

Understanding Clinical Depression through Somatic Symptoms among Depressive Adults: Gender and Education in Consideration

Rabia Batool ¹, Noshi Iram Zaman ², and Wajeeha Riaz ³

Keywords: Depression, Somatic Symptoms, Depressive Clients, Gender, Educational Level	<p style="text-align: center;">ABSTRACT</p> <p><i>The most prevalent mental health disorder is depression, although it is not always presented in the same form. The type of depression that presents itself through somatic symptoms cannot be detected by mental health professionals, hence requires scrutiny before categorizing the clients as having a psychiatric issue. Therefore, the current study sought to examine these variables by employing the Somatic Symptom Scale (SSS-8) to evaluate the somatic symptoms and diagnosed clients of depression. The study was conducted with a sample of 150 depressed patients (Male=43%, Female= 57%) selected from the outdoor patient (Psychiatry) department of hospitals in Rawalpindi/Islamabad. The results of the study revealed that there was a positive correlation between the study variables. This research also assumed that patients with depression have high somatic symptoms and that the male participants will show more somatic symptoms than the female participants. Analysis of results confirmed that the mean number of somatic symptoms in men ($M=20.86$) was significantly higher than that of women ($M=18.12$) $p > 0.05$. Furthermore, the findings also showed that the illiterate patients with depression were having more somatic symptoms $M = 21.72$ than the literate patients $M = 18.20$. The current study would be helpful for mental health professionals to comprehend the personality characteristics of patients regarding the treatment of depression. Also, they can develop better therapeutic approaches to address the somatic symptoms of clinical depression.</i></p> <p>This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.</p> 
Article History: Received: August 13, 2023 Revised: June 28, 2024 Available Online: June 30, 2024	<p style="text-align: center;"></p> <p style="text-align: center;">a Gold Open Access Journal</p> <p>Copyright (c) 2024 Rabia Batool, Noshi Iram Zaman, Wajeeha Riaz, Published by Faculty of Social Sciences, the Islamia University of Bahawalpur, Pakistan.</p>
How to cite this paper? Batool, R., Zaman, N. I., & Riaz, W. (2024). Understanding Clinical Depression through Somatic Symptoms among Depressive Adults: Gender and Education in Consideration. IUB Journal of Social Sciences, 6(1), 67–76. https://doi.org/10.52461/ijoss.v6i1.2060 .	

¹ Lecturer, Department of Psychology, Muslim Youth University, Islamabad, Pakistan.

✉ rabiabatoool451@gmail.com

² Senior Assistant Professor, Department of Professional Psychology, Bahria University Islamabad Campus (BUIC), Islamabad, Pakistan. ✉ noshi.zaman@bahia.edu.pk

³ Senior Research Fellow, Jinnah Centre for character and Leadership- Pakistan Air force.

✉ wajeekhakan343@gmail.com

1 Introduction

Depression is characterized by cognitive, affective, and physical signs and symptoms such as fatigue, weight loss or gain, and changes in appetite and sleep patterns (Nzoma & Shaw, 2024). Based on the statistics of the World Health Organization, approximately 3. Depression is experienced by 8 percent of the population, of which 5 percent of adults suffer from it, male 4% and female 6%. 7% of adults of 60 years and above. According to the data of the latest years, approximately 280 million people are suffering from this disease worldwide (WHO, 2024). Depressed patients may also have other somatic symptoms in addition to those included in the diagnostic criteria for depressive disorders. These nonspecific somatic symptoms include dizziness, nausea, and pains such as headache, stomach pain, chest pain, and poorly localized pain (Harshaw, 2015; Novick et al., 2013). Some previous studies have established that assessing nonspecific somatic symptoms has clinical significance in depressive disorders.

