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**Original Research Article**

# A comparative study to assess hypochondrial attitude among nursing and other department students of Eternal University Baru Sahib, Himachal Pradesh

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## ABSTRACT

**Background:** Hypochondrial attitude is a cognitive and thought process in which person lives with the fear that they have some kind of serious illness but undiagnosed condition. The aim of this study was to examine the sample of students in order to assess and compare the degree of hypochondrial attitude among nursing and other department student.
**Methods:** Total sample size was 310, among them 155 nursing student and 155 other department students were recruited through a convenient sampling technique. Online survey was employed using socio-demographical questionnaire and Whiteley index.
**Results:** Among all participants, hypochondrial attitude prevalence is higher among nursing students then other department students. In the present study, mild (55% in nursing students while 65% in other department students), moderate (43% in nursing students while 34% in other department students) and severe (2% in nursing student and 1% in other department students) hypochondrial attitude was assessed. Furthermore, nursing students are significantly associated with hypochondrial attitude. The highly significant association was assessed among age (0.000), academic year (0.000), diagnose with serious illness (0.000) and the significant once was the number of sibling (0.13), personality (0.015), visit to physician (0.005) and fear of getting covid 19 during pandemic (0.002), there was no significant association between demographic variable and hypochondrial attitude in other department students i.e., $p<0.01$.
**Conclusions:** The conclusion of this study shows that there is higher prevalence of hypochondrial attitude among nursing students. At last it was suggested that counseling and support services are necessary for nursing students.

**Keywords:** Hypochondrial attitude, Nursing students, Socio-demographic variables

## INTRODUCTION

Hypochondriacal attitude is described as the preoccupation of thoughts with the possibility of having health related anxiety. Earlier in 1960s one uncontrolled study was conducted which indicated that a prevalence of health anxiety was between 70% and 80% in medical students[1] It is associated with cognitions not related to illness. Person with hypochondriacal attitude suffer from fear to be ill from the medical condition[2] It is believed that medical student develop fear of illness related to the disease which they are studying.[3] Research has indicated that medical student experience psychological pressure due to new clinical experience.[4]But later studies pronounced that this explained phenomenon is less prevalent in medical student as compare to non – medical students.[5] In recent studies it is highlighted that health anxiety is greater in other profession students.[6] Due to modernization, these days

people search and read about various articles related to health and illness and correlate their actual sign and symptoms with false belief of having severe illness . But in medical students this kind of attitude subside by the time when students practice and initialize the detailing about particular disease condition and correlate its actual sign and symptoms with particular disease condition.[7] This kind of attitude is modelled after they saw patient in their clinical practice .[7] On the other hand, professionals of different courses do not study in detail about any particular disease condition so, they are at risk of developing hypochondrial attitude and health related anxiety.[8]

## METHODS

### *Research design and participants*

As a comparative survey, the present study was conducted in the month of January 2022 on nursing and other department undergraduate students of Eternal University, Baru Sahib, H.P. The study aimed to determine the index of Hypochondrial attitude among nursing and other department undergraduate students. A total of 310 students were selected through convenient sampling technique out of which 155 students were from nursing department and 155 students were from other undergraduate departments of Eternal university. Undergraduate Students of Eternal university who gave their consent for participation were eligible in this study while participants who were above 24 years of age and who have sent incomplete questionnaire were excluded.

### *Measuring tools*

Data was collected by a structured questionnaire, which had two sections. The first section include demographic characteristics (age, gender, religion, education, no. of family members, occupation of father and mother ,monthly family income, residence, field of study, academic year, personality and any diagnosis of serious illness) and the second section contained 14 item Standardized Whiteley index frequently used by researchers to measure health related anxiety wherein , the items are responded on a 5 point likert scale (1="no", 2="a little" , 3="some" , 4="often", 5="severe"). The scores were considered between the range of 14-27, 28-48 and 49-70 for mild, moderate and severe degree of hypochondrial attitude, respectively. Total reliability of 14 item WI was 0.88 using Cronbach's alpha coefficient indicating good internal consistency. Some studies revealed the interclass correlation of WI was calculated as 0.78 and high-test retest reliability of the instrument.

