CORRELATION OF PERCEIVED STRESS WITH SYMPTOM SEVERITY AND QUALITY OF LIFE IN TRICHOTILLOMANIA PATIENTS

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ABSTRACT

Trichotillomania (TTM) is characterized by recurrent pulling out of one's hair resulting in noticeable hair loss. This study aims to evaluate the correlation of TTM symptom severity with the perceived stress along with the possible link between the quality of life and severity of Trichotillomania symptoms.

MATERIALS AND METHODS

This prospective study was conducted in Tripura Medical College since August 2011. Subjects were incorporated into the study from outpatient and inpatient clinics, referrals from clinicians of other specialty and different community outreach program. Total number of samples were n=22. Equal number of normal controls either from the accompanying persons of the patient or general population who consented to participate in the study. The controls were matched with the cases. Inclusion criteria: Patients who fulfil diagnostic criteria of trichotillomania. All trichotillomania patients irrespective of age and marital status were incorporated. Exclusion criteria: Trichotillomania patients having other dermatological diseases. Trichotillomania patients with psychosis and cognitive impairment or suffering from any organic illness.

TOOLS USED

Trichotillomania diagnostic interview revised for diagnosis of TTM, NIMH Trichotillomania Scales or Trichotillomania Symptom Severity Scale (NIMH-TSS) was used for assessment of symptom severity. Perceived Stress Scale by Sheldon Cohen and WHO QOL-BREF was used for quality of life assessment.

RESULT

The NIHM-TSS score is negatively correlated with perceived stress score (r=-0.19548). That means perceived stress is unrelated to symptoms severity of TTM. This is contrary to previous studies on this regard. In quality of life assessment, physical health (Domain 1) is negatively correlated with symptom severity of TTM (r=-0.38916). On the other hand, in psychological health (Domain 2), social relationship (Domain 3) and environmental health (Domain 4) all three parameters are positively correlated with severity of symptoms in TTM.

CONCLUSION

The perceived stress is not related to symptom severity of Trichotillomania. More the perceived stress in trichotillomania patient, poor is the quality of life. More severe the symptom, poor is the physical quality of life. Psychological health, social relationship and environmental health all three parameters are positively correlated with severity of symptoms in TTM.

KEYWORDS

Hair Pulling, Trichotillomania, Impulse Control Disorder, Obsessive-Compulsive Spectrum Disorders, Hair-Loss, Quality of Life, Comorbidity.

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INTRODUCTION

The word Trichotillomania (TTM) was coined by French dermatologist Francois Hallopeau. It is characterized by recurrent pulling out of one's hair resulting in noticeable hair loss.

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There is sense of distress immediately before pulling out the hair or attempting to resist the behaviour.[1] There is pleasure, gratification or relief during pulling out the hair. Chronic TTM is hallmarked by complex behaviours before, during and after epilation. The urge to pull customarily develops during solitary activity—relaxing, reading and watching television, for example. Alternately, it arises in the context of anxiety or frustration related to external stress. Some patients state that antecedent tingling or burning sensations in the scalp compel them to seek relief by pulling.

Trichotillomania was first recognized in the DSM-III-R. DSM-III-R classified trichotillomania as an impulse-control disorder, chiefly because of the typical cycle of mounting tension, the inability to resist the urge to pull hair and the release and gratification afterwards.

DSM-IV then specifically excluded hair pulling secondary to medical conditions or other psychiatric disorders from the diagnosis. The criterion of significant distress or impairment in social, occupational or other important areas of functioning was added and was subsequently maintained in DSM-IV-TR in obsessive compulsive spectrum disorder whereas the fifth Edition (DSM-V), places trichotillomania in the category of obsessive-compulsive and related disorders. ICD-10 classifies trichotillomania under habit and impulse disorders, as a condition—characterized by noticeable hair loss due to a recurrent failure to resist impulses to pull out hairs, preceded by mounting tension and followed by a sense of relief or gratification. The diagnosis should not be made if—pre-existing inflammation of the skin exists or if hair pulling occurs in response to a delusion or hallucination. Stereotyped movement disorder with hair-plucking (F98.4) is also specifically excluded. This problem brings clinically significant distress or impairment in social, occupational areas of life.[2]

Perceived stress means an individual's stress level, which depends on the way he/she perceives his/her present stressors. Stress is the mental, physical and emotional reactions that one experiences as a result of demands of one's life.

The present study aims to evaluate the correlation of TTM symptom severity with the perceived stress along with the possible link between the quality of life and severity of Trichotillomania symptoms.