However, these symptoms are often the first and/or the main symptoms of depression that patients describe in primary care settings (Kirmayer, Robbins, Dworkind, & Yaffe, 1993; Simon, VonKorff, Piccinelli, Fullerton, & Ormel, 1999; Tylee & Gandhi, 2005) and they may be more indicative of cognitive, affective depressive symptoms than specific somatic symptoms of depression (Novick et al., 2013). Cognitive-affective depressive symptoms and nonspecific somatic symptoms, which are identified in the present study as being highly comorbid, are also reported in community and clinical samples of mothers. For instance, a community survey of pregnant women demonstrated that women with depression had a greater total number of diverse non-specific somatic symptoms than women with lower cognitive affective depression (Lamela, Jongenelen, Morais, & Figueiredo, 2017).

Cultural variations in the display of emotion have been documented in some ethnic groups for instance South Asians are most likely to somatize their emotional experiences (Kirmayer et al., 1993). Chen, Jia, Li, Shi, and Li (2022) opined that among depressed patients, somatic symptoms were found to be high ranging from 66% to 93% as observed in Western countries. In a comparative study, conducted by Bhui, Bhugra, Goldberg, Dunn, and Desai (2001) while comparing the characteristics of patients in Punjab with British patients, the latter were found to be less likely to be depressed if they visited a doctor. Individuals in North India were identified as highly inclined to use somatic descriptors such as 'pressure on the mind' and 'sinking of heart' when labeling depression and attributed their mood concerns to pain, aches, weakness, etc (Bhugra & Mastrogianni, 2004).

Kapfhammer (2006) found that for somatic symptoms, there are various terms used in depression such as somatic, physical, somatoform, psychosomatic, medically unexplained, and so on. The term "somatic" is preferred to describe the conditions of depressive mood, which is comprised of numerous bodily sensations that a depressed individual perceives as unpleasant. Further, these complaints are the primary reasons for depressed individuals to seek help from medical healthcare settings (Ismail et al., 2024).

As indicated by the investigation of Wongpakaran and Wongpakaran (2014) somatization is a condition in which the patient encounters unexplained medical manifestations, and is some of the time called "functional somatic complaint". The condition is challenging to recognize in the elderly because of the high comorbidity between medically unexplained physical side effects and other psychiatric issues.

Somatic manifestations might be identified with discouragement, as discouraged elderly individuals normally show their distress through physical pain. Past reviews demonstrated that discouraged elderly individuals tend to express their dissatisfactions more as physical manifestations than non-discouraged people, and this was more the case in elderly discouraged than more youthful discouraged individuals (Wongpakaran & Wongpakaran, 2014).

Janca, Isaac, and Ventouras (2006) discussed somatic symptoms including headache, abdominal pain, nausea, heart palpitations, fatigue, and dizziness. Somatic symptoms did not occur lonely; the study showed that at least 80% of patients reported that mild brain impairment occurs because of the symptoms. Individuals with numerous physical symptoms develop health issues, and they often visit a general practitioner.

Kapfhammer (2006) showed in a clinical review that somatic symptoms, especially somatic anxiety, and lethargy, were recorded in up to 80% encompassing 260 women and 239 men experiencing major depression. This review confirmed former studies demonstrating that depressive disorders with mainly somatic appearance were probably going to be the most well-known type of depression, both in inpatient and outpatient care.

Somatic symptoms are especially prevalent in young adults. Analysis of Nimnuan, Hotopf, and Wessely (2001) determined that 16-25 was the age range of those patients who were more likely to visit the outpatient facility with somatic symptoms. Among them, 72% of patients have at least one medically unexplained symptom (Garner, 2016). Just 2% of patients with no or a single somatic complaint had a mood disorder; however, 60% of patients displayed at least nine somatic symptoms (Mehta & Chaturvedi, 2022). Subsequently, the study of Geremek, Lindner, Jung, Calvano, and Munz (2024) highlighted the fact that in some children and adolescents, the presence of persistent somatic symptoms can cause impairment in daily functioning that leads to psychosocial disturbances, social isolation, and school negligence.