### *Sample size calculation*

Sample size estimation was done on the basis of the results of the previous study results p=28% confidence interval=95%, the sample size is calculated by using the formula;

$$n=P(100\%-P)/(SE)^2$$

Where n=sample size; N=total population; P=prevalence (28%); SE=standard deviation (2.55%), the calculated sample size was 310.155 samples were from nursing department and 155 were from other department. Therefore, data was collected till sample size met. Participants were ensured about the confidentiality of their data and their right to access study findings. In addition, they were ensured about anonymzed them by name and institute. Electronic written consents were taken from each participants before they answered for the online questionnaire.

### *Data collections*

For the data collection, first researcher referred to the various undergraduate departments of the Eternal University and after obtaining permission from the head of various departments, the link to an online Google form was provided to undergraduate students. The online survey was done in the month of February 2022.

### *Data analysis*

Descriptive and inferential data analysis was performed through Statistical Package for the Social Sciences (SPSS Inc.). Data was analyzed in frequency, percentage distribution of demographic variables and degree of hypochondrial attitude. Chi-square and p value were employed to measure the association of the socio demographic variables with the degree of Hypochondrial attitude. Mean, mode, median and standard deviation were also employed to measure the degree of hypochondrial attitude.

## RESULTS

The total sample size is 310 among which 155 are the nursing students and 155 are the other department students. Approximately that majority of the students belongs to the age group 19-21 years i.e., 62.6% in nursing whereas in other department 63.9%. Majority of the students belongs to Hindu religion i.e., 85.2% in nursing and 69% in other department. 100% of students were under graduates in nursing and another department. Majority of the students having >4 family members i.e., 53.5% in nursing and 55.5% in another department. Majority of students belongs to nuclear family i.e.,73.5% in nursing and 68.4% in another department. Majority of population having monthly family income >40,000 i.e., 33.5%. Majority of population resides under rural area i.e., 58.1%. Majority of population having ambivert personality i.e., 46.5% in nursing and 43.2% in other department students respectively (Table 1). Results for assessing the hypochondrial attitude among the students, shows that there was a highly significant association of age, academic year, diagnosed with serious illness with the hypochondrial attitude.

**Table 1: Frequency and percentage distribution of socio demographic profile of the study subject (n=310).**

| Variables | Nursing students | | Other department students | |
|---|---|---|---|---|
| | N | % | N | % |
| **Age (years)** | | | | |
| 16-18 | 38 | 24.5 | 34 | 21.9 |
| 19-21 | 97 | 62.6 | 99 | 63.9 |
| 22-24 | 20 | 12.9 | 19 | 12.3 |
| 25 and above | 0 | 0 | 3 | 1.9 |
| **Religion** | | | | |
| Hinduism | 132 | 85.2 | 107 | 69 |
| Muslim | 6 | 3.9 | 4 | 2.6 |
| Sikhism | 15 | 9.7 | 42 | 27.1 |
| Christianity | 1 | 0.6 | 1 | .6 |
| Other | 1 | 0.6 | 1 | .6 |
| **Education** | | | | |
| Undergraduate | 155 | 100 | 155 | 100 |
| Graduate | 0 | 0 | 0 | 0 |
| **No. of family members** | | | | |
| 2-4 | 72 | 46.5 | 69 | 44.5 |
| >4 | 83 | 53.5 | 86 | 55.5 |
| **Type of family** | | | | |
| Nuclear | 114 | 73.5 | 106 | 68.4 |
| Joint | 41 | 26.5 | 49 | 31.6 |
| **Occupation of father** | | | | |
| Unemployed | 17 | 11.0 | 44 | 28.4 |
| Private job | 44 | 28.4 | 30 | 19.4 |
| Government job | 68 | 43.9 | 43 | 27.7 |
| Business | 26 | 16.8 | 38 | 24.5 |
| **Occupation of mother** | | | | |
| Government job | 14 | 9.0 | 10 | 6.5 |
| Private job | 5 | 3.0 | 7 | 4.5 |
| Home maker | 136 | 87.7 | 138 | 89 |
| **Monthly family income** | | | | |
| <Rs.10000 | 29 | 18.7 | 36 | 23.2 |
| Rs.10001-20000 | 35 | 22.6 | 37 | 23.9 |
| Rs.20001-400000 | 39 | 25.2 | 43 | 27.7 |
| >40000 | 52 | 33.5 | 39 | 25.2 |
| **No. of siblings** | | | | |
| 1 | 70 | 45.2 | 63 | 40 |
| 2 | 54 | 34.8 | 57 | 36.8 |
| >2 | 31 | 20 | 36 | 23.2 |
| **Residence** | | | | |
| Urban | 44 | 28.4 | 54 | 34.8 |
| Rural | 90 | 58.1 | 75 | 48.4 |
| Sub-urban | 21 | 13.5 | 26 | 16.8 |
| **Field of study** | | | | |
| Related to medicine | 155 | 100 | O | 0 |
| Non-related to medicine | 0 | 0 | 155 | 100 |
| **Parents job** | | | | |
| Related to medicine | 13 | 8.4 | 0 | 0 |
| Non-related to medicine | 142 | 91.6 | 155 | 100 |
| **Academic year** | | | | |
| 1st | 38 | 24.5 | 39 | 25.2 |
| 2nd | 50 | 32.3 | 49 | 31.6 |
| 3rd | 18 | 11.6 | 34 | 21.9 |
| 4th | 49 | 31.6 | 33 | 21.3 |

