includes boredom, in other words the excoriation disorder is the mean to regulate low arousal state such like boredom. Neziroglu et al. (2008) used a general term "negative emotions" that might not capture some features of negative affect probably connected with excoriation, such as boredom. Repetitive and recurrent skin picking appears to be a mode for various people to increase their activity when they are feeling bored or to control their emotions when they are anxious, nervous, upset or sad. Sarbu et al. (2014) suggested that boredom has a key role in triggering excoriation and trichotillomania and individuals with excoriation disorder and trichotillomania has higher level of boredom, they, get engaged in picking or pulling behavior when they have nothing to do and feel bored. These individuals feel relief and better after getting involved in these behaviors.

Some patients of excoriation report difficulty in relaxing, poor ability to plan and complete tasks and idealistic expectations of always being productive. All these are the characteristics of a type of perfectionism. As a result, this perfectionism may result in frustration, intolerance and discontent, when their goals are not accomplished and boredom when the task is difficult and impossible. This boredom can start the excoriation and may also add to its severity. It has also been suggested that pulling or picking plays a pivotal role in affective regulation, particularly in reducing the intensity and severity of emotional states like rage, boredom and tension (O'Conner, 2002; Shusterman et al., 2009). People get engaged in skin picking when they have nothing to do or have less activity (Didden et al., 2007; Hall et al., 2013; Hustyi et al., 2013) Studies concluded, that the behaviors play an emotional regulation role, supported by findings showing these behaviors are triggered by and relieve impatience, boredom, and frustration (Bohne et al., 2002; Diefenbach et al., 2002; Duke et al., 2010: Roberts et al., 2015).

Picking is sometimes headed by a negative emotional state boredom and this boredom initiate the pulling behavior in the individuals in order to overcome this low emotional state (Keuthen et al., 2010). The frequency and rate of both excoriation and nail biting increases in people susceptible to these behaviors by experimental manipulation of boredom (Teng et al., 2004; Williams et al., 2006). Environmental factors, boredom, and lack of stimulation have been reported being possible triggers of hair pulling and excoriation episodes (Shusterman et al., 2009). According to Aydin and Basoglu (2019) the emotional dysregulation including boredom, can lead to different self harm behavior. And different Children's books written for specific purpose can help children who are unhappy, tensed and distressed because of their anxieties, low activity(boredom) and temper tantrums they can't handle with for feeling that they are not alone, understanding that they can get rid of the feeling and making progress with solution suggestions.

Bohne et al.(2002) found out that boredom is the basic emotion that is linked with body focused repetitive behavior. When the individuals feel bored, they involved themselves in different activates to avoid the feeling of boredom. In a study with undergraduate students who bite their nails do so most recurrently when are unaccompanied or alone reporting that the boredom condition is most probably to induce nail biting. The patients of nail -biting disorder do not bite their nails when they are involved in social interaction or when they are scolded for the behavior (Williams et al., 2007). Woods et al. (2001) revealed that restricted chances for responding for example being alone, produced higher level of nail biting in children than conditions in which participants are presented with and engaged in activities to perform. Studies also find that affective correlates of trichotillomania that included boredom (Diefenbach et al., 2002; Duke et al., 2009; Snorrason et al., 2010). There is a positive relationship between BFRBs and difficulties in emotion regulation including inactivity or boredom (Houazene et al., 2021).

RESULTS

Table No. 1 The characteristics of demographic variables of the sample with BFRBD

Variables	n	Percent	Cum%
Gender Male			
	61	39.1	46.9
Female	69	44.2	100.0
Age			
13-16	62	39.7	47.7
17-19	68	43.6	100.0
Family system			
Nuclear	91	58.3	70
Joint	36	25.0	99.4
Education			
FA	55	35.3	42.3
BS	75	57.7	100.0
Area			
Rural	46	29.5	100
Urban	84	53.8	64.6
Siblings			
2	23	14.7	17.6
3 or more	107	68.5	100.0
Sample			
Clinical	59	36.6	17.7
Non clinical	71	63.5	100.0

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 family58.3%, 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 No. 2 Psychometric properties of the scales

Scales	N	M	SD	α	Range A	kurt	Skew
1.BORDST	8	15.4	4.23	.81	1-40	2.00	1.01
2.TRI	12	6.43	8.95	.98	0-23	.428	-1.00
3.EXCOR	8	15.75	13.27	.87	1-40	1.00	.85
4.NB	7	10.80	12.07	.88	0-27	-1.	.300

Note. *Dasa=Das Anxiety scale, Dasd=Das Depression Scale, Bordst= Boredom Scale, Tri= Trichotillomania scale, Excor=Excoriation scale, Nb=Nail biting scale*

Table 2 illustrates 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 Boredom scale is .82, Trichotillomania scale is .98, Excoriation scale is .87 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 Boredom and BFRBDs.

