



VARIOUS SOMATIC SYMPTOM DISORDER AMONG DIFFERENT AGE GROUPS AND ITS RELATIONSHIP WITH ANXIETY AND DEPRESSION-A CROSS SECTIONAL STUDY

| | |
|--------------------------------|--|
| Dr. Poonam Bharti | Professor, Department of Psychiatry, Maharishi Markandeshwar Institute of Medical Science and Research, Mullana, Haryana, India |
| Dr. Aman Bharti* | Assistant Professor, Department of Medicine, Guru Gobind Singh Medical College Faridkot, Punjab, India*Corresponding Author |
| Dr. Sana Bano Usmani | Senior Resident, Department of Psychiatry, Maharishi Markandeshwar Institute of Medical Science and Research, Mullana, Haryana, India. |
| Dr. Bimal Kumar Agrawal | Professor, Department of Medicine, Maharishi Markandeshwar Institute of Medical Science and Research, Mullana, Haryana, India. |
| Dr. Ishrat Sibia | Department of Psychiatry, Maharishi Markandeshwar Institute of Medical Science and Research, Mullana, Haryana, India. |

ABSTRACT

Background: Somatic symptom disorder (SSD) is a diagnosis that was introduced with publication of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) in 2013. The main feature of this disorder is a patient's concern with physical symptoms for which no biological cause is found. Various subjects present with various somatic complaints though prevalence of somatic complaints is different in various age groups. It has been seen that individuals suffer from somatic disorders may also have comorbid depression and anxiety. **Methods:** The study is a hospital-based cross-sectional study conducted in/ outpatients department with clinical suspicion of somatic symptoms in the General Medicine, Psychiatry and Paediatrics department of Maharishi Markandeshwar Institute of Medical Science and Research, Mullana. HAM-A and HAM-D scales were used to assess the anxiety and depression the patients were evaluated for the diagnosis of somatic symptoms. The valid and reliable Patient Health Questionnaire-9 (PHQ-9) questionnaire was used to assess the somatic symptoms. **Results:** The data obtained was tabulated on a Microsoft Excel spreadsheet and SPSS Version 25. The data is organized into various age groups and prevalence of somatic symptoms was computed. A total of 163 patients were studied, Majority were females, unemployed/housewife, married belonging to rural background. Below 18 years of age the stomach pain was the most common complain constituting 75% and amongst 18-60 years feeling tired constitutes the majority at 74% and more than 60 years constitute back pain at 82% but headache remains the most common complain ranging from 64-73% among all age groups. The somatic complaints in the age group of 18-60 years are more effected with comorbidity (52%) and stressor (54%) and on combined rating scales the score was higher ranging for moderate to severe in subjects above 60 years of age. The correlation between various age groups found to be statistically significant (p value < .005). **Conclusion:** Headache, nausea, and diarrhoea/constipation were the most common somatic complaints present in all the age groups. Abdominal symptoms were more reported in >60 years of age, feeling tired as well as affected by co-morbidities and stressors in age group of 60 years whereas somatic pain symptoms were more in elderly (back pain)

KEYWORDS : Somatic symptoms, PHQ, HAM-A and HAM-D

Introduction:

Today mental disorders are important concerns of health care system in all countries, with a major burden of disease and catastrophic socio-economic effects [1]. Somatic symptom disorder (SSD) is a diagnosis that was introduced with publication of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) in 2013. SSDs are always multi causal issues where biological, social-environmental and psychological factors are interconnected in a complex manner [2]. Primary care physicians often treat patients who manifest symptoms for which there are no biologic cause. Patients with somatic symptom disorder may be subjected to unnecessary testing and procedures [3]. The main feature of this disorder is a patient's concern with physical symptoms for which no biological cause is found. It requires psychiatric assessment to exclude comorbid psychiatric disease as well as to diagnose a patient with SSD. [4] The Morita therapy is especially effective for patients who pay excessive attention to somatic symptoms [5].