Continued.

| Variables | Nursing students | | Other department students | |
|---|---|---|---|---|
| | N | % | N | % |
| **Personality** | | | | |
| Introvert (Quiet, reserved, shy,silent, calm) | 44 | 28.4 | 42 | 27.1 |
| Ambivert (need social and alone time, good sense of trust, listener and talker) | 72 | 46.5 | 67 | 43.2 |
| Extrovert (talkative, active, assertive, sociable) | 39 | 25.2 | 46 | 29.7 |
| **Diagnosed with serious illness** | | | | |
| Yes | 4 | 2.6 | 11 | 7.1 |
| No | 151 | 97.4 | 144 | 92.9 |
| **Visit to physician in past one year** | | | | |
| Yes | 71 | 45.8 | 29 | 18.7 |
| No | 84 | 54.2 | 126 | 81.3 |
| **Fear of getting covid -19 virus during pandemic** | | | | |
| Yes | 69 | 44.5 | 70 | 45.2 |
| No | 86 | 55.5 | 85 | 54.8 |

**Table 2: Association of socio demographic variable with hypochondrial attitude of nursing students (n=155).**

| Variables | Chi-square | Df | P value |
|---|---|---|---|
| **Age** | 21.697 | 4 | 0.000** |
| **Religion** | 4.685 | 8 | 0.791 $^{NS}$ |
| **Education** | 1.967 | 2 | 0.374 $^{NS}$ |
| **No of family members** | 6.8 | 2 | 0.032 $^{NS}$ |
| **Type of family** | 3.375 | 2 | 0.185 $^{NS}$ |
| **Occupation of father** | 6.997 | 6 | 0.321 $^{NS}$ |
| **Occupation of mother** | 8.003 | 4 | 0.091 $^{NS}$ |
| **Monthly family income** | 4.154 | 6 | 0.656 $^{NS}$ |
| **No of siblings** | 12.621 | 4 | 0.013* |
| **Residence** | 3.856 | 4 | 0.426 $^{NS}$ |
| **Academic year** | 24.161 | 6 | 0.000** |
| **Personality** | 12.632 | 4 | 0.015* |
| **Diagnosed with serious illness** | 49.991 | 2 | 0.000** |
| **Visit to physician in past one year** | 10.546 | 2 | 0.005* |
| **Fear of getting COVID 19 virus during pandemic** | 12.447 | 2 | 0.002* |

*Indicates association is significant at p<0.05, **indicates association is significant at p<0.01, NS not significant association.

There was a significant association of no. of siblings, personality, visit to physician and fear of getting COVID 19 during pandemic with the hypochondrial attitude in nursing students (Table 2). The study shows that in nursing students mean, median, mode and standard deviation is 27.88, 26, 20 and 9.072. In other department students mean, median, mode and standard deviation is 25.51, 23, 19 and 8.286 (Table 3). According to the results of the present study, mild hypochondrial attitude is found 55% in nursing students while 65% in other department students. The moderate degree of hypochondrial attitude is found 43% in nursing students while 34% in other department students. Severe hypochondrial attitude was found in very less population i.e., 2% in nursing students and 1% in other department students.