MATERIALS AND METHODS

Sample selection: This prospective study was conducted in Tripura Medical College since August 2011. Subjects were incorporated into the study from outpatient and inpatient clinics, referrals from clinicians of other specialty and different community outreach program. Total number of samples were n=22. Equal number of normal controls either from the accompanying persons of the patient or general populations who consented to participate in the study. The controls were matched with the cases.

Inclusion Criteria

1. Patients who fulfil diagnostic criteria of trichotillomania (According to Trichotillomania Diagnostic Interview-Revised criteria).
2. Trichotillomania patients irrespective of age and marital status.

Exclusion Criteria

1. Trichotillomania patients having other dermatological diseases.
2. Trichotillomania patients with psychosis and cognitive impairment.
3. Patients suffering from any organic illness.

Tools Used in Assessment

1. **Socio-Demographic Variables**: A semi-structured interview schedule focused on personal characteristics-age, education, type of family, socioeconomic status was used which was prepared by Department of Psychiatry and Dermatology Tripura Medical College, Agartala.
2. **Diagnostic Questionnaire**: Trichotillomania Diagnostic Interview was done objectively trichotillomania depending on the DSM-IV TR criteria.[1]
3. **Phenotype Assessment**: The NIMH Trichotillomania Scales or Trichotillomania Symptom Severity Scale (NIMH-TSS) or Trichotillomania "Global" Scale. This is a globally validated scale developed by National Institute of Mental Health for checking the severity of trichotillomania.[3,4]
4. **Perceived Stress Scale.[5] -** Developed by Sheldon Cohen (1983).
5. **WHO QOL-BREF.[6]** was used for quality of life assessment.

Clinical Assessment

As most of the patients of trichotillomania presents with hair loss, they tend to present mostly in Dermatology OPD. The Dermatologist determined the dermatological comorbidities to rule out the presence of other dermatological conditions. Then diagnostic assessments were conducted by psychiatrists experienced with clinical evaluations of OCD. Clinicians used Trichotillomania Diagnostic Interview Revised Criteria as a semi-structured format for the evaluation of psychopathology. The symptom severity was measured by the NIMH Trichotillomania Scales or Trichotillomania Symptom Severity Scale (NIMH-TSS) or Trichotillomania—Global Scale for subjects who had received psychiatric treatment, consent was obtained to review relevant medical records, if such information was deemed useful for making diagnoses.

Diagnostic Consensus Procedure

Cases were reviewed independently by two expert diagnosticians who reviewed all case materials and completed a Diagnostic Assignment Checklist form. Any disagreements between the investigators were resolved before the case materials was edited and sent for data entry.

Results and Interpretation

The data were analysed using the Statistical Package for Social Science version 18.0 (IBM Corp., Somers, NY), and figures were plotted in GraphPad Prism version 5.0 (GraphPad Inc., San Diego, CA)

Data Analysis for Patients

Variables	TTM Cases		Control	
	No. of Samples N=22	%	No. of Samples N=22	%
Sex	Male:6 Female:16	27.28 72.72	Male:4 Female:18	18.19 81.81
Age (Years)	28.69±10.13		34.91±11.37	28.45
<20	4	18.19	2	9.09
20-45	16	72.72	15	68.19
>45	2	9.09	5	22.72

Education Level				
Below Secondary	1	4.55	3	13.64
Secondary	3	13.63	14	63.64
Higher Secondary	4	18.19	4	18.19
Graduate	9	40.90	1	4.54
Post Graduate	5	22.73	0	0
Marital Status				
Unmarried	8	36.37	2	9.09
Married	13	59.09	20	90.91
Separated	1	4.54	0	0

Table 1: Socio-demographic Characteristics

Socio-Demographic Variables

The socio-demographic profile of the responders is given in Table 1.

Age and Gender

The mean age ±SD of the cases (TTM patients) was 28.69±10.13 years and the subjects in control group is 34.91±11.37. There were 16 (72.72%) female TTM patients and 18 female control participants participated in the study.

Educational Level

Among TTM patients, 1 (4.55%) responders are educated up to below secondary level, 3 (13.63%) responders are educated up to secondary level, 4 (18.19%) are educated up to higher secondary level and 9 (40.90%) responders are graduate. This can be interpreted that TTM are more diagnosed in educated patients. Probably, this is due to their awareness of the disease.

