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Socioeconomic Status as a Determinant of Somatic Symptom Disorder Severity

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Keywords	Abstract
Somatic Symptom Disorder, Somatic Symptoms, Socio-economic Status.	*This study highlights the effect of socioeconomic status among individuals with somatic symptom disorder. The hypothesis was to find out the role of socioeconomic status in Somatic Symptom Disorder. To test the hypothesis, a cross-sectional survey design was used. A sample of (n=100), in which (n=24) males and (n=76) females were screened with somatic symptom disorder with the mean age range of (18-40 years) (M=2.050, SD=1.94), was collected from different hospitals/clinics of Peshawar, Khyber Pakhtunkhwa. The demographic sheet was used to assess the socioeconomic status of the participants. A Somatic Symptom Scale (SSS-8) was used to screen the somatic symptoms in the participants. Descriptive statistics and one-way ANOVA were used. The results of ANOVA showed the mean variance of the lower, middle and upper classes with respect to somatic symptoms. A significant mean difference in the level of socioeconomic status, at the level of p<.05. Post hoc analysis has shown that the lower class (M=25.53, p<.05) have more somatic complaints than the middle class (M=22.70, p<.04) and upper class (M=21.40, p>.05). Further, it was found that lower socioeconomic status has a higher level of somatic symptom disorder than middle and higher socioeconomic statuses. This research may help healthcare providers to control this disorder, empowering patients with somatic symptom disorder to manage their condition in a positive manner.*

INTRODUCTION

When physical symptoms of emotional or psychological distress appear without a known biological cause, this is known as somatisation (Dunphy et al., 2019). Within the DSM-5 category titled "Somatic Symptom and Related Disorders", the primary diagnosis is Somatic Symptom Disorder (SSD). Both physical discomfort and psychological phenomena associated with health (such as health anxiety, catastrophising cognitive style, and spending an excessive amount of time on health-related issues) are present in SSD (Tu et al., 2020). The American Psychiatric Association (2013) outlines three main criteria for diagnosis. First, the person must experience one or more physical symptoms that significantly disrupt their daily life or cause considerable distress (A-criterion). Second, they must exhibit ongoing and disproportionate worry about the severity of these symptoms, excessive anxiety about their health, or dedicate an unusual amount of time and energy to health concerns. This includes cognitive, emotional, and behavioural aspects (B-criterion). Finally, the symptoms need to persist for at least six months to meet the third criterion (C-criterion) (Löwe et al., 2021).

According to Limburg et al. (2016), the severity of a condition is determined by the quantity of behavioural and psychological symptoms as well as the presence or absence of multiple

severe somatic symptoms. Individuals with somatic symptom disorder often report back pain, joint pain, headaches, stomach pain, and limb pain (Tomenson et al., 2013). The misinterpretation of body signals as pathological, uncomfortable, or stressful subsequently leads to an increased vigilance toward bodily cues (Wolters et al., 2022). The consensus is that somatisation results from the body and mind's response to traumatic life experiences (Agoha & Ilobi, 2010). A study was conducted in the hospital of Charsadda, Khyber Pakhtunkhwa, Pakistan, on individuals with somatic symptom disorder. The most reported symptoms were various aches and pains, such as backaches, headaches, and musculoskeletal discomfort, followed by lethargy and low energy (Raza & Zainab, 2019). The gender-based prevalence of somatic symptoms was reported to be a significantly higher proportion of girls than boys in a cross-sectional adolescent general population study (Geelen et al., 2015).

Socioeconomic status (SES), according to Baker (2014), shows the overall social and economic position of an individual, which is directly connected to better health outcomes. On the other hand, a country's SES reflects its population's health. Therefore, SES has an impact on other aspects of life like education, lifestyle, and diet. It also provides a measure of a family's or person's social status, providing opportunities to resources and opportunities (Wani, 2019).

