

THE ROLE OF PARENTING BEHAVIOR IN BODY FOCUSED REPETITIVE BEHAVIOR DISORDERS AMONG ADOLESCENTS

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Abstract

This study sought to investigate the role of parenting in Body focused repetitive behavior disorders among adolescents. Body focused repetitive behavior disorders are those monotonous behaviors that focused on the body, involving impulsively damaging individual's physical appearance or causing physical injury. They include trichotillomania, excoriation and nail biting. The sample comprised of 130 participants (male and female) who were all adolescents aged between 13-19. The data were collected from clinical and nonclinical sample through, The Trichotillomania Scale for Children/adolescents, Parental Bonding Instrument, Excoriation scale and Nail-Biting Scale. The results yielded that there is a positive correlation between low parenting and over protectional parenting with Body focused repetitive behavior disorders among adolescents. The findings of study will enhance the knowledge regarding the critical age period of adolescence with respect to Body focused repetitive disorders. The verdicts of this study will help the psychologists, counsellors, psychiatrists and therapists to design and plan the therapeutic interventions for Body focused repetitive behavior disorders.

Keywords: Body focused repetitive behavior disorders, Adolescents, Low parenting, over protectional parenting

Introduction

When harmless nervous habits turn into repetitive and recurrent behaviors that leads to physical damage, occupational impairment and distress in personal and social life, they become Body focused repetitive behavior disorders (Bohne et al., 2005; Solley &Turner,2018; Teng et al., 2004). Body focused repetitive behaviors that includes trichotillomania, excoriation and nail biting, are the compulsive behaviors that cause physical damage to an individual un intentionally. The basic difference between the body focused repetitive behavior disorders and rest of compulsive behaviors that cause harm to the body; burning or cutting one's own self, is that the former is characterized by direct body to body contact. Body focused Body Repetitive Behavior are actions that are chronic, recurring and cause damage to physical appearance and injury (Grant &Stein,2014; Houghton et al., 2018; Roberts et al., 2013; Sampaio & Grant, 2018; Snorrason et al., 2012; Stein et al., 2010; Teng et al., 2004).

The recognition of such kind of pathological behaviors can be traced back to ancient times especially to the Hippocrates who has recommended that the physicians should ask the patients whether or not he pluck their hairs and scratch their skin in order to diagnose or examine various mental diseases (Chadwick & Mann, 1983 cited in Siddique 2012). BFRBs mostly begins in late childhood or adolescents yet it is amongst the poorly understood, underdiagnosed and inadequately treated groups of disorders. The primary factor of BFRBD is trouble in resisting the impulse or urge to that cause a degree of relief. The BFRBD fallout in deep satisfying state that is why the behavior continues and is negatively reinforced (Woods et al., 2001). Trichotillomania is mostly incapacitating, less recognized condition in which individuals recurrently pull-out hair that leads to



obvious hair loss and is characterized by substantial distress and psychosocial functioning impairments (Arnold et al., 1998; Grant & Odlaug, 2009; Woods et al., 2006).

Excoriation disorder which is also called skin picking disorder is characterized by repetitive and compulsive skin picking that can cause tissue destruction (Arnold et al., 2001; Grant et al., 2012), and results in infection and scars that leads to social isolation and embarrassment (Tucker et al., 2011; Solley & Tuker, 2018).

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; Pacan et al., 2014). Sometimes the nail bitten to its lost and cuticle along with nail bed is chewed (Ghanizadeh, 2008; Gupta &Gupta,2019; Halteh et al.,2017; Pacan et al.,2014; Reich et al.,2011; Upeniece& Beltina,2021; Warshaw et al.,2007).

Prevalence

The Estimated life time prevalence rate of BFRBDs is 0.5-4% (Dell'Osso et al., 2006; Odlaugh &Grant, 2010; Odlaugh et al., 2013; Siddiqui et al.,2012). In a study conducted on 439 undergraduate psychology students at an urban American university at least one body focused repetitive behavior disorders was identified in 13.7% of the sample, with nail biting as the most common manifestation (Dell'Osso et al.,2006; Duke et al.,2009; Odlaugh &Grant ,2010; Teng et al.,2002). The general prevalence of BFRBs in Pakistan among medical college students were found to be 46 (22%). For those positive for BFRBs, gender distribution was as follows: females 29 (13.9%) and males 17 (8.1%). Among these students, 19 (9.0%) were engaged in dermatillomania, 28 (13.3%) in trichotillomania and 13 (6.2%) in nail biting (Siddique et al.,2012).