Depression and somatic symptoms were analyzed in 14 countries on five continents by the researchers. The studies relied on data from patients who sought medical care from physicians in outpatient care facilities for their depression (Kapfhammer, 2006; Simon et al., 1999). Research carried across the participants of both genders in Japan also establishes the relationship between depression and somatization (Konno, 2010). They requested nine somatic symptoms (for example, headache, stomach ache, constipation or diarrhea, backache, and fatigue). What they found was that ladies scored higher on both the Center for Epidemiologic Studies Depression Scale (CES-D) and somatic symptoms. They also discovered that depression and somatic symptoms are positively associated (Hamamura, 2015).

Grover et al. (2012) also stated that in several studies Functional somatic complaints (FSC) in depression are more noticeable among women, elder children, and those having moderately low salaries. Clinical reviews also showed a high prevalence (73-92%) of FSC in patients with depression. Hamilton (1989) reported that about 260 women and 239 men with depression have 80% FSC, Moreover, Sugahara et al. (2004) reported that in Hospitals in Japan, there was a prevalence of 77% in depressed outpatients who were seeking psychosomatic medicine.

Mian, Rubeena, Grossman, and Linda (1998) studied the somatization of depression in Pakistani women diagnosed with major depressive disorder and those who had no psychiatric diagnoses. Results showed that depressed patients (women) reported suggestively more somatic signs than non-patients.

2 Rationale

Depression is one of the most prevailing disorders having many factors like poverty, domestic violence, an imbalanced family system unemployment, etc. Pakistan has an immense degree of depression that includes several reasons like political uncertainty, economic issues, unemployment, insecurity, stressful working conditions, disturbance in the social settings, and gender discrimination, as compared to other developing countries (Ahmed, Enam, Iqbal, Murtaza, & Bashir, 2016; Ganatra, Zafar, Qidwai, & Rozi, 2008; Luni, Ansari, Jawad, Dawson, & Baig, 2009).

In recent times, especially in larger cities urbanization has led to deviations in existing family structures in the country. It has been suggested that urbanization leads to a more nuclear family system, and now developing countries are at risk of nuclear family structure. This trend is more often linked with depression, especially in adults (Taqi, Itrat, Qidwai, & Qadri, 2007).

Furthermore, each member of the family must play a vital role within their boundaries. Usually, with such a home atmosphere/condition people do not prefer to praise others and do not understand others' perspectives. So, a lack of social support occurs among family members which further leads to feelings of worthlessness and the development of negative thinking toward others. There is also a lack of sympathy so, an individual starts developing bodily symptoms to seek attention. These bodily/physical symptoms include headaches, dizziness, backache, pain in gross motor movements, and difficulty in sleeping. By showing these symptoms, they get attention from their family and significant others who consult the physician immediately and start taking care of the person. In this way, the individual learns that thinking negatively and seeing the dark future isn't enough to seek attention rather it is necessary to show the bodily symptoms as well. Individuals having Type D personalities are more prone to show bodily symptoms and signs of depression.

Thus, the current study would fill out the research gap by identifying the demographic factors that play an important role in the development of depression and somatic symptoms among clinically diagnosed depressive clients. The results of the study would be beneficial for all mental health professionals in understanding the dynamic factors behind these constructs and they can take this into account in the treatment/management of these clients.

2.1 Objectives

1. To examine the relationship between somatic symptoms and depression among depressive adults.
2. To explore the role of gender differences and education levels among depressive adults.

2.2 Hypotheses

Based on the preceding literature given in previous section, the following hypotheses are formulated;

1. There will be a positive relationship between somatic symptoms, and depression.
2. Somatic symptomatology will differ on the variable of gender and levels of education.

3 Research Methods

3.3 Participants

In the current study, the data was collected through a purposive sampling technique. The sample consisted of 150 adults, having a diagnosis of depression as per the DSM-5 criteria. The sample included 65 men and 85 women. The age range of the participants was between 18 to 64 years with a mean age of 33.6 years and SD is 9.35. Furthermore, along with age and gender, the educational level of the participants was also focused.