According to research, this disorder is present in a higher ratio in women having a low socioeconomic position (Jacobi et al., 2014), less education, and marital disputes (Creed et al., 2012). Research further establishes a strong connection between somatisation and psychological stressors in individuals from lower socioeconomic backgrounds as well as children. Bizzi et al. (2015) observed that about 40% of children with somatisation during the investigation admitted stressors like limited parental education and family dysfunction. Likewise, Lieb et al. (2002) explain that lower socioeconomic status is a major contributor to the repeated occurrence of somatic symptoms and the growth of Somatic Symptom and Related Disorders (SSRD). Other studies, like Abdolmohammadi et al. (2018), also reinforce that somatisation among those with lower education levels and income is higher.

Power et al. (2002) explain that adults from lower socioeconomic backgrounds exhibit a higher degree of symptoms, but other researchers have noted a higher frequency of psychosomatic disorders in the poor socioeconomic groups (Halldórsson et al., 2000). All sources of family income, including derivatives, are the most commonly used SES indices (Peverill et al., 2021). Individuals with this disorder have more chances of occurrence in the people from lower backgrounds as compared to the upper class in terms of economic status. SES is defined as a person's standing within a community's social hierarchy, which is also a main factor affecting overall health (Aggarwal et al., 2005).

From the above literature, it is clear that no specific study has been carried out below 40 years on this topic; therefore, it has been opted for. Additionally, the somatic symptom disorder is misattributed in individuals who are under 40 years. Therefore, the present study specifies the assessment of SSD through the somatic symptom scale 8. This study shows how socioeconomic status affects the severity of somatic symptom disorder. Recognising this connection is vital for advancing targeted interventions to minimise symptom burden and improve quality of life.

Rationale of the Study

Socioeconomic status (SES) is well-known determinant of health outcomes, yet its specific impact on somatic symptom severity remains underexplored. Lower SES is often

associated with limited healthcare access, chronic stress, and poor coping resources, which may exacerbate somatic symptoms. This study aims to investigate how SES influences somatic symptom severity, providing insight for targeted intervention to reduce health disparities. Finding could inform healthcare policies and psychological support strategies for socioeconomically vulnerable populations.

Objective

- To analyse the role of socioeconomic status in persons with somatic symptom disorder.

Hypothesis

- Somatic symptom disorder will be higher in those of lower socioeconomic status compared to those of upper and middle socioeconomic status.

MATERIALS AND METHODS

The patient with somatic symptom disorder comprised (n=100) with a mean age range of 18 to 40 years who were selected from different hospitals and psychiatric clinics of Peshawar, Khyber Pakhtunkhwa. In this cross-sectional study the sample was drawn through purposive sampling technique.

Inclusion and Exclusion Criteria

The willing participants were only included in the study. The individuals of 18 to 40 years of age were included in this study; this age range encompasses major life transitions that heighten stress, a known trigger for somatic symptom disorder. Moreover, the symptom of SSD disrupts productivity in this age. While participants below 18 years and above 40 years were excluded. We also excluded those with serious psychological or medical disorders.

Socioeconomic Status

Socioeconomic status is the term used to describe the standing of an individual or group or social class. The American Psychological Association (2022) states that it is frequently measured as an income, education, and function of occupation. In the present study, socioeconomic status was measured by the family income, occupation, and family education of parents/siblings/owned education, asked in the demographic information. The demographic sheet included name (optional), age, gender, education, socioeconomic status, house rented/owned, higher qualification in family (earner), marital status, and any other psychological disorder? any other medical disease (diagnosed), also about how frequently you visit your doctor? (almost never, sometimes, regularly, often, almost always), and do you keep checking your medical reports? (almost never, sometimes, regularly, often, almost always).

Somatic Symptom Disorder

This disorder is diagnosed when individuals experience one or more physical signs for a minimum of six months, supplemented by behaviours, excessive thoughts, or feelings linked to these signs (Katz et al., 2015). The Somatic Symptom Scale-8 (SSS-8), which was developed by Benjamin Gierk et al. (2014) for the purpose of assessing somatic symptoms, was used for diagnosis in this study, with greater scores on SSS-8 indicating the presence and

severity of the disorder. It consists of eight items, each rated on a 4-point Likert scale: 0 means not at all, 1 means a little bit, 2 means somewhat, 3 means quite a bit, and 4 means very much. Therefore, a higher score indicates a higher level of somatic symptom disorder. The scale's cutoff points categorise symptom severity on different levels, which are 0-3 points, which means no to minimal; 4-7 points, which means low; 8-11 points, which means medium; 12-15 points, which means high; and 16-32 points, which means very high. SSS-8 has demonstrated strong reliability (Cronbach's $\alpha = 0.81$) (Gierk et al., 2014).

