

Skin Picking and Trichotillomania Disorders in the Era of COVID-19: Cross-Sectional Study

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Abstract

Background: Trichotillomania and skin picking are two forms of body focused repetitive behaviors [BFRBs] classified among Obsessive Compulsive Disorders. Socio-governmental changes which had accompanied COVID-19 overwhelmed patients with BFRBs whom already experienced anxiety and social isolation. Our study was designed to determine if there is an association between COVID-19 pandemic and worsening of symptoms of BFRB disorders (in particular, trichotillomania and skin picking patients).

Methods: Cross-sectional online survey-based study conducted from June to August 2021. The survey collected data about participants sociodemographic, knowledge, concerns, and psychological impacts by using Massachusetts General Hospital Hair Pulling Scale (MGH-HPS) and/or modified skin picking scale-revised (SPS-R).

Results: A total of 171 participants joined the study including 34 (19.9%) male and 137 (80.1%) females. There was a significant difference of the total modified SPS-R (max 32), the mean score has increased by 7.62 during COVID-19 ($t=6.42$, $p<0.001$). Also, 7 parameters (subscales) are statistically significant. There was a significant difference of Frequency of urges, the mean score has increased during COVID-19 by 1.33 ($t=3.16$, $p<0.05=0.025$).

Conclusion: Throughout COVID-19 pandemic in Saudi Arabia, results revealed clearly the significant negative psychological impact of it on the population, specifically on those with BFRBs. The study gives a clue that both diseases are under-diagnosed, hence, the authors suggest conducting community screening programs for early and proper management. We suggest providing more attention and further protective psychological strategies during such stressful situations that go parallel with the physical health care plans.

Keywords: Body focused repetitive behavior, BFRB, Trichotillomania, Hair pulling disorder, Excoriation disorder, Skin picking disorder, COVID-19, Obsessive compulsive and related disorders.

INTRODUCTION

Trichotillomania and excoriation disorders (skin picking) are two forms of body focused repetitive behaviors (BFRB) psychiatric disorders with some dermatological manifestations. Trichotillomania and excoriation disorders are featured by repetitive and excessive grooming and manipulation causing non-scarring hair loss and excoriations respectively. Such disorders are debilitating and give a rise to significant distress and functional impairment(1). They are classified by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) under Obsessive Compulsive and Related Disorders(2). They are considered to be fairly common psychiatric disorders with estimated current prevalence of 1.7% for trichotillomania and 2.1% for excoriation disorders(1). Both genders are equally effected in Trichotillomania while females are more affected in excoriation disorders(3). Psychiatric comorbidities are common association in BFRB with Obsessive-compulsive disorders, anxiety, depression, panic disorders, post-traumatic stress disorder and attention deficit hyperactivity disorder being the most common and often the reason for seeking medical consultation(1,3). Classically, tension before hair pulling or gratification after is described by trichotillomania patients(4). The diagnosis of trichotillomania can be confused with other types of non-scarring alopecia mainly alopecia areata, and therefore the use of trichoscopy can be very helpful for the diagnosis(5).

During the era of COVID-19 pandemic, Many governmental preventive measures have been implemented for infection control: social distancing, in-person to schools and workplaces, social events, religious duties rites, and imposing curfew and

home isolation(6). Several studies have discussed the negative psychological impact of COVID-19 pandemic on the current health status of the general populations and psychiatric patients(7–12).

The aim of our study is to determine if there is association between COVID-19 pandemic and worsening of symptoms of BFRB disorders particularly trichotillomania and skin picking patients.

Methodology:

Setting:

This multi-center cross-sectional online-based survey study was conducted in Eradah mental health hospital and Qassim university medical city, Qassim, Saudi Arabia beside community supported groups reached out through Twitter, Facebook or WhatsApp groups interested in these topics. It was performed from June to August 2021 based on the guidelines of the Declaration of Helsinki and approved by the Local Ethical Committee and registered at national committee of bio & med ethics (NCBE) with registration No. H-04-Q-001. Written informed consent was obtained from all the participants before enrollment and after an explanation of the aim and nature of the study. The study protocol included adult patients attending dermatology and psychiatry clinics or having membership of on-line psychiatric supported groups. It excluded patients with unstable psychological conditions, mentally disabled patients, and patients younger than 18 years or older than 75 years.