Role of Parenting behavior in BFRBDs

In the developmental of early pathologies, parenting plays a critical and key role. Several studies have been conducted to examine the role of parenting in children's and adolescent's internalizing and externalizing problem behavior (Hart et al.,2003). Greater use of harsh discipline and low levels of sensitive parenting is associated with the development of behavior difficulties and problems (Gardner et al., 2009; Miner &Clarke, 2008). The nature of Parent child relationship has great impact on adolescents' psychological wellbeing and has decisive role in the development of their mental health (Anjum & Kausar, 2009; Chao, 2001). Some studies reported that greater acceptance of parents among adolescents may prevent anxiety and parental support to the children's self-sufficiency and independence may improve children's perceptions of control over the environment, that leads towards reduction in anxiety. Conversely, when there is lack of parental support, it causes the disturbance in emotion regulation of the child, resulting in increase of sensitivity to emotional problems (Anjum & Kausar, 2009; Griess, 2010; Tiwari & Verma, 2015; Yeshashwork, 2010)

Warmness and control are the two important dimensions of the parental behavior that play an important role to maintain the emotional health of the child, across the lifespan (Bogels et al.,2006; Bogels & Phares,2008; Brander et al.,2016; McLead et al.,2007; Mollar et al.,2016; Murray et al.,2009; Schleider & Weisz ,2017; Van Der et al.,2008; Wood et al.,2003). Obsessive compulsive disorder is organic condition which is often connected with deep psychosocial impairments mainly due to parents or family burden (Piacentini et al., 2003; Storch et al., 2009; Valderhaug &Iverson, 2005).

Obsessive compulsive disorders are often connected with deep psychosocial impairments mainly due to parents or family issues and Body focused repetitive behavior disorders are categorized



under the obsessive compulsive disorders in DSM-V) (Piacentini et al., 2003; Storch et al., 2009; Valderhaug &Iverson, 2005) .According to studies the children suffering from OCD has parents that are more rejecting and overprotected then the parents of psychologically healthy children (Alonso et al.,2004;Barrett et al.,2002; Lennertz et al.,2010; Mathieu et al.,2015; Przeworski et al.,2012;Smari et al.,2010;Turgeon et al.,2010). Higher levels of parental refutation or rejection and control is linked to the development of obsessive-compulsive behaviors in adolescents and higher parental warmness is connected with lower level of OCD symptoms (Alonso et al.,2004; Mathieu et al.,2020). Some others reported more denial or rejection and less caring or kind behavior than normal control (Hoekstra et al.,1989 cited in Alonso et al.,2004).

The background in which trichotillomania develops is quite similar to the risk factors for child abuse. In children, trichotillomania often starts at times of psychosocial stress within the family unit such as a disturbed mother-child relationship, hospitalizations, periods of separation, or developmental problems. Recently, a strong relationship of family chaos during childhood (Boughn & Holdom, 2003).

Perris et al. (1980, cited in Chen et al., 2020) reported that low parenting care and high parental over protection and control are related to a diversity of psychopathologies such as anxiety, depression, substance abused and obsessive-compulsive disorder. The nature of parents and child relationship shares may possibly add to the development of self-ambivalence, obsessive belies and repetitive behaviors in suspected subjects (Alonso et. al., 2004). According to Doron and Kyrios (2005) there has been a neglect of developmental issues including early attachment patterns and parenting attitudes and their role in the development and maintenance of dysfunctional beliefs and symptoms related to OCD (O'Kearney, 2001). The attachment insecurities and low parenting care have been found connected with thought processes of repetitive behaviors such as evaluation of threat, trouble in overpowering thoughts and under estimating one's handling capability in the intimidating or threatening situations (Doron et al., 2011).

Dysfunctional parenting including parental excessive control, high expressed emotions, and over protection are the features of the physical and social environment to guess or predict certain threat. Compared to obnoxious or negligence full attitudes, faulty parenting might be peculiarly related with maladaptive cognitive evaluation which are particular for OCD (Barreet et al., 2002). According to several studies one of the basic reasons of the onset of obsessive-compulsive disorder is the negligence of primary care givers (parents) from the children. Different studies have defined the childhood commencement of obsessive compulsive (Freeman&Leonard.2000; Frickle et al.,2006; Methews et al.,2008; Montgomery et al.,2006; Murphy et al.,2006; Ross&Anderson,1988; Speckens et al.,2007). So, it is obvious that people with OCD (trichotillomania, nail biting, and excoriation disorder) have been found to endure considerably more attachment insecurities then healthy control (Myhy et al., 2004).

Knox et al. (2013) investigated the children may protect or defend themselves from the agony of the care relationship by shutting down any genuine and real feelings. This leads to the inability of awareness of self and others interfering with cognitive and emotional processing, in that inner states may possibly be avoided generally and the individual might defensively interrupt their ability to consciously represent the feelings, emotional states and thoughts of themselves and other individuals. The experiences of mal treatment in childhood by the primary care givers (parents), increases the likelihood of engaging in self-harm behaviors (excoriation, trichotillomania, nail-biting). Liu et al. (2018) also reported the positive relationship between childhood sensual, somatic and emotional



exploitation to self-harm behaviors. Linehan's biosocial theory proposes that the emotional male treatment from the family inhibit the development of adoptive emotion regulation skills; various capabilities that are mandatory to monitor, appraise and manage disturbing and distressing emotions consequently increasing the risk of relying or depending on maladaptive tactics to deal with negative emotions, and these tactics include self harm behaviors (Linehan, 1993 cited in Guerin-Marion et al., 2019). This theory is verified by other researches by reporting that the behavior is repeatedly inspired by a desire to escape or release passionate emotional pain (Klonsky, 2007; Nock & Prinstein, 2004). Paivio and McCulloch (2004) and Swannell et al. (2012) support the mediating role of "alexithymia" (which is a personality construct that is reflective of problems with identifying, recognizing and labeling emotions) in association between ill-treatment from the parents and self-harm behaviors. Sim et al. (2009) explored that the parental negligence and emotional exploitation towards the children may correlate with the occurrence of self harm behaviors.