Marital Status

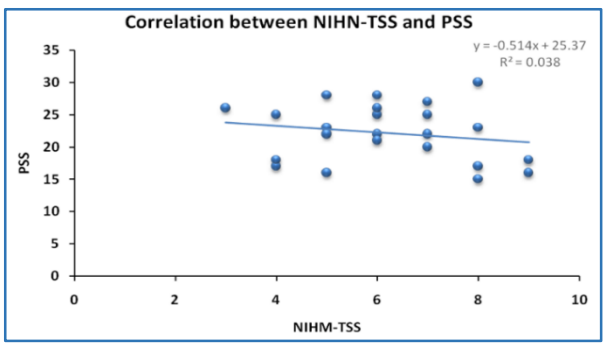
In our study sample there were 8 (36.37%) unmarried, 13 (59.09%) married and 1 (4.54%) separated responders. It shows that most of the responders are married.

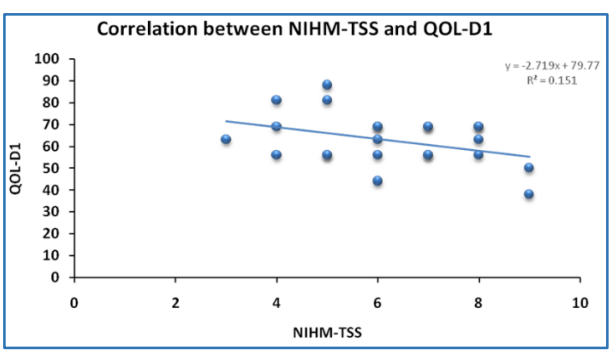
Correlation of TTM Symptom Severity with Perceived Stress and Quality of Life

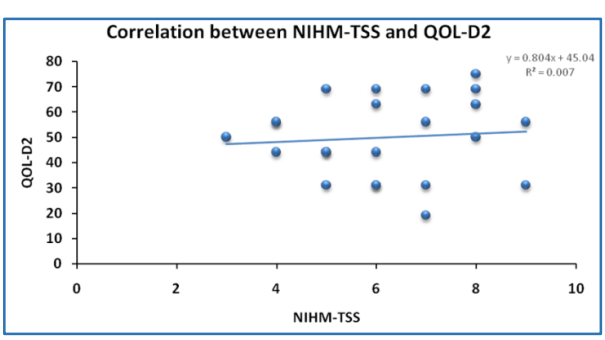
X–axis	Y-axis	Correlation Coefficient (r)
NIHM-TSS	PSS	- 0.19548
NIHM-TSS	QOL-D1	-0.38916
NIHM-TSS	QOL-D2	0.08562
NIHM-TSS	QOL-D3	0.22688
NIHM-TSS	QOL-D4	0.1674

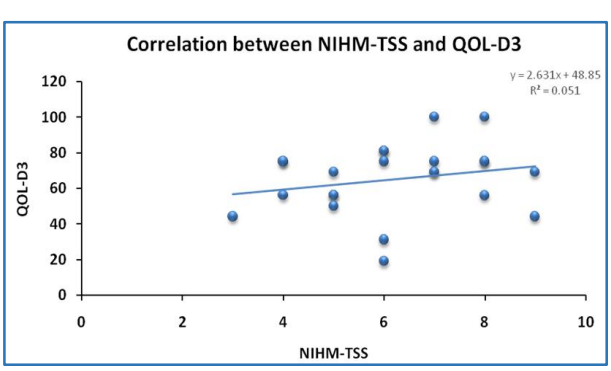
The NIHM-TSS score is negatively correlated with perceived stress score (r=-0.19548). That means perceived stress is unrelated to symptom severity of TTM. This is contrary to previous studies on this regard.

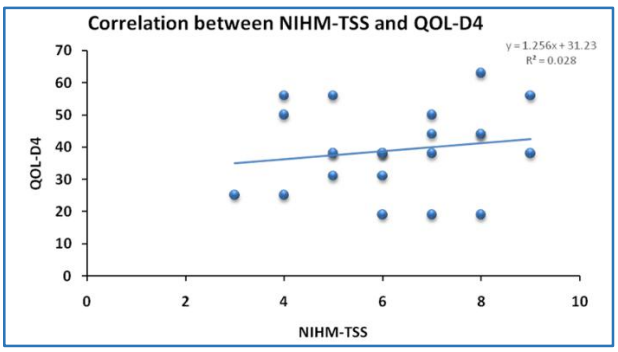
In quality of life assessment, physical health (Domain 1) is negatively correlated with symptom severity of TTM (r=-0.38916). On the other hand, in psychological health (Domain 2), social relationship (Domain 3) and environmental health (Domain 4), all three parameters are positively correlated with severity of symptoms in TTM.







