

FREQUENCY OF BODY-FOCUSED REPETITIVE BEHAVIOURS IN MEDICAL STUDENTS OF PESHAWAR

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ABSTRACT

Objective: To find out the frequency of body-focused repetitive behaviours (BFRBs) in medical students of Peshawar.

Methodology: This cross-sectional study included students from different medical colleges of Peshawar. Habit questionnaire was used to check the common habits; it consists of 11 questions with a simple 'Yes' or 'No' responses and noting the feelings before, during and after committing the behaviour. The Cronbach's alpha reliability of Habit questionnaire in our study was 0.88. SPSS v.20 was used to analyze the data and a p value of <0.05 was considered significant for results when tests of significance were applied.

Results: The mean age of the sample (n=549) was 20.7 ± 1.5 years with majority were male students (n=285, 51.9%) and from private sector (n=432, 78.7%). The most common habit in medical students was chewing lips (n=365, 66.5%). The most common feeling associated before and during committing these habits was irritability [(n=84, 15.3%) and (n=99, 18%)] while it was calmness, after committing the habits (n=121, 22%). The gender wise comparison showed that statistically significant habit in male was punching a wall (p= 0.000) and in females, it was chewing lips (p= 0.024). Similarly students of public sector had significantly more involvement in the habits of biting nails, chewing lips, clinching/ grinding teeth, scratching/picking skin, pulling hair on head and eyebrows/ lashes and punching wall, as compared to private sector (p <0.05).

Conclusion: There was a high frequency of body-focused repetitive behaviours in medical students. Significantly more common habit in females was chewing lips while in males, it was punching the wall.

Key Words: Body-focused repetitive behaviours, Medical students, Peshawar

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INTRODUCTION

Body-focused repetitive behaviours (BFRBs) is an umbrella name given to a group of compulsive behaviours, which may cause damage to one's appearance causing physical injury and/or significant distress. People with this problem engage in body-focused activities like nail biting, hair pulling, skin picking, cheek biting and inner lip biting¹.

The individuals experience ongoing and repetitive urges towards these behaviours. These groups of disorders are relatively harmless at lower frequencies. However, the increased frequency may lead to significant distress and impairment in social and occupational areas or may also cause damage/injury to the body². Trichotillomania is believed to affect 10 million people in United States³. Nail biting generally increases from childhood to adolescence and then decreases in adult-

hood⁴. It ranges from 28 to 33% during childhood and approximately 45% of adolescents are nail biters⁵.

It is an unfortunate fact that BFRBs are less focused and still, research in this field recognize and manage them as distinct entities. There are many reasons to consider them as one entity because it makes it not only less of a labour to manage but also focuses on the fact that they are all directly related to damaging one's own body parts such as lips and finger nails. Trichotillomania and skin picking are categorically placed under DSM-5 as part of obsessive compulsive disorders⁶.

Medical students due to academic stress may engage themselves in certain habits. This study was therefore conducted in order to find the frequency of body focused repetitive behaviours (BFRBs) in medical students and find out the feelings associated before, during and after committing these habits.

METHODOLOGY

This cross-sectional study included students of private and public sector medical colleges of Peshawar, Pakistan, using purposive sampling technique. These included Peshawar Medical College, Khyber Medical College, Rahman Medical College and Kabir Medical College. The study was approved by Ethical Review Committee of Peshawar Medical College and each participating institute was approached for permission, before starting data collection. All the students who participated in the study were informed about the purpose of the study and were included after their consent. All the information provided was kept confidential.

Habit questionnaire was used to check the common habits⁷. The questionnaire consists of 11 questions with a simple 'Yes' or 'No' as possible responses and their respective frequencies in the past 2 weeks. A few more questions on moods and feelings that people may have before, during and after the habitual behaviour are also part of the questionnaire. The Cronbach's alpha reliability of Habit questionnaire in our study was 0.88.

The results were analyzed using SPSS v.20. Analysis of the basic variables was carried out using descriptive statistics for finding frequencies and percentages of BFRBs. Chi-square test was used to find out the differences based on gender and public and private sector institutions. The results were considered significant at $p < 0.05$ level.