The prevalence of somatic symptom disorder (SSD) is estimated to be 5% to 7% of the general population, with higher female representation (female-to-male ratio 10:1), and can occur in childhood, adolescence, or adulthood. [6] The prevalence increases to approximately 17% of the primary care patient population. Persistent distressing physical symptoms present a huge individual and societal burden and unmet clinical need. For example, in the 2016 Global Burden of Disease Study, low back pain (LBP) without any diagnosed underlying medical condition is the leading cause for years lived with disability (YLDs) [7] The prevalence is likely higher in certain patient populations with functional disorders, including fibromyalgia, irritable bowel syndrome, and chronic fatigue syndrome. [8].

somatoform disorders suffer from anxiety and depressive disorders, concurrently. At least a third of patients with somatoform disorders have comorbid anxiety or depressive disorders, whereas depression and anxiety co-occur with one another up to 50% of the time. [9] Sleep disturbances, loss of energy and impaired concentration are a cause of diagnostic overlap in these disorders as these symptoms are commonly seen in them. [10, 11]. Tripartite model of anxiety and depression, a theoretical model was developed to describe the overlap of anxiety and depression. [12] .So this study was planned to find the prevalence of somatic symptoms among various age groups as well as to see the relationship of somatic symptoms disorder with anxiety and depression. Prevalence of severity has great impact on prevalence on somatic symptoms.

Methodology:

The study is a hospital-based cross-sectional study conducted in/ outpatients department with clinical suspicion of somatic symptoms in the General Medicine, Psychiatry and Paediatrics department of Maharishi Markandeshwar Institute of Medical Science and Research, Mullana, Ambala for the period of 1 year. Patients fulfilling the inclusion criteria from the above-mentioned departments were enrolled in the study which includes the patients having somatic symptoms, but no laboratory confirmations were made on the basis of complaints. Individuals whose complaints have underlying pathology were excluded from the study. Those who were eligible were briefed about the nature of the study and written informed consent was obtained prior to the enrolment. Prior to the commencement, the study was approved by the Institutional Ethics Committee of Maharishi Markandeshwar Institute of Medical Science and Research, Mullana, Ambala.

Different studies concluded that 20.4%, or 30% of patients with

Patients were then interviewed and socio-demographic data like age

gender, education, occupation, marital status, rural/ urban area, and their socio- economic data. Patients were also interviewed for the detailed clinical presentation, history of associated medical conditions like diabetes mellitus, thyroid manifestations, cardiovascular (Hypertension) manifestations etc. The patients were divided into age groups which are categorised as- 18 years, 18-65 years and >65 years. A thorough general physical examination was conducted to assess vital parameters.

Tools

The Hamilton Anxiety Rating Scale (HAM-A, sometimes termed HARS), dating back to 1959, is one of the first rating scales to measure the severity of perceived anxiety symptoms [13] The HAM-A is a clinician-based questionnaire; however, being available in the public domain, it has been employed as a self-scored survey [14]. HAM-A and HAM-D scales were used to assess the anxiety and depression the patients were evaluated for the diagnosis of somatic symptoms. The scoring was done as mild, moderate, and severe basis. HAM-A consists of a total of 14 items where each item consists of 5 responses as-0,1,2,3,4,5 in the increasing order of severity that is “0” stands for not present to “5” very severe. Thereafter responses for all the questions were added and then the patient is diagnosed whether he/she is suffering from mild, moderate, or severe anxiety. Similarly, the HAM-D scale was used to diagnose depression. It consists of a total of 17 items, which similarly to HAM-A, each consists of 5 responses from 0 to 5 in increasing order of severity.

The valid and reliable Patient Health Questionnaire-9 (PHQ-9) questionnaire was used to assess the somatic symptoms. Total thirteen symptoms were included in the questionnaire and participants were asked for the last two weeks how often the symptoms were experienced. The severity was assessed from minimal to severe.

Statistical Analysis:

The data obtained was tabulated on a Microsoft Excel spreadsheet and SPSS Version 25. The data statistics were performed using various Statistical Tools. The data is organized into various age groups and prevalence of somatic symptoms was computed.

Results:

A total of 163 patients were enrolled for the study. Out of which 60% belongs to age group of 18 to 60 years as shown in figure 1.