3.4 Instruments

Demographic information consent form and Somatic Symptom Scale (SSS-8) (Gierk et al., 2014) was employed. The scale was constructed by Gierk et al. (2014) and the current study used a translated and adapted version of the scale. It consists of 8 items, the respondents self-rated their somatic complaints on a 5-point Likert scale of 0- Not at all to 4- Very much. Gierk et al., (2014) report that SSS-8 is a reliable measure, that is Cronbach's alpha = 0.81. The Cronbach's alpha of the SSS-8 Urdu version in the current study is also 0.81.

3.5 Procedure

Initially, permission was taken from the authors for the use of instruments. After that, the heads of the departments of psychiatry from the twin cities of Rawalpindi-Islamabad were contacted with a permission letter, consent form, and copy of all measures. The target population was approached during OPD days. They were informed about the purpose and objectives of the study and declared that their participation would be entirely voluntary. After their consent, they were requested to fill out the Demographic Information Sheet, and Somatic Symptom Scale-8 (SSS-8). Since the targeted population did not have much understanding about the English language, due to this all protocols were provided in Urdu. The participants have completed the provided protocols with an average time of 20-25 minutes.

4 Results

During statistical analysis, it was concluded that there were 43% men and 57% women in the respective study. Age is comprised of Mean= 33.6, SD= 9.35, and Range= 19-60 years. Furthermore, Education contained categories Illiterate (56.7%), Matric (30.7%), Intermediate (18.0%), Graduation (12.7%), and Masters (12.0%) (see Table 1). Table 2 shows the positive relationship between Somatic symptoms and depression. Table 3 displayed the mean differences between men and women in somatic symptoms among patients with depression. Men had high somatic symptoms as compared to women. Moreover, Table 4 described that there was a statistically significant difference in somatic symptoms of illiterate participants (M=21.72).

Table 1.
Demographic Characteristics of the Participants of the Main Study (N= 150).

Characteristics	Categories	f	%	M	SD	Range
Age				33.6	9.35	19-60
Gender	Men	65	43			
	Women	85	57			
Education	Illiterate	25	16.7			
	Matric	61	40.7			
	Intermediate	27	18			
	Graduation	19	12.7			
	Masters	18	12			

Note. f= Frequency, %= Percentage, M= Mean, SD= Standard Deviation.

Table 1 shows the descriptive statistics of age (Mean= 33.6, Standard Deviation= 9.35, and Range= 19-60 years). Gender includes men (43%) and women (57%). Education contained categories illiterate (56.7%), matriculation (30.7%), intermediate (18.0%), graduation (12.7%) and masters (12.0%).

Table 2.
Inter Scale Correlation between SSS-8 and PHQ-9 (N=150).

	Scales	1	2
1	SSS-8	-	.64**
2	PHQ-9		-

Note. SSS-8= Somatic Symptom Scale, PHQ-9= Patient Health Questionnaire

** $p < 0.01$.

Table 2 depicts that there is a statistically significant positive relationship between the Somatic Symptom Scale (SSS-8) and Patient Health Questionnaire (PHQ-9) at $p < 0.01$.

Table 3.

Means, Standard Deviations, and t-values across gender on SSS-8 (N=150).

Variables	Men (n=65)		Women (n=85)		t	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
SSS-8	20.86	4.14	18.12	5.36	3.54	0	1.21	4.28	0.57

Note. SSS-8= Somatic Symptom Scale, M= Mean, SD= Standard Deviation, CI= Confidence Interval, LL= Lower Limit, UL= Upper Limit.

Table 3 presents that there are high somatic symptoms (M= 20.86) in Males as compared to females (M= 18.12).

Table 4.