Variables	*M*	*SD*	*1*	*2*	*3*	*4*
1.BFRBDT	6.43	8.95	1	-.543** .000 130	-.408** .000 130	.323** .000 130
2.BFRBDN	10.80	12.07		1	-.515** .000 130	.149* .090 130
3.BFRBDS	15.74	13.27			1	.508** .000 130
4.BORDT	11.26	2.78				1

Note. BFRBDT=Body Focused Repetitive Behavior Disorders Trichotillomania scale, BFRBDN=Body focused repetitive behavior disorder Nail biting scale, BFRBDS=Body focused repetitive behavior disorder excoriation scale, Bordr= Boredom scale.

Table 3 shows that the correlation between trichotillomania scale and boredom scale is positive (.54**). There is also found the positive correlation between nail biting scale and boredom scale (.14*). According to the table excoriation scale and boredom scale is positively correlated (.50**). as well. There is negative correlation found between trichotillomania scale, excoriation (-40**) and nail biting scale (-.54**) .

DISCUSSION

The current study has explored the relationship between Boredom and BFRBD (Table 3). The positive correlation is found between boredom and BFRBD; increase level of boredom increase the likelihood of nail biting, excoriation and trichotillomania(p>.05,.01). The term boredom encompasses both a physiological experience - feeling under-stimulated - and an emotional one - feeling uninterested, uninspired, perhaps a little depressed. The finding is in consistent with the previous studies that reveled the positive relationship between boredom and excoriation disorder (Didden et al., 2007; Penzel, 2003: Sarbu et al., 2014; Hall et al., 2013; Hustyi et al. 2013; Keuthen et al., 2010; Teng et al., 2004; Williams et al., 2006), boredom and nail biting (Bohne et al., 2002; Williams et al., 2007; Woods et al., 2001) boredom and trichotillomania (Diefenbach et al., 2002; Duke et al., 2009; Snorrason et al., 2010).Individuals having trichotillomania and excoriation consistently report that emotions such as boredom, present prior to BFRBs and decrease during or after pulling or picking episodes (Roberts et al., 2013). Teng et al. (2004) reported that students with excoriation, nail biting, mouth chewing, skin biting, and skin-scratching demonstrated significantly more BFRBs in conditions designed to induce boredom than in a control condition. Similarly, Williams et al. (2006) manipulated emotion in undergraduates students reporting Nail biting and concluded that NB occurred primarily in states of boredom or frustration. The Frustrated action model has also received some independent research support. Studies that used questionnaire measures to measure emotional state during BFRBD have found that individuals engage in trichotillomania, excoriation and nail biting, when they are bored, frustrated, or inactive the

emotional regulation theory posits that repetitive behaviors regulate affective states such as anxiety, depression, or boredom. From this perspective, engaging in a BFRBD temporarily alleviates a preexisting negative affective state and, as a result, is negatively reinforced (Bohne et al., 2002; Diefenbach et al., 2002; Duke et al., 2010: Roberts et al., 2015).

CONCLUSION

The current study aimed to find out the relationship between Boredom and Body focused repetitive behavior disorders among adolescents. This study is a valuable addition in the field of research pertaining to body focused repetitive behavior disorders and Boredom. The results of the study are beneficial to provide a new foundation for the therapeutic interventions for both Boredom and Body focused repetitive behavior disorders with adolescents to improve the outcomes of the treatment. Moreover, it will help to improve conventional treatment strategies to deal with common disorder (BFRBD) of adolescent period. This research study enhances the BFRBD research in Pakistan as it is providing an inclusive depiction of prevalence, effects, managing strategies, risk and defensive features as described by adolescents, and it also subsidizes innovative knowledge about the importance of social standpoints to international research in this extent by adding to the risk, managing and handling literature. Subsequently, this research is a contribution to the discussion around more inclusive understandings of BFRBD during the critical phase of adolescents.

Limitations and Suggestions

The current study is not invulnerable from limitations. However, the sample size for the study was 230 but the actual data that fitted to the required criteria was 130 only, and to generalize the results of prevalence, future research should build upon a larger data set so that it could be better generalized. A convenience sampling method was used in the current study comprised of only adolescents who are studying in higher education institutions which is another limitation of the study. The study did not include the adolescents who are not educated or studying in lower educational institutions (Which constitutes a large group of the adolescent's population in Pakistan), so the data may not generalize to all Pakistani adolescent's experiences. Future researchers can include the experiences and perspective of uneducated or less educated group of adolescents in order to genialize the findings of the study.

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