The participants were asked to fill on-line questionnaire consisting of four main sections. The first section is about demographic data. The second section is designed to specify the status of their condition, either formally diagnosed by a health care professional with hair-pulling, skin picking, diagnosed with both diseases, not currently diagnosed but suffering from hair-pulling or skin picking, or not complaining of any. Depending on this response, the participant will fill either modified Massachusetts General Hospital Hair Pulling Scale (MGH-HPS) or modified skin picking scale-revised (SPS-R) or both(13,14). Each scale consists of 8 questions scaled from 0-4 with a total score of 32. The same scale is filled twice to evaluate the condition in pre-covid and during covid which was specified to the last week to overcome issue of memory recall.

Data analysis:

The data was collected from electronic surveys using Google forms service. Then coded, processed and analyzed using Microsoft Excel the 24th version of IBM SPSS statistics software. Descriptive statistics including frequencies and percentages, mean and standard deviation were used to describe the study variables. The paired test-test was used to test the differences between diseases during and before the COVID-19 pandemic. The p-values at 0.05, 0.01, and 0.001 were considered statistically significant, while deemed $P \geq 0.05$ to be insignificant.

Results

As shown in [Table1], a total of 171 people participated in the study including 34 (19.9%) male and 137 (80.1%) females. The mean score of the age was 26.98 ± 9.10 . There are 76 (44.4%) participants did not complain from neither repetitive hair pulling or repetitive skin picking, thus they were excluded from the study. There are 51 (29.3%) participants who had repetitive hairpulling without a formal diagnosis, while 32 (18.7%) participants had repetitive hairpulling (trichotillomania). Also, 6 (3.5%) participants had repetitive skin picking without formal diagnosis, while 4 (2.3%) participants had diagnosed with repetitive skin picking (excoriation disorder).

Table 1 Demographic and diagnose information, (N=171)

	Values
Male	34 (19.9%)
Female	137 (80.1%)

Age, mean (SD)	26.98±9.10
Do not complain from neither repetitive hairpulling nor skin picking	76 (44.4%)
Repetitive hairpulling (trichotillomania)	32(18.7%)
Repetitive skin picking (excoriation disorder).	4 (2.3%)
Diagnosed with both trichotillomania and excoriation disorder	2 (1.2%)
Repetitive skin picking without formal diagnosis	6 (3.5%)
Repetitive hairpulling without formal diagnosis	51 (29.3%)

As shown in [Table 2] paired test-test was conducted to test the mean differences of the problem before and during COVID-19 for the diagnosed sample. There was a significant difference in the total modified SPS-R (max 32), the mean score has increased by 7.62 during COVID-19 ($t=6.42$, $p<0.001$). Also 7 parameters (subscales) in the scale had significantly increased during COVID-19 period and they were respectively as follows:

There was a significant difference of Overall urge, the mean score has increased during COVID-19 by 1.41 ($t=8.08$, $p<0.001$). There was a significant difference of Intensity of urges, the mean score has increased during COVID-19 by 0.97 ($t=3.97$, $p<0.001$). Also, there was a significant difference of time spent picking skin, the mean score has increased during COVID-19 by 0.76 ($t=3.25$, $p<0.01=0.003$). There was a significant difference of Control over skin picking behavior, the mean score has increased during COVID-19 by 0.76 ($t=3.55$, $p<0.01=0.001$). There was a significant difference of social impairment caused by skin picking, the mean score has increased during COVID-19 by 0.76 ($t=3.95$, $p<0.001$). There was a significant difference of Social avoidance behavior, the mean score has increased during COVID-19 by 1.12 ($t=7.41$, $p<0.001$). There was a significant difference of Physical damage to skin from skin picking, the mean score has increased during COVID-19 by 1.35 ($t=7.37$, $p<0.001$).