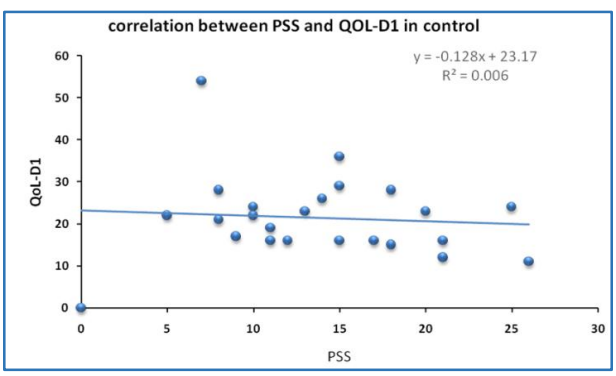


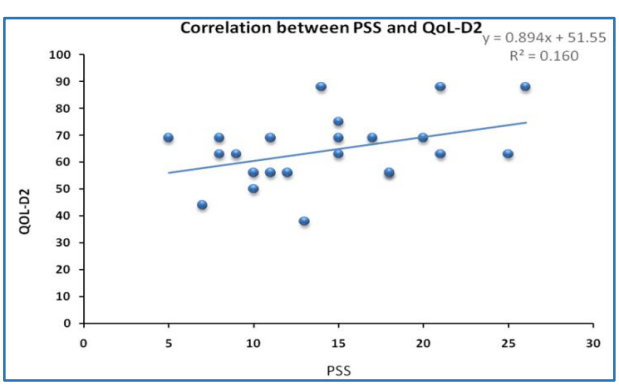


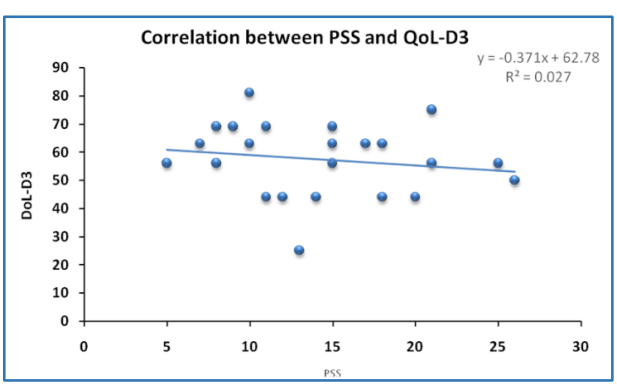
Relationship between the levels of QOL-D1, QOL-D2, QOL-D3, QOL-D4, PSS and NIHM-TSS. *r* and *p*: coefficient and significance level respectively, according to the Pearson correlation test.

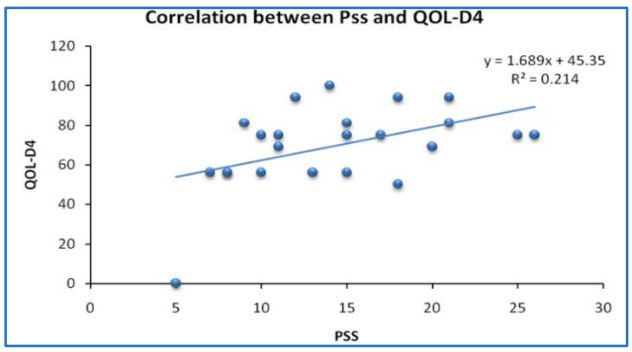
Analysis for Control Sets

X-axis	Y-axis	Correlation Coefficient (r)
PSS	QOL-D1	-0.34746
PSS	QOL-D2	0.3762
PSS	QOL-D3	-0.16696
PSS	QOL-D4	0.4633









Relationship between the levels of QOL-D1, QOL-D2, QOL-D3, QOL-D4 and PSS. *r* and *p*: coefficient and significance level respectively, according to the Pearson correlation test.

CONCLUSION

The Following Conclusions can be drawn from our study:

1. The perceived stress is not related to symptom severity of trichotillomania.
2. More the perceived stress in trichotillomania patient, poor is the quality of life.
3. More severe the symptom, poor is the physical quality of life.
4. Psychological health, social relationship and environmental health all three parameters are positively correlated with severity of symptoms in TTM.

Limitation of the Study

As the number of cases is less, the result may not be generalised to all TTM patients.

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