Figure 1: Percentage wise distribution of subjects of different age groups enrolled in the study.

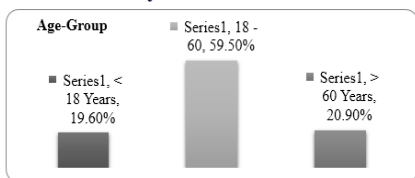


Table-1: Socio demographics details of participants

| Sample Profiling | Set | Frequency | Percentage |
|------------------|------------------------------|-----------|------------|
| Gender | Male | 78 | 47.9 |
| | Female | 85 | 52.1 |
| Age-Group | < 18 Years | 32 | 19.6 |
| | 18 - 60 | 97 | 59.5 |
| | > 60 Years | 34 | 20.9 |
| Education | Illiterate or Primary School | 45 | 27.6 |
| | Secondary School | 65 | 39.9 |
| | High School | 42 | 25.8 |
| | College | 11 | 6.7 |
| Occupation | Government Job | 13 | 8.0 |
| | Non- Government Job | 57 | 35.0 |
| | Retired | 13 | 8.0 |
| | Housewife/Unemployed | 80 | 49.0 |
| Marital Status | Single | 49 | 30.0 |
| | Married | 102 | 62.6 |
| | Divorced/Widow | 12 | 7.4 |

| | | | |
|-----------------------|--------|-----|------|
| Location | Rural | 99 | 60.7 |
| | Urban | 64 | 39.3 |
| Socio-Economic Status | Upper | 3 | 1.8 |
| | Middle | 115 | 70.6 |
| | Lower | 45 | 27.6 |

Socio- demographic details of the participants are shown in Table-1. During the analysis, the majority of the patients were females constituting 52.% and 40% of the participants were educated till secondary school 40%. The occupation status of the participants presented with statistics as housewife/ unemployed at 49% with non-government jobs 35%, this was followed by retired and government jobs standing at 8 each. The total of 63% participants were married, followed by single at 30% and divorced/ widow constituting 7%. The rural to urban ratio was found to be 61% by 39% participants. Maximum of the subjects were from middle class comprises of 71% , followed by Lower class at 27.6 % and Upper class at 1.8% respectively.

Table-2: Age-wise prevalence of somatic symptoms

| Complaints | < 18 Years % Age | Complaints | 18 – 60 Years % Age | Complaints | > 60 Years % Age |
|--|------------------|--|---------------------|--|------------------|
| Stomach Pain | 75 | Feeling Tired | 74.2 | Back Pain | 82.4 |
| Constipation, Diarrhea | 75 | Headache | 73.2 | Headache | 73.5 |
| Headache | 71.9 | Constipation, Diarrhea | 64.9 | Nausea | 73.5 |
| Nausea | 65.6 | Pain in Arms, Legs, Joints Palpitation | 63.9 | Constipation , Diarrhea | 64.7 |
| Feeling Tired | 62.5 | Sleep Problem | 62.9 | Pain in Arms, Legs, Joints Palpitation | 64.7 |
| Back Pain | 56.3 | Nausea | 59.8 | Sleep Problem | 58.8 |
| Pain in Arms, Legs, Joints Palpitation | 43.7 | Back Pain | 57.7 | Feeling Tired | 55.9 |
| Sleep Problem | 43.7 | Shortness of Breath | 42.3 | Shortness of Breath | 52.9 |
| Shortness of Breath | 40.6 | Chest Pain | 29.9 | Chest Pain | 52.9 |
| Chest Pain | 40.6 | Stomach Pain | 28.9 | Stomach Pain | 44.1 |
| Pain during Sexual Intercourse | 9.4 | Dizziness | 23.7 | Dizziness | 20.6 |
| Dizziness | 6.3 | Pain during Sexual Intercourse | 22.7 | Pain during Sexual Intercourse | 14.7 |
| Fainting Spells | 0 | Fainting Spells | 8.2 | Fainting Spells | 8.8 |

The age-wise prevalence of somatic symptoms is shown in Table 2. For <18 Years age group, the highest somatic complaints are Stomach Pain and Constipation, Diarrhea at 75% each, followed by Headache (72%) and Nausea (66%) respectively. For 18-60 years age group, the highest somatic complaints were Feeling Tired (74%), followed by Headache (73%) and Constipation, Diarrhea (65%) respectively along with pain in arms, leg and joints the percentage for which stands at 64%. For >60 Years age group, the highest somatic complaints are Back Pain (82%), followed by Headache and Nausea at 74% each and Constipation, diarrhea (65%) respectively as well joint pain in arms, joints and legs which is 65%.