The later development of the child depends a lot on the early life experiences. John Bowlby explored that early life experiences with the care givers could have a deep impact on that individual's view of himself and the world around and other social relations. The secure or insecure attachment of parent and child predicts the emotional wellbeing of the child. individuals with an insecure early attachment leads to anxiety, stress and other psychopathologies and behavioral problems (Malek pour, 2007).

Method

Participants

The sample included a total of 130 participants from different educational institutes and hospitals of Mansehra, Abbottabad, Haripur, Rawalpindi, Islamabad, Peshawar, Swabi, Karachi, Jhelum, Quetta. The age range was 13-19 both males and females from clinical and nonclinical sample.

Research Instruments

Skin Picking Scale Revised

It is the revised measure of the Skin Picking Scale (SPS; Keuthen et al., 2001) which is 6-item self-report measure of skin picking disorder (SPD) severity. the Skin Picking Scale-Revised; SPS-R is eight item scale developed by Snorrosam et al. (2012) having reliability .83 and validity 0.86. SPS-R has satisfactory psychometric properties, with reliable and valid subscales. Exploratory and confirmatory factor analyses discovered two factors, one measuring impairment and the other symptom severity (4 items each). There is high internal consistency and convergent/concurrent and discriminant validity of both the factors. The advantage of the SPS-R is the elimination of a vague item, that has improved the psychometric properties of the scale.

The Trichotillomania Scale for Children/adolescents

It is 12 item scale that has two version, one is for children or adolescents and the other is parent version. In this study children or adolescent's version is used. The reliability of Trichotillomania Scale for Children (TSC) is .82 and validity is .74(Tolin et al, 2008).

Parental Bonding Instrument

This is consisting of 25 items divided into 12 items of care and 13 items of over protection. Using a Likert scaling from 0 to 3, the 12 items of the 'care' scale allow a maximum score of 36, and the 13 items of the 'overprotection' scale allow a maximum score of 39. The scales may be used separately, or together as a bonding instrument. Used together they allow five types of parental bonding to be examined: average (defined statistically), high care-low overprotection (which might be conceptualized as optimal bonding), low care-low overprotection (conceptualized as absent or



weak bonding), high care-high overprotection (conceptualized as affectionate constraint) and low care-high overprotection (conceptualized as affectionless control). The cutoff point for care scale is 26 and for over protection is 12.5. Below 26 at care scale would be the indication of low parental care and above 12.5 shows the over protection of the parents (Perker et al.,1979; Gamsa,1987). In this study the scores of almost all the participants were below 26 at care scale while the total score of these participants were above 12.5 at overprotection scale.

Nail Biting Scale

The nail biting scale 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 (type, rate of recurrence, duration), but also the affective back ground and outcomes along with the functions of every single type of SIB distinctly. The correlations between the different types of Self injurious behavior questionnaire range from 0.06 to 0.37. The alpha coefficient of the five different types of Self injurious behavior questionnaire is 0.62(Claes & Vandereycken, 2007).

Procedure

The sample was collected from the different hospitals and educational institutions. Prior to data collection, 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. After taking prior approval from the head institution, informed consent along with the demographic sheet and questionnaires was distributed to adolescents in accordance with research inclusion criteria. Initially 230 questionnaires were distributed and 180 were answered and recollected. Among these only 130 were fulfilling the required criteria for BFRBDs.

Data analysis

Table 1

At this stage the data were analyzed using Spss 23. Initially reliabilities and intercorrelation were computed as indicator of psychometric properties of the scales, that were found satisfactory. For internal consistency, Cronbach Alpha was calculated for all the scales as well as subscales that lie in satisfactory range.

Results

The characteristics of demographic variables of the sample with BFRBDs

Variables	N	Percent	Cum%	Cum%		
Gender						
Male	67	41.6	41.6			
Female	94	58.4	100.0			
Age						
13-16	79	49.1	49.1			
17-19	82	50.9	100.0			
Education						
FA	71	44.1	44.1			
BS	90	55.9	100.0			
Sample						
Clinical	59	36.6	36.6			
Non clinical	102	63.4	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 male adolescents were 41.6%, female adolescents 58.4%, faculty of arts 44.1%, bachelor of arts 55.9%, clinical sample 36.65 and nonclinical sample 63.4%.

Table 2 *Psychometric properties of the scales*

Scales	N	M	SD	α	Range	;	kurt	Skew
					Actua	l potential		
1.PACT	12	10.14	4.31	.88	29	48	2.00	1.00
2.POPT	13	22.51	6.12	.79	33	52	18	46
3.TRI	12	6.43	8.95	.98	23	36	.428	-1.00
4.EXCOR	8	15.75	13.27	.87	39	40	1.00	.85
5.NB	7	10.80	12.07	.88	21	27	-1.	.300

Note. Pact= Parents care scale, Popt= Parents overprotection 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 Parent care scale is .88, Parent over protection scale is .88, Childhood trauma scale is .79, 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 3The correlation coefficient between Parental over protection and BFRBDs.

