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CYBERCHONDRIA AND HEALTH ANXIETY AMONG MEDICAL STUDENTS AND PARAMEDICAL STAFF DURING COVID-19 PANDEMIC

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ABSTRACT

Background: The Internet has become an important tool in day to day life. Cyberchondria (compucondria) can be a vulnerability factor for developing anxiety in a pandemic situation, particularly when the Internet is flooded with a lot of misinformation. Medical & paramedical staff,despite their knowledge tend to obtain information from online resources, so we decided to evaluate Cyberchondria construct & health anxiety amongst them during covid-19 pandemic.

Aim : The present study aimed to evaluate, compare & co-relate the cyberchondria construct & health anxiety among medical students and paramedical staff during Covid-19 pandemic.

Methods: 50 consecutive medical students & 50 consecutive paramedical staff fulfilling the inclusion criteria were evaluated. Socio-demographic and clinical data were gathered using a semi-structured pro-forma. Assessments were further done using Cyberchondria severity scale-15(CSS-15) & Coronavirus anxiety scale(CAS) .Descriptive statistics in the form of numbers and percentages were calculated. Chi-square test was used to compare the groups (medical students and paramedical staff) and their correlates.

Results: Coronavirus related anxiety was found to be significantly higher in paramedical staff (16%) compared to medical students (4%) with p-0.0455. Amongst Cyberchondria constructs, medical students and paramedical staff were found to be more affected by Reassurance(70%) & excessiveness construct(66%),compared to compulsion(46%) & distress(44%).Only 3% were found to be affected by mistrust of a medical professional.

Conclusion: If medical students and paramedical staff have anxiety related to covid and are affected by online search, impact it might have on general population be more. Lesser availability of literature regarding cyberchondria needs to be addressed.Further research study among wider group of people would help in assessing the nature and extent of cyberchondria.

KEYWORDS : Covid-19, Cyberchondria, Medical students, paramedical staff

INTRODUCTION:

Coronavirus (SARS-CoV-2) COVID-19 pandemic is causing considerable psychological and physical stress and high morbidity and mortality rates worldwide since its outbreak in December 2019.[1-4]

Cyberchondria has been described relatively recently as behaviour characterized by excessive online searching for medical information associated with increasing levels of health anxiety. [5-6] Anxiety and insecurity can trigger a compulsive search for information on social media that will further intensify anxiety, creating a vicious cycle of cyberchondria that is difficult to stop[7]

Excessive online searching for health information can itself represent a safety-seeking behaviour (e.g., researching whether symptoms are a sign of a viral infection) . As a result of potentially disturbing information, it can trigger or reinforce further safety-seeking behaviour.[8-9]

Recent research has found that, during pandemics such as COVID-19, cyberchondria affects people's threat appraisal and motivates people to adopt recommended health measures more promptly .[10] Conversely, it can be a risk factor for overly heightened concern, catastrophizing and social distancing, which all have a pathological influence on mental health. [11]

MATERIALS AND METHODS:

The study performed was cross sectional.50 Medical students and 50 paramedical staff of our institute were included in the study after a written informed consent. Inclusion criteria included people above age of 18yrs, willing to give consent for the study.Exclusion criteria included people not willing to give consent.The study was completed over a period of 8 weeks. A semi structured pro-forma consisting of demographic details was initially filled up by all the participants.

The participants were assessed using Cyberchondria severity scale-15(CSS-15). The questionnaire is self administered containing 5 constructs, i.e. Compulsion, distress, excessiveness, reassurance & mistrust of medical professional. Each construct is represented by three questions.The score range per construct is 0-12. Cyberchondria severity scale-15(CSS-15) with 15 questions was developed and validated by Barke et al. in 2016, with the internal consistency of α = 0.93 and split-half reliability α = 0.95.[12]

All participants were also assessed by Coronavirus anxiety scale (CAS). The questionnaire included 5 items, with each item being rated from 0-4 based on experience in last 2 weeks. Total score of >=9 represents probable dysfunctional Coronavirus related anxiety.

All the data collected was entered into an excel sheet and a master chart was prepared. Descriptive statistics in the form of numbers and percentages were calculated. Chi-square test was used to compare the groups (medical students and paramedical staff) and P < 0.05 was considered as statistically significant.

RESULTS

Table 1: Socio demographic correlates of Medical students and paramedical staff

Sr. No.	Socio demographic parameter	Group A-Medical students-50	Group B-Paramedical staff-50	Total-100
1.	Age			
	<30 years	46 (92%)	40 (80%)	86(86%)
	>30 years	04 (08%)	10 (20%)	14(14%)
2.	Sex			
	Male	30(60%)	08 (16%)	38(38%)
	Female	20(40%)	42(84%)	62(62%)
3.	Marital status			
	Married	07(14%)	17(34%)	24(24%)

4.	Unmarried	43(86%)	33(66%)	76(76%)
	Family type			
	Nuclear	46(92%)	34(68%)	80(80%)
	Joint	04(08%)	16(32%)	20(20%)
5.	Domicile			
	Rural	02(04%)	07(14%)	09(09%)
	Urban	48(96%)	43(86%)	91(91%)

Our sample consisted of 50 Medical student & 50 Paramedical staff. Majority were of <30 years, Group A had 46 out of 50 and Group B had 40 out of 50 participants who were of <30 years of age. Total there were 62 female and 38 male, with preponderance of males in Group A(60%) and females in Group B(84%).Most were unmarried (76%), had urban domicile(91%) and belonged to nuclear family(80%).