Table-3: Impact of stressor and comorbidities on various age groups

| Set | Age Group | Impact |
|---|------------|--------|
| Co-morbidities (hypertension, diabetes, hypothyroidism) | < 18 Years | 10.3% |
| | 18 - 60 | 51.8% |
| | > 60 Years | 37.9% |

| | | |
|----------|------------|-------|
| Stressor | < 18 Years | 23.1% |
| | 18 - 60 | 53.8% |
| | > 60 Years | 23.1% |

The participants were assessed for co-morbidities (hypothyroidism, diabetes, and hypertension) and stressors. As per Table 3, the analysis was done by arranging the patients into the desired age groups and it was shown that majority of participants presented with co-morbidities and stressor belongs to the age group of 18-60 years (52%) and stressor (54%) respectively.

Table-4: Impact of PHQ, HAM-A, HAM-D on combined Age Groups

| PHQ, HAM-A, HAM-D (Age-Group Wise) | | | | | | | | | | |
|------------------------------------|-----------|------------|-------|------------|-------|------------|-------|-------------|-------|-----------------|
| Factors | Age-Group | < 18 Years | | 18 – 60 | | > 60 Years | | Correlation | Sig. | Null Hypothesis |
| | | Count (32) | % age | Count (97) | % age | Count (34) | % age | | | |
| PHQ | Normal | 10 | 31.25 | 3 | 3.09 | 0 | 0 | 0.43 | 0.01* | Rejected |
| | Mild | 12 | 37.5 | 25 | 25.77 | 4 | 11.76 | | | |
| | Moderate | 10 | 31.25 | 68 | 70.1 | 30 | 88.24 | | | |
| | Severe | 0 | 0 | 1 | 1.03 | 0 | 0 | | | |
| HAM-A | Normal | 29 | 90.63 | 64 | 65.98 | 22 | 64.71 | 0.16 | 0.03* | Rejected |
| | Mild | 0 | 0 | 3 | 3.09 | 2 | 5.88 | | | |
| | Moderate | 3 | 9.38 | 28 | 28.87 | 10 | 29.41 | | | |
| | Severe | 0 | 0 | 2 | 2.06 | 0 | 0 | | | |
| HAM-D | Normal | 6 | 18.75 | 5 | 5.15 | 0 | 0 | 0.37 | 0.0* | Rejected |
| | Mild | 19 | 59.38 | 32 | 32.99 | 8 | 23.53 | | | |
| | Moderate | 6 | 18.75 | 28 | 28.87 | 13 | 38.24 | | | |
| | Severe | 1 | 3.13 | 32 | 32.99 | 13 | 38.24 | | | |

*Significant at the 0.05 level

Table 4 gives a details description of all the cases with the various scales- PHQ, HAM-A, HAM-D. The participants were divided into age groups of <18 years, 18-60 years, and >60 years and are then divided into mild, moderate, and severe cases of PHQ, HAM-A, and HAM-D.

When PHQ parameters were assessed amongst various age groups it was seen that in <18 Years age group majority had mild symptoms (37.5%) while in 18-60 years as well as in > 60 years moderate symptoms were more reported respectively as (70.1%) and (88.24%). The correlation was found to be statistically significant (.001).

As on HAM-A scale, no anxiety symptoms were observed in participants in all age groups.

When subjects were assessed on HAM-D scale, 60% participants <18 years showed mild symptoms whereas 18-50 years age group as well as > 60 years both reported severe level symptoms (33%) (38%). This association here also found to be statistically significant.