RESULTS

The mean age of the sample (n=549) was 20.7 ± 1.5 years with a range of 17-25 years. The majority were males (n=285, 51.9%) and from private sector medical colleges (n=432, 78.7%). Most of them were from Peshawar Medical College (n=265, 48.3%), followed by Khyber Medical College (n=117, 21.3%), Kabir Medical College (n=103, 18.8%) and Rahman Medical College (n=64, 11.7%). Majority were from second year (n=175, 31.9%) of their medical school studies, followed by students of third year (n=144, 26.2%), first year (n=139, 25.3%), fourth (n=87, 15.8%) and final year (n=4, 0.7%). The details are given in Table 1.

According to the responses of Habit questionnaire, only 54 (9.8%) students were not involved in any body focused repetitive behaviour. The most common habit in medical students was chewing lips (n=365, 66.5%), followed by biting nails (n=264, 48.1%) [Table 1]. The most common feelings associated before committing the habits mentioned in the questionnaire were irritability, frustration or anger (n=84, 15.3%), followed by emptiness or boredom (n=83, 15.1%) and sadness (n=69, 12.6%). The most common feelings during committing the habits in were irritability, frustration or anger (n=99, 18.0%), followed by sadness (n=93, 16.9%) and emptiness or boredom (n=90, 16.4%). The most common feelings after committing the habits were calmness (n=121, 22.0%), relief (n=110, 20.0%) and guilt (n=92, 16.8%), respectively.

Table 1: Frequencies of demographic variables (n=549)

S. No.	Variables	Frequency (%)	
1	Gender	Male	285 (51.9%)
		Female	264 (48.1%)
2	Institutes	Private	432 (78.7%)
		Public	117 (21.3%)
3	Year of Schooling	Pre-clinical (1st& 2nd Year)	458 (83.5%)
		Clinical (3rd, 4th and Final Year)	91 (16.5%)
4	Behaviours	Biting Nails	264 (48.1%)
		Chewing Lips	365 (66.5%)
		Biting Cheeks	160 (29.1%)
		Grinding/ Clinching Teeth	238 (43.4%)
		Scratching/Picking Skin	185 (33.7%)
		Pulling Hair on Head	159 (29.0%)
		Pulling hairs on Eye Brows/Lashes	133 (24.2%)
		Deliberately Self-Cutting	66 (12.0%)
		Punching Wall or Other Object	249 (45.4%)
		Hitting Self	142 (25.9%)
		Burning Self	88 (16.0%)

Table 2: Details of Habit questionnaire showing body focused repetitive behaviour in last 2 weeks (n=549)

S. No.	Behaviour	Frequency in Last Two Weeks			
		Not at all (%)	Once (%)	2-4 times (%)	More than 4 times (%)
1	Biting Nails (n=264)	58 (22.0)	72 (27.2)	68 (25.8)	66 (25.0)
2	Chewing Lips (n=365)	44 (12.1)	61 (16.7)	147 (40.3)	113 (30.9)
3	Biting Cheeks (n=160)	39 (24.3)	50 (31.3)	44 (27.5)	27 (16.9)
4	Grinding/ Clinching Teeth (n=238)	56 (23.5)	68 (28.6)	80 (33.6)	34 (14.3)
5	Scratching/picking Skin (n=185)	51 (27.6)	58 (31.3)	51 (27.5)	25 (13.6)
6	Pulling Hair on Head (n=159)	45 (28.3)	35 (22.0)	49 (30.8)	30 (18.9)
7	Pulling hairs on Eye brows/Lashes (n=133)	35 (26.3)	38 (28.6)	44 (33.1)	16 (12.0)
8	Deliberately Self-cutting (n=66)	16 (24.3)	27 (40.9)	20 (30.3)	3 (4.5)
9	Punching Wall or Other Object (n=249)	70 (28.1)	79 (31.7)	64 (25.7)	36 (14.5)
10	Hitting Self (n=142)	46 (32.4)	50 (35.2)	31 (21.8)	15 (10.6)
11	Burning Self (n=88)	22 (25.0)	31 (35.2)	22 (25.0)	13 (14.8)