Procedure

This cross-sectional study was conducted in psychiatric hospitals and clinics in Peshawar after obtaining formal permission from the respective institution. A total of 100 patients (n=100) were included based on referrals from psychiatrists who initially identified potential cases of somatic symptom disorder. Prior to data collection, the researcher established contact with psychiatrists to assess the frequency of somatic symptom disorder presentation in a clinical setting. Upon agreement, the researcher attended clinics to observe patient screening. Patients flagged by the psychiatrist as likely SSD cases were further evaluated by using standardised screening tool such as the somatic symptom scale 8. This approach ensured a systematic recruitment process while maintaining clinical relevance and diagnostic accuracy. Before screening, ethical considerations, including informed consent and confidentiality, were strictly followed. Those participants who showed willingness became part of the present study. Afterward, a demographic sheet was given to the participants, followed by the screening questionnaire of Somatic Symptom Disorder. After the completion of questionnaires, subjects were thanked for being a part of the present research study.

RESULTS

The descriptive analysis of all the variables used to give a detailed idea about the nature of the data. To test the hypothesis, a one-way ANOVA test was used. The alpha level is .05. The results are presented in three separate tables.

Table 1: Socio-Demographic Characteristics of Participants

Sample Characteristics		**N**	**%**
Age	18-21	28	28.0
	22-25	28	28.0
	26-29	7	7.0
	30-33	6	6.0
	34-37	10	10.0
	38-40	21	21.0
Gender	Male	24	24.0
	Female	76	76.0
Marital Status	Married	47	47.0
	Unmarried	53	53.0
Education	Illiterate	31	31.0
	Metric	2	2.0
	Intermediate	5	5.0
	Bachelor	46	46.0
	Higher	16	16.0

Socioeconomic Status	Lower	72	72.0
	Middle	23	23.0
	Upper	5	5.0
House	Rented	54	54.0
	Owned	46	46.0
Higher qualification in family	Illiterate	28	28.0
	Matric	1	1.0
	Intermediate	3	3.0
	Bachelor	28	28.0
	Higher	40	40.0
Psychological Disorder	Yes	59	59.0
	No	41	41.0
Medical Disorder	Yes	20	20.0
	No	80	80.0
Frequent Visits to Doctor	Regular	4	4.0
	Often	43	43.0
	Almost always	53	53.0
Frequent Checking of Medical Reports	Regular	8	8.0
	Often	44	44.0
	Almost always	48	48.0

Table 1 shows the demographic information of individuals diagnosed with somatic symptom disorder. The table indicates that a higher number of participants belong to the 18-21 and 22-25 age groups. Moreover, unmarried females have more somatic symptom disorder as compared to males. An individual with somatic symptom disorder belongs to a lower socioeconomic status as compared to middle and upper socioeconomic strata. Additionally, 80% reported that they have no medical problem for which they seek a medical checkup.

Table 2: Psychometric Properties of Major Study Variables of Somatic Symptoms, Emotional Distress

Variables	Mean	SD	Range	A
SSS	3.08	4.95	8-40	.58

Note: SSS= Somatic Symptom Scale

Table 2 shows that the Cronbach α coefficient of Somatic Symptom Scale consists of 8 items and .58 indicating a moderate internal consistency of the scale.

Table 3: Mean, standard deviation and one-way ANOVA analysis of variance of somatic symptom disorder among different socioeconomic group.

Measures	Lower		Middle		Upper		F (2,97)	η2
Somatic Symptoms	MSD		M	SD	M	SD		
	25.53	4.75	22.70	5.40	21.40	5.17	4.25	.08

Note: ***p<.00, η2= Partial eta square

Table 3 shows the mean variance of lower, middle, and upper classes with respect to somatic symptoms. One-way ANOVA shows a significant mean difference in the level of

socioeconomic status, F (2, 97) = 4.25, p<.05. The post hoc test has shown that lower class (M=25.53, p<.05) have more somatic complaints than middle class (M=22.70, p<.04) and upper class (M=21.40, p>.05). The results supported the hypothesis of the study.