Further, an encouraging relationship between Age-Groups and all the three factors viz. PHQ, HAM-A and HAM-D respectively with positive 0.43 correlations between the Age-Groups and PHQ is the pinnacle connection followed by Age-Groups and HAM-D with positive 0.37 and Age-Groups and HAM-A with positive 0.16 respectively. These indicate that all are key predictors.

In addition to test the Null Hypothesis, following findings from Table 4 have been revealed which is also depicted in Figure 2:

PHQ: H0a There is a significant impact of Age-Group towards PHQ since the value of Significance is .00 ($\leq 5\%$). Hence we reject the Null Hypothesis.

HAM-A: H0b - There is a significant impact of Age-Group towards HAM-A since the value of Significance is .03 ($\leq 5\%$). Hence we reject the Null Hypothesis.

HAM-D: H0c - There is a significant impact of Age-Group towards HAM-D since the value of Significance is .00 ($\leq 5\%$). Hence we reject the Null Hypothesis.

Figure 2: Effect of PHQ, HAM-A, HAM-D on various age groups

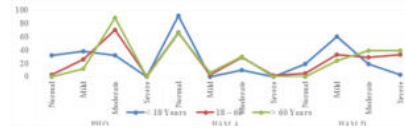


Table-5: Combined Rating Scale for PHQ, HAM-A, HAM-D on various Age Groups

| Combined Rating Scale (PHQ, HAM-A, HAM-D) | Age-Group | | |
|---|------------|------------|------------|
| | < 18 Years | 18 – 60 | > 60 Years |
| Ave. % age | Ave. % age | Ave. % age | Ave. % age |
| Normal | 46.88 | 24.74 | 21.57 |
| Mild | 32.29 | 20.62 | 13.72 |
| Moderate | 19.79 | 42.61 | 51.96 |
| Severe | 1.04 | 12.03 | 12.75 |

Combined rating scale analysis of all the parameters were performed and analysis were done. The severity of somatic symptoms increases with age. As shown in the analysis done in our study the participants in >60 years of age group have highest score (52%) of severity of somatic symptoms and <18 (43%) have least severity, it is more imperative towards normal. The severity of somatic symptoms in age group of 18-60 years were more than <18 years of age group (43%) and less than age group of >60 years (52%).

Discussion:

Physicians in primary health care settings have many patients with perplexing complaints. Often these people had multiple visits and various treatments but they are unsatisfied. Somatic complaints play as the junction between physical and psychosocial aspects of illness and health, accordingly the physicians must learn the variant aspects of the disease.

The World Health Organization (WHO) estimated the lifetime prevalence of mental disorders ranged from 18.1 to 36.1% [13]. Heretofore studies show the prevalence rates for somatoform disorders in the general population range from 11 to 21% in younger, 10 to 20% in the middle-aged, and 1.5 to 13% in the older age groups [14]. In our study the prevalence of somatic symptoms was highest among the age group of 18-60 years stands at 0.2%, followed by 0.07 and 0.006 in age groups of >60 years and <18 years respectively. In previous studies also, the prevalence of somatic complaints varies in different societies as 1.5 to 21.9% or even greater in the adult population [15].

Amongst the 163 participants that were enrolled in the study, the majority of participants were in 18-60 years of age group (60%), out of which majority the females (52%), housewife / unemployed (49%) were, married (63%) belongs to rural background (61%) with middle socio-economic status (71%). Even in our study majority were middle-aged women. Females may present with more of somatic symptoms owing to changes in social status and hormones.

Similar results were observed from the data from 30,449 study participants, Majority (56.7%) were women, the average age was 40.5 years and 74.6% were married. Age-wise criteria show that individuals with the age group of 18-65 years constitute 59% of the sample size, 60% rural population, 62% married, and 27.6% have done primary education forms the majority. Another study which was conducted by Barsky AJ et al. also showed similar results as per socio-demographic data when compared with the study conducted here. [16] In already performed study by Baitha U et al, it was observed that education levels also affect somatic symptoms. Lower educational levels were associated with more severe somatic symptoms. 34, 17% in our study, majority were unemployed having more somatic complaints which goes in favor of the above cited reference. [17]

One important reason for the limited empirical data might be a general

conceptual confusion accompanying the phenomenon of somatization, as one core disorder of the somatoform group. [Hilderink, P., Collard, R., Rosmalen, J., & OudeVoshaar, R. (2013).