Table 3: Comparison of Habit questionnaire on gender and students of public & private sector institutions (n=549)

S. No.	Behaviour	Gender			Private / Public Institutes		
		Male (%) n=285	Female (%) n=264	p value	Private Sector (%) n=432	Public Sector (%) n=117	p value
1	Biting Nails (n=264)	139 (48.8)	125 (47.3)	.739	198 (45.8)	66 (56.4)	.042*
2	Chewing Lips (n=365)	177 (62.1)	188 (71.2)	.024*	266 (61.6)	99 (84.6)	.000*
3	Biting Cheeks (n=160)	86 (30.2)	74 (28.0)	.581	119 (27.5)	41 (35.0)	.113
4	Grinding/ Clinching Teeth (n=238)	127 (44.6)	111 (42.0)	.552	169 (39.1)	69 (59.0)	.000*
5	Scratching/picking Skin (n=185)	97 (34.0)	88 (33.3)	.862	135 (31.2)	50 (42.7)	.020
6	Pulling Hair on Head (n=159)	90 (31.6)	69 (26.1)	.160	116 (26.9)	43 (36.8)	.036
7	Pulling hairs on Eye brows/Lashes (n=133)	73 (25.6)	60 (22.7)	.430	90 (20.8)	43 (36.8)	.000*
8	Deliberately Self-cutting (n=66)	38 (13.3)	28 (10.6)	.326	47 (10.9)	19 (16.2)	.114
9	Punching Wall or Other Object (n=249)	150 (52.6)	99 (37.5)	.000*	182 (42.1)	67 (57.3)	.004*
10	Hitting Self (n=142)	76 (26.7)	66 (25.0)	.656	106 (24.5)	36 (30.8)	.172
11	Burning Self (n=88)	54 (18.9)	34 (12.9)	.053	66 (15.3)	22 (18.8)	.356

*Sig. p < 0.05

The details of Habit questionnaire showing body focused repetitive behaviour in last 2 weeks is given in Table 2.

The gender wise comparison showed that statistically significant habit in male was punching a wall (0.000) and

in females, it was chewing lips (p=0.024). Public sector students showed more involvement in all these habits, as compared to the students of private sector medical colleges. The details and significance is given in Table 3.

DISCUSSION

This study was conducted to find out the occurrence of body-focused repetitive behaviours (BFRBs) in medical students of Peshawar. The prevalence of BFRBs was found to be much higher in our study than a previous survey conducted in Karachi, which stated it to be 22%⁸.

Our study showed that the most common habit in medical students was chewing on lips followed by biting nails. Wood et al⁹ reported that 21.8% of the sample engaged in chewing on mouth, lips or cheeks and 10.1% engaged in nail biting. Nail biting (n=109; 34.6%) followed by skin picking (n=78; 24.8%) has also been shown to be at the top of the behaviours in a study conducted by Roberts et al¹⁰. Another study has shown biting nails to be the most common behaviour¹¹. However, in another study, grinding teeth (54%) was the most common repetitive behaviour, followed by biting nails (36.5%)¹². One study has divided the habits in three groups, showed that the commonest group of habits was related to trichotillomania (13.3%) followed by dermatillomania (9%)⁸.

The most common feelings associated before and during committing the habits was irritability, frustration, or anger while most common feelings after committing the habits was calmness, relief and guilt. A study by Sarah et al¹³ showed that participants in the BFRBs group reported a stronger urge to engage in BFRBs in the boredom/frustration condition than in the relaxation condition. The results of another study indicated significant decreases in boredom, anxiety and tension and significant increases in guilt relief, sadness and anger across time related to trichotillomania¹⁴.