Table 2: Coronavirus related anxiety in Medical students and paramedical staff

Coronavirus anxiety scale score (CAS- score)	Group A-Medical students-50	Group B-Paramedical staff-50	χ2	P
<9	48(96%)	42(84%)	4	0.0455 (significant)
>=9	02(04%)	08(16%)		

Coronavirus related anxiety was measured using coronavirus anxiety scale. A CAS total score >=9 indicates probable dysfunctional coronavirus related anxiety.

As depicted in Table 2 coronavirus related anxiety was found only in 4% of medical students, compared to 16% in paramedical staff & this difference was found to be statistically significant(p=0.0455).

Mistrust of Medical Professional" construct of cyberchondria severity scale (CSS-15) has different scoring pattern compared to other constructs. Here score of 0 indicates severely affected, 1-6 indicates moderately affected whereas 7-12 indicates not affected.

Most of Medical students and paramedical staff were not affected & showed trust in Medical Professionals.

Table 3: Distribution of % of medical students and paramedical staff according to various constructs of Cyberchondria severity scale (CSS-15) and subgroup scores

Score	0	1-6	7-12	χ2	P
1.Excessiveness construct				4.8366	0.089073
Group A- Medical students-50	20(40%)	20(40%)	10(20%)		
Group B-Paramedical staff-50	14(28%)	16(32%)	20(40%)		
2.Reassurance construct				3.8978	0.142431
Group A- Medical students-50	18(36%)	20(40%)	12(24%)		
Group B-Paramedical staff-50	12(24%)	17(34%)	21(42%)		
3.Compulsion construct				0.6167	0.734655
Group A- Medical students-50	28(56%)	20(40%)	02(04%)		
Group B-Paramedical staff-50	26(52%)	23(46%)	01(02%)		
4.Distress construct				1.3857	0.500145
Group A- Medical students-50	30(60%)	19(38%)	01(02%)		
Group B-Paramedical staff-50	26(52%)	21(42%)	03(06%)		

The "Excessiveness" construct measures attributes related to the repetition and spending unnecessary time researching the same symptom and health condition on the internet. Here 40% of medical students and 32% of paramedical staff were moderately affected, whereas 20% of medical students and 40% of paramedical staff was found to be significantly affected.

The "Reassurance" construct measures attributes related to anxiety, manifested in the need for reassurance from qualified medical professional. In this construct, 40% of medical students and 34% of paramedical staff were moderately affected, whereas 24% of medical students and 42% of paramedical staff was found to be significantly affected, total of 30% were found to be not affected.

The "Compulsion" construct measures attributes related to searching symptoms online and interrupting the time to be used for work related and leisure activities. 40% of medical students and 46% of paramedical staff were moderately affected, only 4% of medical students & 2% paramedical staff was found to be significantly affected, majority of 54% in total were not affected.

The "Distress" construct measures attributes related to panic, anxiety and disturbed sleep. 56% in total were not found to be affected. 38% of medical students and 42% of paramedical staff were moderately affected and only 2% of medical students and 6% of paramedical staff were found to be severely affected.

Overall, in all Cyberchondria constructs no statistically significant difference was found between medical students and paramedical staff.However paramedical staff was found to be slightly more affected by reassurance and excessiveness construct in comparison to medical students.

DISCUSSION :
Our study included 50 medical students and 50 paramedical staff amongst which total of 62 were female. Our study assessed coronavirus related anxiety and prevalence of various cyberchondria constructs amongst medical students and paramedical staff and comparison between two groups.

In our study 86% were found to be of less than 30 years. 76% were unmarried and 91% belonged to urban domicile. Coronavirus related anxiety was found to be significantly higher in paramedical staff (16%) compared to medical students (4%) with p - 0.0455. This indicates need for more awareness, education & training about anxiety & what to do when one has such symptoms & when to take professional help in paramedical staff as compared to medical students.

Our data showed prevalence and severity of various cyberchondria construct among medical students and paramedical staff to be similar to studies on nonmedical population. This concluded medical students are no exception, and expressing health concerns is common irrespective of profession.

In our study medical students and paramedical staff were found to be more affected by reassurance(70%) & excessiveness construct(66%), compared to compulsion(46%) & distress(44%) in total.Only 3% were found to be affected by mistrust of a medical professional. Amongst them 20% of medical students and 40% of paramedical staff was found to be significantly affected by reassurance construct, 24% of medical students and 42% of paramedical staff was found to be significantly affected by excessiveness construct compared to only 4% of medical students & 2% paramedical staff who were found to be significantly affected by compulsion construct & 2% of medical students and 6% of paramedical staff were found to be severely affected by distress construct.

The study done on computer engineering students in Pune, India , by Dagar et al. also revealed that excessiveness and reassurance constructs were more affected among the CSS subscales.[13]

LIMITATIONS:
Our study is cross-sectional, so it is difficult to establish causal association of internet usage with growing severity of cyberchondria. This study has been conducted in a small population, a larger study scale would lead to more accurate measures.

CONCLUSION :
High level of coronavirus related anxiety was found in paramedical staff compared to medical students, also in many constructs of cyberchondria paramedical staff was found to be slightly more affected than medical students. This indicates need for proper education, awareness, as well as availability of multidisciplinary Mental Health Teams for counselling and pharmacological management as and when required. [14] If medical students and paramedical staff have anxiety related to covid and are affected by online search, impact it might have on general population be more.

Lesser availability of literature regarding cyberchondria needs to be addressed.Further research study among wider group of people would help in assessing the nature and extent of cyberchondria.

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Conflicts Of Interest: There are no conflicts of interest

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