Mean and Standard Deviations Across Education of Participants on SSS-8 and PHQ-9 (N=150).

Scale	Illiterate (n=25)		Matric (n=61)		Intermediate (n=27)		Graduation (n=19)		Masters (n=18)		F	p
	M	SD	M	SD	M	SD	M	SD	M	SD		
SSS-8	21.72	5.67	18.2	5.27	18.96	3.94	19.16	4.81	20.39	4.06	2.52	0.04

Note. SSS-8= Somatic Symptom Scale, PHQ-9= Patient Health Questionnaire, M= Mean, SD= Standard Deviation.

Table 4 depicts that there is a statistically significant difference in somatic symptoms of illiterate participants (M=21.72).

5 Discussion

The present study was conducted to explore the relationship between somatic symptoms and depression. Subsequently, examine the difference in demographic variables that include gender and education among the study variables. The sample consisted of 150 depressive patients out of which 65 were men and 85 were women. Sample characteristics were made on various demographic variables i.e., age, gender, and education. The age range (M= 33.6, SD= 9.35) of the participants was 18-64 years. Proposed hypotheses were approved during the statistical analyses of bivariate correlation, independent sample t-tests, and one-way ANOVA on the demographic variables.

The first hypothesis was that there would be a significant positive relationship between somatic symptoms, and depression. Results showed that there is a positive relationship between somatic symptoms and depression ($r = .64, p < .01$) (see Table 2). The reason behind specifically in the relation between depression and somatic symptoms is that in Asian cultures people get more attention by showing bodily symptoms which include headaches, neckaches, pain in arms and legs, and other body pains that are easily observable by others. These bodily symptoms are also reported by Japanese depressed patients in comparison with people in the United States (Waza, Graham, Zyzanski, & Inoue, 1999). Further, Li et al. (2024) also supported the evidence that somatic symptoms including headache, abdominal pain, vomiting, and musculoskeletal pain often shown by individuals who do not want to go to school. In addition to this, when individuals show low mood and do not take interest in daily life activities, people who are living in their surroundings do not bother them unless they show physical complaints. This

evidence is supported by the findings of Li et al. (2024), Geremek et al. (2024), and Tylee and Gandhi (2005).

In this way, people often visit the physician because of somatic symptoms. This reason is further supported by the findings of the World Health Organization (WHO) which suggests that 69% of depressed individuals visited the physician only because of medically unexplained somatic symptoms (Simon et al., 1999). Additionally, family history plays a strong role in developing somatic symptoms and depression. Results of Colvin (2012) showed that those women who had a family history of depression were more prone to develop major depression in their midlife. Moreover, a study by Yeh, Huang, and Liu (2016) discussed the fact that depression in a mother can cause disturbance in multiple mechanisms of cognitive functioning which contributes to developing depression. Furthermore, Gronemann et al. (2023) reported that the offspring of at least one parent with depression have a 2 to 3-fold increased risk of developing depression as compared with such exposure.

The second hypothesis was that somatic symptomatology would differ on the variable of gender and education among depressive clients. Garner (2016) reported that in young adults there are more somatic symptoms. Moreover, Nimnuan et al. (2001) identified that about 72% of patients have at least one medically unexplained somatic symptom.

Subsequently, results of the current study revealed that men have a higher score on somatic symptoms ($M= 20.86$, $SD= 4.14$) than women ($M= 18.12$, $SD= 5.36$). These are consistent with the results of Shah, Sajid, and Sabih (2011) that men have higher depression than women. They further stated that women reported more physical symptoms than men. Furthermore, it was also highlighted that there was a strong association between anxiety, depression, and functional somatic symptoms.