In term of MGH-HPS (modified) scale item (0-4), There was a significant difference of Frequency of urges, the mean score has increased during COVID-19 by 1.33 ($t=3.16$, $p<0.05=0.025$).

The increase in total mean of both diseases during COVID-19 compared to its readings before the pandemic is illustrated in [Figure1], however, the increase in MGH-HPS is not statistically significant.

Table 2 Modified Skin Picking Scale-Revised and modified Massachusetts General Hospital Hair pulling Scale scores before and after COVID (Diagnosed sample)

Statement	Pre-COVID-19 mean±SD	During COVID-19 mean±SD	Mean difference	t	p value
SPS-R (modified) scale item (0-4)					
Overall urge	2.12±0.84	3.53±0.61	1.41	8.08***	0.000
intensity of urges	2.29±1.24	3.26±0.79	0.97	3.97***	0.000
Time spent picking skin	2.50±1.29	3.26±0.79	0.76	3.25**	0.003
Control over skin picking behavior	1.85±1.28	2.62±0.99	0.76	3.55**	0.001
Emotional distress from skin picking	2.79±1.25	3.26±0.71	0.47	1.94	0.054
Social impairment caused by skin picking	1.88±1.07	2.65±0.60	0.76	3.95***	0.000
Social avoidance behavior	2.24±0.82	3.35±0.60	1.12	7.41***	0.000
Physical damage to skin from skin picking	2.18±1.17	3.53±0.56	1.35	7.37***	0.000
Total modified SPS-R (max 32)	17.85±7.10	25.47±3.08	7.62	6.24***	0.000
MGH-HPS (modified) scale item (0-4)					
Frequency of urges	1.33±0.52	2.67±0.82	1.33	3.16*	0.025
Intensity of urges	1.83±1.17	2.83±0.41	1.00	2.24	0.076
Ability to control the urges	1.83±1.17	2.33±0.82	0.50	1.00	0.363
Affecting responsibilities	2.17±1.60	2.83±0.75	0.67	1.00	0.363
Frequency of hair pulling	2.17±1.33	2.83±1.47	0.67	0.61	0.566

Attempts to resist hair pulling	1.17±0.98	1.50±1.05	0.33	0.79	0.465
Control over hair pulling	1.50±1.38	1.00±1.10	-0.50	-0.89	0.415
Associated distress	2.17±1.47	2.17±1.17	0.00	0.00	1.000
Total modified MGH-HPS (max 32)	14.17±8.04	18.17±4.49	4.00	1.04	0.347

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

SPS-R, Skin picking scale revised; MGH-HPS, Massachusetts General Hospital Hair Pulling Scale.

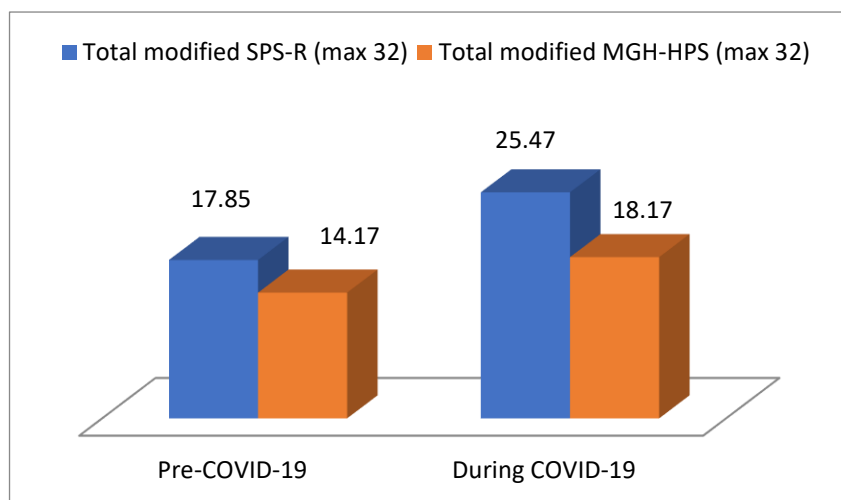


Figure 1. Total mean score of SPS-R and MGH-HPS over pre and during COVID-19 (Diagnosed sample)