## DISCUSSION

The present study confirms that hypochondrial attitude is more among the nursing students as compare to other department students. This is a comparative study to assess hypochondrial attitude among nursing and other department students. While there are no such studies conducted to compare and assess the hypochondrial attitude among nursing and other department students. There was a cross-sectional study conducted in Medical University of Silesia in Katowice, Poland. In that study it was found the widespread belief that medical students, are more anxious about health. But non-medical universities in Katowice, shows that the percentage showing susceptibility to hypochondria and nosophobia symptoms are high compare to the students of medicine.[9] But our present study shows that the medical students i.e., nursing students are more susceptible to hypochondrial attitude.

**Table 3: Association of socio demographic variable of other department students (n=155).**

| Variables | Chi square | Df | P value |
|---|---|---|---|
| **Age** | 19.61 | 12 | 0.075 NS |
| **Religion** | 6.281 | 16 | 0.985 NS |
| **No of family members** | 7.614 | 4 | 0.107 NS |
| **Type of family** | 2.350 | 4 | 0.672 NS |
| **Occupation of father** | 16.143 | 12 | 0.185 NS |
| **Occupation of mother** | 3.634 | 8 | 0.889 NS |
| **Monthly family income** | 13.293 | 12 | 0.348 NS |
| **No of siblings** | 5.254 | 8 | 0.730 NS |
| **Residence** | 11.921 | 8 | 0.155 NS |
| **Academic year** | 7.767 | 12 | 0.803 NS |
| **Personality** | 10.141 | 8 | 0.255 NS |
| **Diagnosed with serious illness** | 6.889 | 4 | 0.142 NS |
| **Visit to physician in past one year** | 3.783 | 4 | 0.436 NS |
| **Fear of getting COVID 19 virus during pandemic** | 10.454 | 4 | 0.033 NS |

*Indicates association is significant at p<0.05, **indicates association is significant at p<0.01, NS not significant association.

**Table 4: Mean, median, mode and standard deviation of Likert scale for assessing the degree of hypochondrial attitude among nursing and other department students (n=310).**

| Departments | Mean | Mode | Median | SD |
|---|---|---|---|---|
| **Nursing students** | 27.88 | 20 | 26.00 | 9.072 |
| **Other department students** | 25.51 | 19 | 23 | 8.286 |

**Table 5: Whitely Index to assess degree of hypochondrial attitude among nursing students (n=155).**

| Items | No (%) | Little (%) | Some (%) | Often (%) | Severe (%) |
|---|---|---|---|---|---|
| **Do you often worry about the possibility that you have got a serious illness?** | 42.6 | 25.8 | 23.2 | 7.1 | 1.3 |
| **Are you bothered by many aches and pains?** | 39.4 | 27.1 | 19.4 | 12.3 | 1.9 |
| **Do you find that you are often aware of various things happening in your body?** | 23.9 | 28.4 | 31.6 | 15.5 | 0.6 |
| **Do you worry a lot about your health?** | 16.8 | 27.1 | 25.2 | 21.9 | 9.0 |
| **Do you often have the symptoms of very serious illnesses?** | 75.5 | 16.8 | 4.5 | 1.9 | 1.3 |
| **If a disease is brought to your attention (through the radio, television, newspaper or someone you know) do you worry about getting it yourself?** | 26.5 | 40.6 | 27.7 | 3.9 | 1.3 |
| **If you feel ill and someone tells you that you are looking better, do you become annoyed?** | 39.4 | 31.6 | 18.1 | 8.4 | 2.6 |
| **Do you find that you are bothered by many different symptoms?** | 53.5 | 25.2 | 17.4 | 3.2 | 0.6 |
| **Is it easy for you to forget about yourself and think about all sorts of other things?** | 40.6 | 27.7 | 24.5 | 5.8 | 1.3 |
| **Is it hard for you to believe the doctor when he tells you there is nothing for you to worry about?** | 54.8 | 17.4 | 17.4 | 9.7 | 0.6 |
| **Do you get the feeling that people are not taking your illness seriously enough?** | 49.7 | 26.5 | 18.1 | 4.5 | 1.3 |
| **Do you think that you worry about your health more than most people?** | 44.5 | 26.5 | 21.3 | 5.8 | 1.9 |
| **Do you think there is something seriously wrong with your body?** | 69 | 14.2 | 11 | 3.9 | 1.9 |
| **Are you afraid of illness?** | 34.2 | 27.7 | 27.7 | 6.5 | 4.5 |