In this study, men reported more physical symptoms than women. The reason might be unemployment, finding a new job with a good salary, earning for their family and bearing their expenses, dealing with different issues, and exerting their efforts to sort out solutions. Resultantly, they start complaining about physical aches like headaches, neck aches, or pain in their arms and legs, to get attention and relief from work. Whereas, women do not show more somatic symptoms because they are mostly busy with household work. They do not have to deal with lots of people daily. Furthermore, for security reasons, marital issues are also behind in developing depression and somatic symptoms. Currently, Pakistan is fighting against terrorism as a frontline state since 2001. Depression and somatic symptoms are developed due to this continuous physical and mental trauma (Ahmed et al., 2016).

Another study concluded the fact that nearly 98% of patients reported at least one somatic symptom and 45% conveyed six or more symptoms that were similar for men and women (Glise, Ahlberg, & Jonsdottir, 2014).

Consequently, the second hypothesis also emphasized that somatic symptoms are high among those individuals who have had a high level of education as compared to those who have low education. In this study, results show that patients without education show more somatic symptoms (illiterate; $M= 21.72$, $SD= 5.67$) than those with higher education (masters; $M= 20.39$, $SD= 4.06$). The reason behind this might be that individuals with a low level of education do not consult a physician for their body aches. They usually preferred to just express themselves. This leads to the development of depression and the problem worsens over time. Whereas, individuals with high/masters levels of education, consult physicians and take medicine to get relief from their somatic symptoms. Furthermore, if they constantly face these symptoms this will affect their mental health and they will not perform their assigned activities.

According to the study done by Shah et al. (2011), it was established that there was a significant relationship between education, anxiety, and depressive disorders. This was

evidenced in this study, whereby patients with higher education were found to present with a higher percentage of somatic symptoms as compared to patients with lower education (Shah et al., 2011).

6 Limitations, Recommendations, and Implications for Future Research

The significant limitations of this study were that the sample was taken from government hospitals of Rawalpindi and Islamabad only. Future researchers may collect data from other cities and also include private hospitals to improve the generalizability of the results. Moreover, data can be collected from inpatients to see the variation in study findings. Furthermore, the study highlighted the fact that in depression, somatic symptoms have a strong impact on the diagnosis, prognosis, and treatment of depression. Keeping this in view, mental health professionals may devise such assessment tools that lead to the effective management of treating depression and somatic symptoms in more efficient ways.

From the current study, it is found that there is a strong relationship between somatic symptomatology and depression among patients with depressive disorder. The depression and somatic symptoms were high among men as compared to women. Moreover, the study also revealed that individuals with low levels of education showed more somatic symptoms than individuals having higher education.

Further, the findings of the current study would be beneficial for academicians, by considering the causal factors behind students' passive attitudes towards studies; they can address them on time by referring them to mental health professionals to prevent developing somatic symptoms that may lead to depression. Furthermore, mental health professionals may benefit from this study's results and can develop intervention strategies to manage the somatic symptoms and prevent them from developing clinical depression.

References

- Ahmed, B., Enam, S. F., Iqbal, Z., Murtaza, G., & Bashir, S. (2016). Depression and anxiety: a snapshot of the situation in Pakistan. *International Journal of Neuroscience and Behavioral Science*, 4(2), 32.
- Bhugra, D., & Mastrogianni, A. (2004). Globalisation and mental disorders: Overview with relation to depression. *The British journal of psychiatry : the journal of mental science*, 184, 10-20. doi:10.1192/bjp.184.1.10
- Bhui, K., Bhugra, D., Goldberg, D., Dunn, G., & Desai, M. (2001). Cultural influences on the prevalence of common mental disorder, general practitioners' assessments and help-seeking among Punjabi and English people visiting their general practitioner. *Psychological medicine*, 31(5), 815-825.
- Chen, L., Jia, S., Li, P., Shi, Z., & Li, Y. (2022). Experiences and coping strategies of somatic symptoms in patients with depressive disorder: A qualitative study. *Archives of Psychiatric nursing*, 38, 6-13.
- Colvin, A. (2012). *The role of family history of depression in the development of major depression in women during midlife*. University of Pittsburgh,
- Ganatra, H. A., Zafar, S. N., Qidwai, W., & Rozi, S. (2008). Prevalence and predictors of depression among an elderly population of Pakistan. *Aging and Mental Health*, 12(3), 349-356.
- Garner, M. J. (2016). *Stress and somatic symptoms: Rumination and negative affect as moderators*: Seattle Pacific University.
- Geremek, A., Lindner, C., Jung, M., Calvano, C., & Munz, M. (2024). Prevalence of Somatic Symptoms and Somatoform Disorders among a German Adolescent Psychiatric Inpatient Sample. *Children*, 11(3), 280.