Variables	M	SD	1	2	3	4
	24.7	4.52	1	.061*	.327**	.277**
1.PAOT				.488	.000	.001
				130	130	130
•	. 10	0.07		1	543**	408**
2.BFRBD T	6.43	8.95			.000	.000
					130	130
					1	515**
3.BFRBD N	10.80	12.07				.000
						130
4.BFRBDS						1
	15.74	13.27				

Note. BFRBDT= Trichotillomania scale, BFRBDN= Nail biting scale, BFRBDS= Excoriation scale, PAOT=Prenatal over protection scale.

Table 3 shows the correlation between parental over protection scale and trichotillomania is positive (.06*). According to the table there is also a positive correlation between excoriation (.27**) and parental overprotection scale. The positive correlation is also found between nail biting and parental over protectional scale (.32**).



Table 4 *The correlation coefficient between low parental care and BFRBDs(N=130)*

М	SD	1	2	3	4
10.00	2.70	1	515**	543**	2.96**
10.80	2.78		.000	.000	.207
			130	130	130
15.74	13.27		1	408**	464**
				.000	.000
				130	130
11.26	2.78			1	296**
					349*
					130
					1
9.25	3.83				
	10.80 15.74 11.26	10.80 2.78 15.74 13.27 11.26 2.78	1 10.80 2.78 15.74 13.27 11.26 2.78	1515** 10.80 2.78 .000 130 15.74 13.27 11.26 2.78	1515**543** 10.80 2.78 .000 .000 130 130 1408** .000 130 1 1.26 2.78

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, PACT=Prenatal care scale.

Table 4 shows the correlation between low parental care and nailbiting is negative (-2.96**). According to tabular values there is negative correlation between excoriation and low prenatal care (-.46**) and trichotillomania with low parental care scale (-.34*).

Discussion

This study instigated the role of parenting in Body focused repetitive among adolescents. The current study divulged that overprotected parenting behavior is positively correlated with BFRBDs (Table 3). There is significant relationship (p >.01,.05) between overprotected parental behavior and BFRBDs. If the parents show over protected behavior towards their children, they might develop BFRBDs. This result finding is in consistent with the previous literature that described the positive relationship between overprotected behavior of parents and development of obsessive- compulsive behaviors including trichotillomania, excoriation and nail biting in their children (Hafer, 1988; Merker et al., 1993 cited in Alonso et al.,2004; Turgeon et al., 2002; Perris et al.,1980, cited in Chen et al., 2018). Yoshida et al. (2005) described that over protected parenting results in the development of obsessive- compulsive behavior in children that might be executed in such behaviors as nail biting, excoriation or trichotillomania. Over protection is related to the occurrence



of neurosis and other mental disorders. Considering the substantial evidence linking psychological control to internalizing pathology, it is plausible that high parental psychological control may also be linked to Trichotillomania, particularly since it may outweigh protective factors, such as high parental warmth and acceptance (Aunola & Nurmi, 2005). Galambos et al. (2003) found that parents' high level of psychological control combined with a high level of behavioral control was related to externalizing problems such as antisocial behaviors, self-harm behaviors etc., among adolescents.

Another parenting dimension with potentially salient implication for child development is parental warmth and acceptance. Parental warmth/acceptance describes how parents are emotionally supportive and non-judgmental, or, respectively, how parents may be rejecting by being cold or indifferent toward children's concerns. This current study was put sought to determine the low parenting and its relationship with the development of BFRBDs among adolescents. The study findings confirmed that there is negative correlation between low parental care behavior and BFRBDs (Table4). There is significantly negative correlation(p>.01) between low parental care behavior and development of BFRBDs in adolescents. There is higher levels of denial and rejection reported from the parents in the patients of obsessive -compulsive behaviors including BFRBDs then healthy individuals and lower levels of emotional warmth from the parents is reported by the obsessive- compulsive patients (Alonso et al., 2004). The attachment insecurities and low parenting care have been found connected with thought processes of repetitive behaviors such as evaluation of threat, trouble in overpowering thoughts and under estimating one's handling capability in the intimidating or threatening situations (Doron et al., 2011). The behavior of both parents influences the psychological and emotional development of the child. And emotional and physical mal treatment and low care of the parents to child can lead to the development of self-harm behaviors (Gratz et al., 2002; Guérin-Marion et al., 2018). The development of emotional clarity of the adolescent also depends upon his or her personal feelings of alienation and isolation in parent child relationship, afar from the impact or influence of maltreatment and low care which increases the risk of self-harm behaviors. Another risk factor for self-injurious behavior is lack of insight into emotional experiences, that broadly stem out from parent child relationship in which adolescents were not taken as worthy of care and attention without maltreatment attitude. The low care parental behavior plays a key role in predicting the high risk of children involvement in excoriation disorder and parental accommodation and negative beliefs predicted likelihood of involvement in nail biting behavior. Additional evidences about the association of BFRBD and anxiety symptoms can be withdrawn from these findings, dearth of emotional warmth might increase a child's need for engagement in previously established emotionally maladaptive behaviors such as BFRBD and parental negatively expressed emotions hinders the positive mental growth of the children (Wilke, 2021).