On the contrary, Klapow et al. (2002) reported that younger patients were at a higher risk for psychological disorders. In the present study it was observed that elderly people had more somatic complaints as compared to the younger population. Subjects below <18 Years age group had more of GIT related somatic complaints in the form of stomach pain and constipation, diarrhoea (75%) each, followed by headache (72%). The probable reason behind this may be in form of making excuses to miss (take off from) the school, fear of attending the schools, to procrastinate their work or to meet the unnecessary desire, and seeking attention from their parents. Literature also reports as from previous studies done in Asian societies which shows that somatic complaints may be an appropriate way for psychological distress presentation and help-seeking rather than direct expression [20, 18].

Eliassen M et al did a large population based study and found that tiredness and musculoskeletal symptoms as the most prevalent somatic symptoms . [19]. Similar results were seen in our study, for the 18-60 years age group, the highest somatic complaints were feeling tired (74%), followed by headache (73.2%) along with pain in the arms. Related to these somatic complaints it was also seen the more comorbid illness and stressors were seen in middle age group, the probable reason may be that 18-60 years age group is mostly working class and coddle with work-life mechanism, having major responsibilities in the form of personal and professional life and lots of expectations towards their life.

In one of the study conducted by Drayer, RA et al, >60 years greater degrees of anxiety and depression were associated with more severe somatic symptoms. [20] In our study it was observed that subjects belonging to the age group above 60 years had more of the depressive symptoms (38%) as compared to other age groups. The justified reason behind the depressive symptoms is well understood. That may be due to health problems, high dependency or may have lost their life partner as well as age related issues. Whereas the constipation and diarrhea in >60 years may also be due to health issues, unable to take proper diet resulting in nutritional deficiencies and even in few cases due to polypharmacy side effects.

Wong JY et al. in their study showed that improving anxiety and sleep quality may help alleviate physical symptoms (19, 21). P.H. Hilderink et al conducted a study and observed that when compared to other mental disorders, such as depression or dementia, somatoform disorders appear to be a neglected topic in old age psychiatry and health care research[22]. Our study we tried to study anxiety and depressive symptoms in the subjects enrolled according to the inclusion criteria. Depressive symptoms were more seen in the elderly group of population in our study. May be in future more studies can be taken up to study other co morbid disorders in patients of somatic symptom disorder as well as to screen the elderly population for other psychiatric disorders. In the study done by Abdulbari Bener, also showed similar results in older people had a higher risk of presenting mental disorders in primary care. Depression (42.2%), anxiety (41.1%), somatization (39.3%) and stress (39.3%) were more frequent among old age patients.

But in our study it was observed upon combined rating scale, the highest average percentage was seen amongst the > 60 years, the probable reason already explained earlier. The explanation behind such findings were very well explained in the study conducted by Tomenson B et al, for the higher prevalence of these psychological disorders in older patients may be that physical complaint is more often associated with somatic problems. A high number of somatic symptoms has been associated with increased health care use, poor health status [23], poor functional status and sickness absence [24] independently of the etiology of the symptoms. For the >60 Years age group, the highest somatic complaints are Back Pain (82%), followed by headache, presenting headache a common problem in every age group.

In another study done by Hekmatravan R et earlier, most complaints were Pain in limbs, Stomach pain, headache, and nausea. In some of the research, the most common symptoms were a pain in limbs and joints, GI symptoms, and headache [25]. In our study when general prevalence of somatic symptoms was headache, git symptoms (nausea

vomiting diarrhea) as well as pain in joints and arms were most commonly reported among all age groups. The above cited studies support the findings seen in our study.

On various parametric tools (PHQ- HAM-A, HAM-D) the significant correlation was found among all age groups. On combined rating percentage, which shows with increase in age, the somatic complaints, depression and anxiety also increases.