- Gierk, B., Kohlmann, S., Kroenke, K., Spangenberg, L., Zenger, M., Brahler, E., & Lowe, B. (2014). The somatic symptom scale-8 (SSS-8): a brief measure of somatic symptom burden. *JAMA Intern Med*, *174*(3), 399-407. doi:10.1001/jamainternmed.2013.12179
- Glise, K., Ahlborg, G., & Jonsdottir, I. H. (2014). Prevalence and course of somatic symptoms in patients with stress-related exhaustion: does sex or age matter. *BMC psychiatry*, *14*, 1-13.
- Gronemann, F. H., Jacobsen, R. K., Wium-Andersen, M. K., Jorgensen, M. B., Osler, M., & Jorgensen, T. S. H. (2023). Association of Familial Aggregation of Major Depression With Risk of Major Depression. *JAMA psychiatry*, *80*(4), 350-359. doi:10.1001/jamapsychiatry.2022.4965
- Grover, S., Kumar, V., Chakrabarti, S., Hollikatti, P., Singh, P., Tyagi, S., . . . Avasthi, A. (2012). Prevalence and type of functional somatic complaints in patients with first-episode depression. *East Asian Arch Psychiatry*, *22*(4), 146-153. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/23271583>
- Hamamura, T. (2015). *Depression and somatic symptoms in Japanese college students: Negative mood regulation expectancies and honne and tatemaie as personality predictors*: California State University, Fullerton.
- Hamilton, M. (1989). Frequency of symptoms in melancholia (depressive illness). *The British Journal of Psychiatry*, *154*(2), 201-206.
- Harshaw, C. (2015). Interoceptive dysfunction: toward an integrated framework for understanding somatic and affective disturbance in depression. *Psychol Bull*, *141*(2), 311-363. doi:10.1037/a0038101
- Ismail, A., Chabbouh, A., Charro, E., El Masri, J., Ghazi, M., Sadier, N. S., & Abou-Abbas, L. (2024). Examining the validity and reliability of the Arabic translated version of the depression and somatic symptoms scale (A-DSSS) among the Lebanese adults. *Scientific Reports*, *14*(1), 5435.
- Janca, A., Isaac, M., & Ventouras, J. (2006). Towards better understanding and management of somatoform disorders. *Int Rev Psychiatry*, *18*(1), 5-12. doi:10.1080/09540260500466766
- Kapfhammer, H. P. (2006). Somatic symptoms in depression. *Dialogues Clin Neurosci*, *8*(2), 227-239. doi:10.31887/DCNS.2006.8.2/hpkapfhammer
- Kirmayer, L. J., Robbins, J. M., Dworkind, M., & Yaffe, M. J. (1993). Somatization and the recognition of depression and anxiety in primary care. *Am J Psychiatry*, *150*(5), 734-741. doi:10.1176/ajp.150.5.734
- Konno, C. (2010). Depressive symptoms and somatic complaints in Japanese adults [In Japanese with English abstract]. *Journal of Japanese Society of Psychosomatic Obstetrics and Gynecology*, *15*, 228.
- Lamela, D., Jongenelen, I., Morais, A., & Figueiredo, B. (2017). Cognitive-affective depression and somatic symptoms clusters are differentially associated with maternal parenting and coparenting. *J Affect Disord*, *219*, 37-48. doi:10.1016/j.jad.2017.05.006
- Li, A., Yang, D. D., Beauquesne, A., Moro, M. R., Falissard, B., & Benoit, L. (2024). Somatic symptoms in school refusal: a qualitative study among children, adolescents, and their parents during the COVID-19 pandemic. *European Child & Adolescent Psychiatry*, *33*(7), 2243-2251.
- Luni, F. K., Ansari, B., Jawad, A., Dawson, A., & Baig, S. M. (2009). Prevalence of depression and anxiety in a village in Sindh. *J Ayub Med Coll Abbottabad*, *21*(2), 68-72. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/20524473>
- Mehta, U. M., & Chaturvedi, S. K. (2022). Medically unexplained symptoms. *Oxford Textbook of Social Psychiatry*, *50*, 421.
- Mian, M. D., Rubeena, H., Grossman, P. H. D., & Linda, S. (1998). The somatization of depression in native Pakistani women. *Jefferson Journal of Psychiatry*, *14*(1), 4.