DISCUSSION

The primary aim of the study was to explore the role of socioeconomic status in patients with somatic symptom disorder. The results revealed a strong association between somatic symptom disorder and socioeconomic status, supporting the research hypothesis that individuals with lower socioeconomic status are more likely to develop somatic symptom disorder compared to those from middle or upper social classes. Social classification was based on family income, categorising participants into high, middle, and lower social classes. This result is in conformity with inferences drawn from other studies on the topic.

As mentioned by Suryoputri et al. (2022), youth from lower economic backgrounds also face other challenges, like minimal income and greater risk of domestic violence. Research further takes on such aggravating factors causing health disparities and obstacles in adapting (Brody et al., 2013; Ciairano et al., 2009). Noble et al. (2015) noticed a nexus between both family income and parental education and children's brain development. In addition, some studies suggest that people with lower SES are more likely to suffer more persistent somatic symptoms (PSS) (Von Dem Knesebeck & Barbek, 2023).

According to Vogel (2019), in five persons, one faces mental health issues; however, the flagrant element among all is poverty. Serious mental diseases are linked to the lower employment rates and educational achievement, leading to substantial financial loss (Hakulinen et al., 2019). Moreover, research has explained that both low socioeconomic status (SES) and mental illness are associated with a higher chance of somatic diseases (Skarstein et al., 2023). Elderly people with lower education levels and limited financial resources usually show higher rates of morbidity and mortality (Von Dem Knesebeck et al., 2018). Research suggests that people with lower socioeconomic positions undergo multimorbidity with greater severity and more frequency (Marengoni et al., 2011). The number of severe conditions among study participants was found to be influenced by socioeconomic factors, specifically education and income (Schäfer et al., 2012). Our data align with earlier studies showing a higher prevalence in individuals with chronic conditions with low socioeconomic conditions (Marengoni et al., 2011).

Ladipo et al. (2015) suggest that people with lower socioeconomic class have a higher chance of developing somatic symptom disorder. The reason for this communication gap is the lower socioeconomic class, where expression is not encouraged, resulting in somatising internally the feelings (Hurwitz, 2004). Further, the frequency of somatising patients is directly proportional to socioeconomic status (Ladipo et al., 2015). Also, higher risk towards somatisation is linked to lower levels of income, education, unemployment, and poverty (Neeleman et al., 2001).

CONCLUSION

Socio-economic status is a significant determinant in the development and manifestation of somatic symptom disorder. Lower SES is often associated with increased stress, limited access to healthcare, and poorer mental health resources, all of which contribute to the heightened vulnerability to SSD. Moreover, individuals in lower socio-economic brackets may face greater environmental stressors, such as financial instability and social marginalisation, which exacerbate physical symptom reporting. Understanding the role

of SES in SSD can help improve diagnostic accuracy, treatment strategies, and interventions aimed at addressing the underlying socio-economic factors that influence the disorder.

Implication and Recommendation

The application of the knowledge gathered from the current study is beneficial for health practitioners as well as for the general population. The present study targets the mental health programmes in low SES communities that can improve early SSD detection. Integrating somatic symptom screening assessment in primary care for at-risk populations may reduce misdiagnosis. Socioeconomic support (e.g., financial aid, stress reduction programmes) could mitigate somatic symptom disorder triggers. It is recommended that future researchers should use longitudinal approaches and survey the large community to expand the body of knowledge and establish causal relationships between factors. It is also recommended to conduct awareness-raising seminars to avoid and control the somatic symptom disorder.

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REFERENCES

Abdolmohammadi, K. (2018). Ghadiri Sourman Abadi F, Sadat Seyed Pourmand N, Falsafinejad MR. The Validation of Somatization Inventory in the Students of Tabriz Universities (Iran). Qom Univ Med Sci J, 11(12), 61-7.