Discussion:

In this study, we investigated the impact of COVID-19 pandemic and its related precautionary measures on the severity of symptoms of trichotillomania and skin picking disorders. Our main findings can be summarized as following: the severity of symptoms of skin picking disorder has significantly increased after the pandemic the frequency of urges toward hair pulling has significantly increased during the pandemic, although there was no significant change in the total score of severity of symptoms of hair-pulling disorder.

In our study, most statements subscales of the modified SPS-R have significantly increased post-COVID-19 compared to pre-COVID-19. Furthermore, there was a significant difference in the total modified SPS-R, the mean score has increased by 7.62 during COVID-19 ($t=6.42$, $p<0.001$). Our finding is in consistent with similar studies that reported a significant increase of the severity of symptoms of skin picking disorder during COVID-19 pandemic(11)(15). A study done by Alkhamees AA. et al, showed that during COVID-19 pandemic, nearly one-fourth of study group had experienced moderate to severe psychological impact and that is being female, students, working in medical field and existing mental disorder are all associated with high scores of depression, anxiety and stress(12). Negative affective states (i.e. anxiety, tension or boredom), as revealed by Snorrason I. et al, (16) play an important role prior to pathological skin picking in which nearly 76% of patients experience strong negative feelings (e.g., anxiety, anger, sadness) before picking their skin. One study showed no aggravations of skin picking behaviors during the period of the pandemic However, it is worth mentioning that the studied sample of the mentioned study had good social support during the pandemic while our study did not assess the degree of social support which might be a key factor(17).

Unlike skin picking disorder, severity of symptoms of trichotillomania showed no significant increase in the total modifies MGH-HPS, except for the frequency of urges which has significantly increased during the pandemic. This result is in alignment with other study and it is challenging to explain because of the clinical similarities between the two diseases. However, the severity of trichotillomania symptoms is more likely to get worse by social exposure(18) which indeed has decreased during COVID-19 lockdown. The only statement subscale that showed significant increase is the frequency of urge, which may be explained by the poor quality of sleep during COVID-19 pandemic(19,20).

Although this study has a number of limitations, it suggests that anticipated psychological effects of a pandemic are, in fact, having a significant effect on the severity of symptoms for patients with skin picking disorder. Firstly, the study had a small sample size besides that a lot of participants were excluded from the study due to lack of formal diagnosis, but this gives an idea that these conditions are under-diagnosed, which was pointed out by many other studies(21,22). Hence, these conditions require more attention which we are hopeful for. Secondly, data was collected through an online survey and was not designed to be epidemiologically representative of a particular population, it contained a relatively higher number of females than males, skin picking and hair pulling disorders are also known to affect females more than males(23–25).

Conclusion:

Throughout COVID-19 pandemic in Saudi Arabia, results revealed clearly the significant negative psychological impact of it on population, specifically on those with obsessive-compulsive disorders or other mental diseases. We were able to find clearly the significant increase on the total skin picking scale score including all other subscales like social avoidance. For hair pulling scales, there was only a significant difference in the frequency of urges. Our study gives a clue that both diseases are under-diagnosed, so we suggest conducting community screening programs in order to diagnose and manage such cases. We suggest providing more attention and further protective psychological strategies to the patients during such stressful situations that go parallel with the physical health care plans

Statement of Ethics

This study protocol was reviewed and the need for approval was waived by Local Ethical Committee, Qassim University. Written informed consent was obtained from the patient for publication of the details of their medical case and any accompanying images

Conflict of Interest

No conflict of interest.

Funding Sources

No funding source.

Data Availability Statement

Available with author on request

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