References

Alonso, J., Angermeyer, M.C., Bernert, S., Bruffaerts, R., Brugha, T.S., Bryson, H., de Girolamo, G., Graaf, R., Demyttenaere, K., Gasquet, I., Haro, J.M., Katz, S.J., Kessler, R.C., Kovess, V., Lépine, J.P., Ormel, J., Polidori, G., Russo, L.J., Vilagut....., Vollebergh, W.A. (2004). Investigators, European Study of the Epidemiology of Mental Disorders. Project. Prevalence of mental disorders in Europe: results from the European Study of the Epidemiology of Mental Disorders project. Acta *Psychiatr Scand Suppl.* (420):21-7. http//doi: 10.1111/j.1600-0047.2004.00327. x. PMID: 15128384.



- Arnold, L, M., Auchenbach, M, B, McElroy, S, L. (2001). Psychogenic excoriation. Clinical features, proposed diagnostic criteria, epidemiology and approaches to treatment. *CNS Drugs.* **15**(5):351–359
- Aunola, K., & Nurmi, J.-E. (2005). The Role of Parenting Styles in Children's Problem Behavior. Child Development, 76(6), 1144–1159. http://doi:10.1111/j.1467-8624.2005. 00840.x-i
- Bögels, S. M., & Brechman-Toussaint, M. L. (2006). Family issues in child anxiety: Attachment, family functioning, parental rearing and beliefs. Clinical Psychology Review, 26(7), 834–856. http://doi:10.1016/j.cpr.2005.08.001
- Bögels, S., & Phares, V. (2008). Fathers' role in the etiology, prevention and treatment of child anxiety: A review and new model. Clinical Psychology Review, 28(4), 539–558. http://doi: 10.1016/j.cpr.2007.07.011
- Bohne, A., Keuthen, N., Wilhelm, S. (2005). Pathological hairpulling, skin picking and nail biting. *Ann. Clin. Psychiatry* 17.227–232.
- Boughn, S. & Holdom, J. J. (2003). The relationship of violence and trichotillomania. *Journal of Nursing Scholarship*, 35, 165–170
- Brander, G., Pérez-Vigil, A., Larsson, H., Mataix-Cols, D (2016). Systematic review of environmental risk factors for obsessive-compulsive disorder: A proposed roadmap from association to causation. *Neurosci Biobehav*. 65:36-62. http://doi: 10.1016/j.neubiorev.2016.03.011.
- Claes, L., & Vandereycken, W. (2007). The Self-Injury Questionnaire—Treatment Related (SIQ-TR): Construction, reliability, and validity in a sample of female eating disorder patients. In P. M. Goldfarb (Ed.), Psychological tests and testing research trends (pp. 111–139). Nova Science Publishers.
- Chao, C. (2001). Parenting style and adolescents' development. *International Journal of Educational Research*, 34(2), 6772.
- Chen, G., He, J., Cai, Z., & Fan, X. (2020). Perceived parenting styles and body appreciation among Chinese adolescents: Exploring the mediating roles of dispositional mindfulness and self-compassion. *Children and Youth Services Review*, 105698. http://doi: 10.1016/j.childyouth.2020.10
- Dell'Osso, B., Altamura, A. C., Allen, A., Marazziti, D., & Hollander, E. (2006). Epidemiologic and clinical updates on impulse control disorders: a critical review. *European Archives of Psychiatry and Clinical Neuroscience*, 256(8), 464–475. http://doi:10.1007/s00406-006-0668-0
- Doron, G., Kyrios, M., (2005). Obsessive-compulsive disorder: a review of possible internal representations within a broader cognitive theory. *Clin Psychol Rev*; 25: 415-32.
- Doron, G., Moulding, R., Nedeljkovic, M., Kyrios, M., Mikulincer, M., & Sar-El, D. (2011). Adult attachment insecurities are associated with obsessive compulsive disorder. Psychology and Psychotherapy: *Theory, Research and Practice*, 85(2), 163–178. http://doi:10.1111/j.2044-8341.2011. 02028.x
- Duke, D. C., Bodzin, D. K., Tavares, P., Geffken, G. R., & Storch, E. A. (2009). The phenomenology of hairpulling in a community sample. *Journal of Anxiety Disorders*, 23, 1118–1125.
- Freeman, J. B., & Leonard, H. L. (2000). Sexual obsessions in obsessive-compulsive disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, 39(2), 141–142. http://doi:10.1097/00004583-200002000-00010
- Fricke, S., Moritz, S., Andresen, B., Jacobsen, D., Kloss, M., Rufer, M., et al. (2006). Do personality disorders predict negative treatment outcome in obsessive-compulsive disorders? A prospective 6-month follow-up study. *European Psychiatry*, 21(5), 319e324
- Galambos, N. L., Barker, E. T., & Almeida, D. M. (2003). Parents do matter: Trajectories of change in externalizing and internalizing problems in early adolescence. *Child Development*, 74, 578 594.
- Gardner, K. L., Hale, M. W., Oldfield, S., Lightman, S. L., Plotsky, P. M., & Lowry, C. A. (2009). Adverse experience during early life and adulthood interact to elevate tph2 mRNA expression in serotonergic neurons within the dorsal raphe nucleus. *Neuroscience*, 163(4), 991–1001. http://doi: 10.1016/j.neuroscience.2009
- Ghanizadeh A. (2008). Association of nail biting and psychiatric disorders in children and their parents in a psychiatrically referred sample of children. *Child Adolesc Psychiatry Ment Health.*, 2 (1): 13-http//doi:10.1186/1753-2000-2-13.
- Gran,t J.E., Odlaug, B.L,(2009). A clinical comparison of pathologic skin picking and obsessive-compulsive disorder. *Compr Psychiatry*.51(4):347-52. http://doi: 10.1016/j.comppsych.2009.10.006.
- Grant, J. E., & Stein, D. J. (2014). Body-focused repetitive disorders in ICD-11. *Revista Brasileira de Psiquiatria*, 36, S59–S64. http://doi:10.1590/1516-4446-2013-1228
- Gratz, K. L., Conrad, S. D., & Roemer, L. (2002). Risk factors for deliberate self-harm among college students. *American Journal of Orthopsychiatry*, 72, 128–140.
- Griess, S. (2010). Perceived Parenting Style and its Relationship to Hopefulness, Happiness, and Optimism in a college student sample. University of Northern Colorado. ProQuest Dissertations and Theses.