Conclusion:

Headache, nausea, diarrhea and vomiting were the most common somatic symptoms observed in all the age groups. The somatic complaints of age group <18 years age was more pertaining to abdominal symptoms whereas >60 years age group reported pain in arms legs, joints but the nausea, diarrhoea and constipation remains the same amongst all. Though the effect of comorbidities and stressors were more in middle age group (18-60 years), whereas upon combined rating scale of all the tools reported that elderly group more than 60 years of age were more effected as compared to <18 years and 18-60 years of age group. There is an encouraging relationship between Age-Groups on all the three tools with positive 0.43 correlations between the age-groups. Statistically significant correlation was found.

Limitations:

The study has its own limitations. First, the sample size is relatively small. Secondly, the co-morbidities are relatively narrow.

REFERENCES

1. Kessler RC, Aguilar-Gaxiola S, Alonso J, Chatterji S, Lee S, Ormel J, Üstün TB, Wang PS. The global burden of mental disorders: an update from the WHO World Mental Health (WMH) surveys. *Epidemiol Psychiatr Sci* 2009;18:23-33.
2. Hilderink PH, Collard R, Rosmalen JG, Oude Voshaar RC. Prevalence of somatoform disorders and medically unexplained symptoms in old age populations in comparison with younger age groups: a systematic review. *Ageing Res Rev*. 2013 Jan;12(1):151-6.
3. Glise K, Ahlborg G, Jr, Jonsdottir IH. Prevalence and course of somatic symptoms in patients with stress-related exhaustion: does sex or age matter. *BMC Psychiatry* 2014;14:118
3. Barsky AJ, Peekna HM, Borus JF. Somatic symptom reporting in women and men. *J Gen Intern Med*. 2001;16:266-275.
4. Baiitha U, Ranjan P, Deb KS, Baudhi NK, Singh V, Kaloiya G, et al. Association of Somatic Symptom Severity With Sociodemographic Parameters In Patients With Medically Unexplained Physical Symptoms: A Cross-Sectional Study From a Tertiary Care Center in India. *Cureus*. 2020 Jul 17;12(7):e9250.
5. Xiaolu Zhou A N, SeonghoMin B, JiahongSun C, SeJooKim D, Joung-sookAhn B, YunshiPeng E, Samuel Noh F, Ryder AG. Extending a structural model of somatization to South Koreans: Cultural values, somatization tendency, and the presentation of depressive symptoms. *J Affect Disord* 2015;176:151-4
6. Eliassen M, Kreiner S, Ebstrup JF, Poulsen CH, Lau CJ, Skovbjerg S, et al. Somatic Symptoms: Prevalence, Co-Occurrence and Associations with Self-Perceived Health and Limitations Due To Physical Health - A Danish Population-Based Study. *PLoS One*. 2016;11(3):e0150664.
7. Drayer, RA, Mulsant, BH, Lenze, EJ, et al. Somatic symptoms of depression in elderly patients with medical comorbidities. *Int J Geriatr Psychiat* 2005; 20: 973-982
8. Wong JY, Fong DY, Chan KK. Anxiety and insomnia as modifiable risk factors for somatic symptoms in Chinese: a general population-based study. *Qual Life Res* (2015) 24:2493-98.
9. Prevalence of somatoform disorders and medically unexplained symptoms in old age populations in comparison with younger age groups: A systematic review. *Ageing Research Reviews*, 12(1), 151-156.
10. Tomenson B, Essau C, Jacobi F, Ladwig KH, Leiknes KA, Lieb R, et al. Total somatic symptom score as a predictor of health outcome in somatic symptom disorders. *Br J Psychiatry*. 2013;203:373-380
11. Poulsen OM, Persson R, Kristiansen J, Andersen LL, Villadsen E, Orbaek P. Distribution of subjective health complaints, and their association with register based sickness absence in the Danish working population. *Scand J Public Health*. 2013;41: 150-157
12. Hekmatravan R, Samsun Shariat M, Khani F, Khademi M. The relationship between anxiety and depression with Somatization in Blind people of Isfahan city. 4th International Congress on Psychosomatic. Azad University, Isfahan, Iran: 2012; Oct, 17-19