Based on gender, chewing lips (62.1%) and punching walls (52.6%) were more common in men while chewing lips (71.2%) and nail biting (47.3%) were a common trend in women. In a study by Siddiqui et al⁸, chew mouth, lips or cheeks was reported to be 41.8% (23/55) in males and 32.9% (51/155) in females while nail biting was stated to be 20% (11/55) in males and 23.2% (36/155) in females. A study conducted by Stephania et al¹⁵ showed that 15% females engaged in clinically significant skin picking compared to only 6.1% of males. This is in contrast to our finding where 34% males were involved in skin picking as compared to 33.3% females.

There is dearth of literature comparing the presence of body focused repetitive behaviours between students of public and private sector medical colleges.

CONCLUSION

There is a high frequency of body-focused repetitive behaviours in medical students. The most common habit in both genders was chewing lips. However, it was

significantly more in females while in males, punching the wall was the more significantly reported habit. Further investigations should be made on epidemiological, neurobiological and psychiatric levels to understand the causes and mechanisms of BFRBs and their relation to other compulsive disorders.

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REFERENCES

1. Roberts S, O'Connor K, Bélanger C. Emotion regulation and other psychological models for body-focused repetitive behaviors. *Clin Psychol Rev* 2013;33:745-62.
2. Grant JE, Stein DJ. Body-focused repetitive behaviour disorders in ICD-11. *Rev Bras Psiquiatr* 2014; 36:S59-64.
3. Diefenbach GJ, Reitman D, Williamson DA. Trichotillomania: A challenge to research and practice. *Clin Psychol Rev* 2000; 20:289-309.
4. Tanaka OM, Vitral RW, Tanaka GY, Guerrero AP, Camargo ES. Nailbiting or onychophagia: a special habit. *Am J Orthod Dentofacial Orthop* 2008; 134:305-8.
5. Leung AK, Robson WL. Nailbiting. *Clin Pediatr (Phila)* 1990; 29:690-2.
6. American Psychiatric Association. Diagnostic and statistical manual of mental disorders (5th ed.) (DSM-5). Arlington: Am Psychiatr Pub; 2013.
7. Resnick HS, Weaver T. Habit Questionnaire: Unpublished measure. Med University of South Carolina, Charleston; 1994.
8. Siddiqui EU, Naeem SS, Naqvi H, Ahmed B. Prevalence of body-focused repetitive behaviours in three large medical colleges of Karachi: a cross-sectional study. *BMC Res Notes* 2012; 5:614.
9. Woods DW, Miltenberger RG, Flach AD. Habits, tics, and stuttering. Prevalence and relation to anxiety and somatic awareness. *Behav Modif* 1996; 20:216-25.
10. Selles RR, Nelson R, Zepeda R, Dane BF, Wu MS, Novoa JC et al. Body focused repetitive behaviors among Salvadorian youth: Incidence and clinical correlates. *J Obsessive-Compul Relat Disord* 2015; 5:49-54.
11. Teng EJ, Woods DW, Twohig MP, Marcks BA. Body-focused repetitive behavior problems. Prevalence in a nonreferred population and differences

- in perceived somatic activity. *Behav Modif* 2002; 26:340-60.
12. Sacks MB, Flood AM, Dennis FM, Hertzberg MA, Beckham JC. Self-mutilative behaviors in male veterans with posttraumatic stress disorder. *J Psychiatr Res* 2008; 42:487-94.
 13. Roberts S, O'Connor K, Aardema F, Bélanger C. The impact of emotions on body-Focused repetitive behaviors: Evidence from a non-treatment-seeking sample. *J Behav Ther Exp Psychiatry* 2015; 46:189-97.
 14. Diefenbach GJ, Mouton-Odum S, Stanley MA. Affective correlates of trichotillomania. *Behav Res Ther* 2002; 40:1305-15.
 15. Hayes SL, Storch EA, Berlanga L. Skin picking behaviors: An examination of the prevalence and severity in a community sample. *J Anxiety Disord* 2009; 23:314-9.

CONTRIBUTORS

SAK and MI conceived the idea. SAK, MAK & MK did data collection and helped in the write up of the study. MRS did statistical analysis and helped in the write up of the study. MI planned the study, critically revised the manuscript and supervised the study. All authors contributed significantly to the submitted manuscript.