- Guérin-Marion, C., Martin, J., Deneault, A.A., Lafontaine, M.-F., & Bureau, J.-F. (2018). The functions and addictive features of nonsuicidal self-injury: a confirmatory factor analysis of the Ottawa self-injury inventory in a community sample of young adults. *Psychiatry Research*, 264, 316–321.
- Gupta, M.A., Gupta, A.K (2003). Depression and dermatological disorders. In: Koo JYM, Lee CS, editors. Psychocutaneous medicine. New York: Marcel Dekker; p. 233–49.
- Gupta, M. A., & Gupta, A. K. (2019). Self-induced dermatoses: A great imitator. *Clinics in Dermatology*, 37(3), 268-277. DOI: https://doi.org/10.1016/j.clindermatol.2019.01.006
- Halteh, P., Scher, R. K., & Lipner, S. R. (2017). Onychophagia: A nail-biting conundrum for physicians. *Journal of Dermatological Treatment*, 28(2) 166-172. https://doi.org/10.1080/09546634.2016.1200711
- Hart, C. H., Newell, L. D., & Olsen, S. F. (2003). Parenting skills and social-communicative competence in childhood. In J. O. Greene & B. R. Burleson (Eds.), Handbook of communication and social interaction skills (pp. 753 797). Mahwah, NJ: Lawrence Erlbaum Associates.
- Houghton, D. C., Alexander, J. R., Bauer, C. C., & Woods, D. W. (2018). Abnormal perceptual sensitivity in body-focused repetitive behaviors. *Comprehensive Psychiatry*, 82, 45–52. http://doi: 10.1016/j.comppsych.2017.12.005
- Klonsky, E. D. (2007). The functions of deliberate self-injury: A review of the evidence. *Clinical Psychology Review*, 27, 226–239. https://doi.org/10.1016/j.cpr.2006.08.002
- Knox, M., Burkhart, K., & Hunter, K. E. (2010). ACT Against Violence Parents Raising Safe Kids Program: Effects on maltreatment-related parenting behaviors and beliefs. *Journal of Family Issues*, 32(1), 55–74. http://doi:10.1177/0192513×10370112
- Knox, M., Burkhart, K., & Cromly, A. (2013). Supporting positive parenting in community health centers: the act raising safe kids' program. *Journal of Community Psychology*, 41(4), 395–407. http://doi:10.1002/jcop.21543
- Krejci, C. B. (2000). Self-Inflicted Gingival Injury Due to Habitual Fingernail Biting. *Journal of Periodontology*, 71(6), 1029–1031. http://doi:10.1902/jop.2000.71.6.1029
- Lennertz, L., Grabe, H. J., Ruhrmann, S., Rampacher, F., Vogeley, A., Schulze-Rauschenbach, S., Wagner, M. (2010). Perceived parental rearing in subjects with obsessive-compulsive disorder and their siblings. *Acta Psychiatrica Scandinavica*, 121(4), 280–288. http://doi:10.1111/j.1600-0447.2009. 01469.x
- Liu, R. T., Scopelliti, K. M., Pittman, S. K., & Zamora, A. S. (2018). Childhood maltreatment and non-suicidal self- injury: a systematic review and meta-analysis. *The Lancet Psychiatry*, 5(1), 51–64. https://doi.org/10.1016/S2215-0366(17)30469-8
- Malekpour, M. (2007). Effects of attachment on early and later development. *British Journal of Developmental Disabilities*, 53(105, Pt2), 81–95. https://doi.org/10.1179/096979507799103360
- Mathieu, C., & Babiak, P. (2016). Corporate psychopathy and abusive supervision: Their influence on employees' job satisfaction and turnover intentions. *Personality and Individual Differences*, 91, 102–106. http://doi. 10.1016/j.paid.2015.12.002
- Mathews, C. A., Kaur, N., & Stein, M. B. (2008). Childhood trauma and obsessive-compulsive symptoms. *Depression and Anxiety*, 25(9), 742–751. http://doi:10.1002/da.20316
- McLeod, B.D, Wood, J.J., Weisz, J.R. (2007). Examining the association between parenting and childhood anxiety: a meta-analysis. *Clin Psychol Rev.* 27(2):155-72. http://doi: 10.1016/j.cpr.2006.09.002. Epub 2006 Nov 16. PMID: 17112647.
- Miner, J. L., & Clarke-Stewart, K. A. (2008). Trajectories of externalizing behavior from age 2 to age 9: Relations with gender, temperament, ethnicity, parenting, and rater. *Developmental Psychology*, 44(3), 771–786. https://doi.org/10.1037/0012-1649.44.3.771
- Möller, E.L., Nikolić, M., Majdandžić, M., Bögels, S.M. (2016). Associations between maternal and paternal parenting behaviors, anxiety and its precursors in early childhood: A meta-analysis. *Clin Psychol Rev*.45:17-33. http://doi: 10.1016/j.cpr.2016.03.002. Epub 2016 Mar 3. PMID: 26978324.
- Montgomery, C., Jackson, D. M., Kelly, L. A., & Reilly, J. J. (2006). Parental feeding style, energy intake and weight status in young Scottish children. *British Journal of Nutrition*, 96, 1149–1153
- Murray, J., Farrington, D. P., Sekol, I. and Olsen, R. F. (2009), Effects of Parental Imprisonment on Child Antisocial Behaviour and Mental Health: *A Systematic Review, Campbell Systematic Reviews*: 2009: 4
- Murphy, T. K., Sajid, M. W., & Goodman, W. K. (2006). Immunology of Obsessive-Compulsive Disorder. *Psychiatric Clinics of North America*, 29(2), 445–469. http://doi:10.1016/j.psc.2006.02.003