**Table 6: Whitely Index to assess degree of hypochondrial attitude among other department students (n=155).**

| Items | No (%) | Little (%) | Some (%) | Often (%) | Severe (%) |
|---|---|---|---|---|---|
| **Do you often worry about the possibility that you have got a serious illness?** | 53.5 | 29 | 12.3 | 4.5 | 0.6 |
| **Are you bothered by many aches and pains?** | 51 | 21.9 | 18.1 | 8.4 | 0.6 |
| **Do you find that you are often aware of various things happening in your body?** | 36.1 | 30.3 | 22.6 | 9.7 | 1.3 |
| **Do you worry a lot about your health?** | 27.1 | 31.6 | 16.8 | 17.4 | 7.1 |
| **Do you often have the symptoms of very serious illnesses?** | 81.9 | 9.7 | 3.9 | 3.2 | 1.3 |
| **If a disease is brought to your attention (through the radio, television, newspaper or someone you know) do you worry about getting it yourself?** | 39.4 | 34.2 | 16.8 | 6.5 | 3.2 |
| **If you feel ill and someone tells you that you are looking better, do you become annoyed?** | 49 | 28.4 | 12.3 | 7.1 | 3.2 |
| **Do you find that you are bothered by many different symptoms?** | 67.7 | 21.3 | 7.7 | 1.9 | 1.3 |
| **Is it easy for you to forget about yourself and think about all sorts of other things?** | 49.7 | 24.5 | 14.2 | 9.0 | 2.6 |
| **Is it hard for you to believe the doctor when he tells you there is nothing for you to worry about?** | 62.6 | 18.1 | 9.7 | 7.1 | 2.6 |
| **Do you get the feeling that people are not taking your illness seriously enough?** | 63.9 | 17.4 | 10.3 | 8.4 | - |
| **Do you think that you worry about your health more than most people?** | 46.5 | 28.4 | 13.5 | 9.7 | 1.9 |
| **Do you think there is something seriously wrong with your body?** | 71.6 | 18.1 | 7.7 | 2.6 | - |
| **Are you afraid of illness?** | 36.1 | 32.9 | 14.2 | 11.6 | 5.2 |

Moreover, the results of the present study reported that the hypochondrial attitude is more in nursing students as compare to other department student. Nursing students are highly significantly associated with domains such as age, academic year, diagnose with serious illness, personality, visit to physician and fear of getting COVID-19 during pandemic. A descriptive study was conducted to assess and compare health related anxiety among medical students during preclinical and clinical years of training. In the results it was found that health related-anxiety (Shahi main section score >18) was found in 14.77% of students in preclinical than clinical, 16.66% and 13.04% respectively. No relation was noted between current health anxiety (SHAHI score) and the number of visits to doctor per year.[10] In our study, it was reported that 55% of nursing students have mild hypochondrial attitude whereas 65% in other department students. The moderate degree of hypochondrial attitude i.e., 43% was in nursing and 34% in other department students, whereas sever hypochondrial attitude was foun in very less population i.e., 2% in nursing and 1% in other department students.

A cross sectional study was conducted to assess increased frequency of health anxiety in health science students and non-health science students in a Greek university. In this study 14 items-short health anxiety inventory (SHAHI) was used to measure health anxiety. The prevalence of health anxiety (SHAHI score>14) was 18.1% in non-health science students and 8.3% (Shahi score >18) in health science students. The results shows that the health science students had higher health anxiety compare to non-health science students.[11] In our study the heath related anxiety or hypochondrial attitude is higher among nursing students as compare to other department students. The finding is congruent with the previous studies wherein the medical students have higher hypochondrial attitude and health related anxiety as compare to other department students. This is probably because, they study about the disease conditions in there theory and perceive that they are suffering from same symptoms as they had studied. Moreover, it is seen in the preclinical years of training as compare to clinical years.

***Limitations***

This study carries the limitations that it includes convenience sampling technique. In addition, participants were from a single state of India, which may limit the generalizability of the present study to other part. However, despite the above limitations, the present study has notable strength. First, to the best authors knowledge, this study provide unique opportunity to compare and assess the hypochondrial attitude among nursing and other department students. In addition, our study used standardized tool to assess the hypochondrial attitude among nursing and other department students.

## CONCLUSION

The conclusion of this study shows that there is higher prevalence of hypochondrial attitude among nursing students then in other department students and there is significantly strong association of socio demographic variable with degree of hypochondrial attitude in nursing students. At last, it was suggested that counselling and support services are necessary for nursing students.

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