- Nimnuan, C., Hotopf, M., & Wessely, S. (2001). Medically unexplained symptoms: an epidemiological study in seven specialities. *J Psychosom Res*, *51*(1), 361-367. doi:10.1016/s0022-3999(01)00223-9
- Novick, D., Montgomery, W., Aguado, J., Kadziola, Z., Peng, X., Brugnoli, R., & Haro, J. M. (2013). Which somatic symptoms are associated with an unfavorable course in Asian patients with major depressive disorder? *Journal of Affective Disorders*, *149*(1-3), 182-188.
- Nzoma, A., & Shaw, R. (2024). Depression, Anxiety, and Suicide. In *Pediatric Rotations: A Quick Guide for Medical Students* (pp. 205-220): Springer.
- Shah, M., Sajid, W. B., & Sabih, F. (2011). Pattern of somatic symptoms in anxiety and depression. *Pakistan Armed Forces Medical Journal*, *61*(3).
- Simon, G. E., VonKorff, M., Piccinelli, M., Fullerton, C., & Ormel, J. (1999). An international study of the relation between somatic symptoms and depression. *New England journal of medicine*, *341*(18), 1329-1335.
- Sugahara, H., Akamine, M., Kondo, T., Fujisawa, K., Yoshimasu, K., Tokunaga, S., & Kubo, C. (2004). Somatic symptoms most often associated with depression in an urban hospital medical setting in Japan. *Psychiatry research*, *126*(2), 151-158.
- Taqi, A. M., Itrat, A., Qidwai, W., & Qadri, Z. (2007). Depression in the elderly: Does family system play a role? A cross-sectional study. *BMC psychiatry*, *7*, 1-12.
- Tylee, A., & Gandhi, P. (2005). The importance of somatic symptoms in depression in primary care. *Prim Care Companion J Clin Psychiatry*, *7*(4), 167-176. doi:10.4088/pcc.v07n0405
- Waza, K., Graham, A. V., Zyzanski, S. J., & Inoue, K. (1999). Comparison of symptoms in Japanese and American depressed primary care patients. *Fam Pract*, *16*(5), 528-533. doi:10.1093/fampra/16.5.528
- WHO. (2024). Depressive Disorder. Retrieved from https://www.who.int/news-room/fact-sheets/detail/depression/?gad_source=1&gclid=EAIaIQobChMI9_Wy5GNiAMVv6d_oCR3WLx5DEAAYASAAEgL_7fd_BwE
- Wongpakaran, T., & Wongpakaran, N. (2014). Personality traits influencing somatization symptoms and social inhibition in the elderly. *Clin Interv Aging*, *9*, 157-164. doi:10.2147/CIA.S56246
- Yeh, Z.-T., Huang, Y.-h., & Liu, S.-I. (2016). Maternal depression and adolescent emotions: The role of family functioning. *Journal of child and family studies*, *25*, 2189-2200.