- Myhr, G., Sookman, D., & Pinard, G. (2004). Attachment security and parental bonding in adults with obsessive-compulsive disorder: a comparison with depressed out-patients and healthy controls. *Acta Psychiatrica Scandinavica*, 109(6), 447–456. http://doi:10.1111/j.1600-0047.2004.00271.x
- Nock, M. K., & Prinstein, M. J. (2004). A functional approach to the assessment of self-mutilative behavior. *Journal of Consulting and Clinical Psychology*, 72, 885–890. https://doi.org/10.1037/0022-006X.72.5.885
- Odlaug, B.L., Lust, K., Schreiber, L.R., Christenson, G., Derbyshire, K., Grant, J.E. (2013). Skin picking disorder in university students: health correlates and gender differences. *Gen Hosp Psychiatry*, 35(2):168–73.
- Odlaug, B. L., & Grant, J. E. (2010). Pathologic skin picking. *American Journal of Drug and Alcohol Abuse*, 36(5), 296-303. https://doi.org/10.3109/00952991003747543
- O'Kearney, R. (2001). Motivation and emotions in the cognitive theory of obsessive-compulsive disorder. *Australian Journal of Psychology*, 53(1), 7–9. http://doi:10.1080/00049530108255114
- Pacan, P., Reich, A., Grzesiak, M., &Szepietowski, J. C. (2014). Onychophagia is associated with impairment of quality of life. *Acta Dermato-Venereologica*, 94(6), 703–706. https://doi.org/10.2340/00015555-18171203.
- Paivio, S. C., & McCulloch, C. R. (2004). Alexithymia as a mediator between childhood trauma and self-injurious behaviors. *Child Abuse & Neglect*, 28(3), 339–354. http://doi:10.1016/j.chiabu.2003.11.018
- Piacentini, J., Bergman, R. L., Keller, M., & McCracken, J. (2003). Functional Impairment in Children and Adolescents with Obsessive-Compulsive Disorder. *Journal of Child and Adolescent Psychopharmacology*, 13(supplement 1), 61–69. http://doi:10.1089/104454603322126359
- Reich, A., Szepietowski, J.C. (2011). Health-related quality of life in patients with nail disorders. *Am J Clin Dermatol*. 12:313–20.
- Roberts, S., O'Connor, K., & Belanger, C. (2013). Emotion regulation and psychological models for body-focused repetitive behaviors. *Clinical Psychology Review*, 33, 745e762. http://dx.doi.org/10.1016/j.cpr.2013.05.004
- Ross, C. A. & Anderson, G. (1988) Phenomenological overlap of multiple personality disorder and obsessive-compulsive disorder. *Journal of Nervous and Mental Diseaw*, 176.295-29
- Sampaio, D.G., Grant, J.E. (2018) Body-focused repetitive behaviors and the dermatology patient. *Clin Dermatol*. 2018 Nov-Dec;36(6):723-727. http://doi: 10.1016/j.clindermatol.2018.08. 004.. PMID: 30446195.
- Schleider, J. L., & Weisz, J. R. (2017). Little Treatments, Promising Effects? Meta-Analysis of Single-Session Interventions for Youth Psychiatric Problems. *Journal of the American Academy of Child & Adolescent Psychiatry*, 56(2), 107–115. http://doi: 10.1016/j.jaac.2016.11.007
- Siddiqui, E.U., Naeem, S.S., Naqvi, H. *et al.* (2012). Prevalence of body-focused repetitive behaviors in three large medical colleges of Karachi: a cross-sectional study. *BMC Res Notes* **5**, 614 https://doi.org/10.1186/1756-0500-5-614
- Sim, L., Adrian, M., Zeman, J., Cassano, M., & Friedrich, W. N. (2009). Adolescent Deliberate Self-Harm: Linkages to Emotion Regulation and Family Emotional Climate. *Journal of Research on Adolescence*, 19(1), 75–91. http://doi:10.1111/j.1532-7795.2009.00582.x
- Snorrason, I., Belleau, E. & Wood, D. (2012). How related are hair pulling disorder (trichotillomania) and skin picking disorder? A review of evidence for comorbidity, similarities and sharedetiology. *Clinical Psychology Review*, 32, 618–629
- Snorrason, I., & Woods, D. W. (2014). Nail picking disorder (onychotillomania): A case report. *Journal of Anxiety Disorders*, 28, 211–214. doi:10.1016=j.janxdis.2013.10.004
- Speckens, A. E. M., Hackmann, A., Ehlers, A., & Cuthbert, B. (2007). Imagery special issue: Intrusive images and memories of earlier adverse events in patients with obsessive compulsive disorder. *Journal of Behavior Therapy and Experimental Psychiatry*, 38(4), 411–422. http://doi:10.1016/j.jbtep.2007.09.004
- Solley, K., & Turner, C. (2018). Prevalence and correlates of clinically significant body-focused repetitive behaviors in a non-clinical sample. *Comprehensive Psychiatry*, 86, 9–18. http://doi: 10.1016/j.comppsych.2018.06.014
- Storch, E.A., Larson, M.J., Muroff, J., Caporino, N., Geller, D., Reid, J.M., Morgan, J, Jordan, P., Murphy, T.K(2009). Predictors of functional impairment in pediatric obsessive-compulsive disorder. *J Anxiety Disord*. 24(2):275-83. http://doi: 10.1016/j.janxdis.2009.12.004. Epub 2009 Dec 16. PMID: 20056376.
- Swannell, S., Martin, G., Page, A., Hasking, P., Hazell, P., Taylor, A., & Protani, M. (2012). Child maltreatment, subsequent non-suicidal self-injury and the mediating roles of dissociation, alexithymia and self-blame. *Child Abuse & Neglect*, 36(7-8), 572–584. http://doi:10.1016/j.chiabu.2012.05.005
- Teng, E. J., Woods, D. W., Marcks, B. S., & Twohig, M. P. (2004). Body-focused repetitive behaviors: The proximal and distal effects of affective variables on behavioral expression. *Journal of Psychopathology and Behavioral Assessment*, 26, 55–64.



- Tiwari, V. and Verma, S. (2015). Perceived inter parental relationship and anxiety among adolescents: mediating role of perceived parental support. Indian Journal of Community Psychology. ISSN 0974-2719, 11(II), 244 258.
- Tolin, D. F., Diefenbach, G. J., Flessner, C. A., Franklin, M. E., Keuthen, N. J., Moore, P., ... Board, T. L. C. S. A. (2008). The Trichotillomania Scale for Children: Development and Validation. *Child Psychiatry and Human Development*, 39(3), 331–349. https://doi.org/10.1007/S10578-007-0092-3
- Tucker. B.T., Woods, D.W., Flessner, C.A., Franklin, S.A., Franklin, M.E. (2011). The skin picking impact project: phenomenology, interference, and treatment utilization of pathological skin picking in a population-based sample. *J Anxiety Disord*, 25, 88-95.
- Upeniece, I., & Beltiņa, M. (2021). The importance of education to reduce self-destructive nail habits. society. integration. education. Proceedings of the International Scientific Conference, 4, 491-499. https://doi.org/10.17770/sie2021vol4.6418
- Valderhaug, R., Ivarsson, T. (2005). Functional impairment in clinical samples of Norwegian and Swedish children and adolescents with obsessive-compulsive disorder. *Eur Child Adolesc Psychiatry*. 14(3):164–73.
- Van der Bruggen, C. O., Stams, G. J. J. M., & Bögels, S. M. (2008). *Research Review:* The relation between child and parent anxiety and parental control: a meta-analytic review. *Journal of Child Psychology and Psychiatry*, 49(12), 1257–1269. http://doi:10.1111/j.1469-7610.2008.01898.x
- Warshaw, E. M., Foster, J. K., Cham, P. M. H., Grill, J. P., & Chen, S. C. (2007). Nail QoL: a quality-of-life instrument for onychomycosis. *International Journal of Dermatology*, 46(12), 1279–1286. http://doi:10.1111/j.1365-4632.2007.03362.x
- Wilke, C. K. V. (2021). Children's trichotillomania for parents: self-blame and trichotillomania knowledge are linked to expressed emotion. https://doi.org/10.31219/osf.io/h6z4r
- Wood, J. J., McLeod, B. D., Sigman, M., Hwang, W.-C., & Chu, B. C. (2003). Parenting and childhood anxiety: theory, empirical findings, and future directions. *Journal of Child Psychology and Psychiatry*, 44(1), 134–151. http://doi:10.1111/1469-7610.00106
- Woods, D. W., Wetterneck, C. T., & Flessner, C. A. (2006). A controlled evaluation of acceptance and commitment therapy plus habit reversal for trichotillomania. *Behaviour Research and Therapy*, 44(5), 639–656. http://doi: 10.1016/j.brat.2005.05.006
- Yeshashwork, K. (2010). Mind the Gap: Personal Reflections on the Mental Health Infrastructure of Ethiopia. *Psychology International* Vol 21, No 1. www.apa.org/pi
- Yoshida, T., Taga, C., Matsumoto, Y., Fukui, K. (2005). Paternal overprotection in obsessive-compulsive disorder and depression with obsessive traits. *Psychiatr Clin Neurosci* 59: 533-8