Aggarwal OP, Bhasin SK, Sharma AK, Chhabra P, Aggarwal K, Rajoura OP. A New Instrument (Scale) for Measuring the Socioeconomic Status of a Family: Preliminary Study. Indian J Community Med. 2005;30:10–2.

Agoha, B. C. (2010). Stressful Life Events and Somatic Complaints in a Nigerian Adult Sample. Nigerian Journal of Psychological Research, 6.

American Psychological Association. (2022). Manual De Publicaciones De La APA. Editorial El Manual Moderno.

American Psychiatric Association Division of Research. (2013). Highlights of changes from DSM-IV to DSM-5: Somatic Symptom and Related Disorders. Focus, 11(4), 525-527.

Baker, E. H. (2014). Socioeconomic Status, Definition. The Wiley Blackwell Encyclopedia of Health, Illness, Behavior, and Society, 2210-2214. https://doi.org/10.1002/9781118410868.wbehibs395

Bizzi, F., Cavanna, D., Castellano, R., & Pace, C. S. (2015). Children's Mental Representations with Respect to Caregivers and Post-Traumatic Symptomatology in

Somatic Symptom Disorders and Disruptive Behavior Disorders. Frontiers in Psychology, 6, 1125. https://doi.org/10.3389/fpsyg.2015.01125

Brody, G. H., Yu T., Chen Y. F., Kogan S. M., Evans G. W., Beach S. R., Windle M., Simons R. L., Gerrard M., Gibbons F. X., Philibert R. A. (2013). Cumulative Socioeconomic Status Risk Allostatic Load, and Adjustment: A Prospective Latent Profile Analysis with Contextual and Genetic Protective Factors. Developmental Psychology, 49(5), 913–927. https://doi.org/10.1037/a0028847

Ciairano S., Kliewer W., Rabaglietti E. (2009). Adolescent Risk Behavior in Italy and the Netherlands: A Cross-National Study of Psychosocial Protective Factors. European Psychologist, 14(3), 180–192. https://doi.org/10.1027/1016-9040.14.3.180

Creed, F. H., Davies, I., Jackson, J., Littlewood, A., Chew-Graham, C., Tomenson, B., & McBeth, J. (2012). The Epidemiology of Multiple Somatic Symptoms. Journal of Psychosomatic Research, 72(4), 311-317. https://doi.org/10.1016/j.jpsychores.2012.01.009

Dunphy, Louise; Penna, Marta; EL-Kafsi, Jihene (2019). Somatic Symptom Disorder: a Diagnostic Dilemma. BMJ Case Reports, 12(11), e231550–. https://doi.org/10.1136/bcr-2019-231550

Geelen, S. M. V., Rydelius, P. A., & Hagquist, C. (2015). Somatic Symptoms and Psychological Concerns in a General Adolescent Population: Exploring the Relevance of DSM-5 Somatic Symptom Disorder. Journal of Psychosomatic Research, 79(4), 251-258.

Gierk, B., Kohlmann, S., Kroenke, K., Spangenberg, L., Zenger, M., Brähler, E., & Löwe, B. (2014). The Somatic Symptom Scale–8 (SSS-8): A Brief Measure of Somatic Symptom Burden. JAMA Internal Medicine, 174(3), 399-407. https://doi.org /10.1001/jamainternmed.2013.12179

Hakulinen, C., Elovainio, M., Arffman, M., Lumme, S., Pirkola, S., Keskimäki, I., & Böckerman, P. (2019). Mental Disorders and Long Term Labour Market Outcomes: Nationwide Cohort Study of Individuals. Acta Psychiatrica Scandinavica, 140(4), 371-381. https://doi.org/10.1111/acps.13067

Halldórsson, M., Kunst, A. E., Köhler, L., & Mackenbach, J. P. (2000). Socioeconomic Inequalities in the Health of Children and Adolescents: A Comparative Study of the Five Nordic Countries. The European Journal of Public Health, 10(4), 281-288. https://doi.org/10.1093/eurpub/10.4.281

Hurwitz, T. A. (2004). Somatization and Conversion Disorder. The Canadian Journal of Psychiatry, 49(3), 172-178. https://doi.org/10.1177/070674370404900304

Jacobi, F., Höfler, M., Siegert, J., Mack, S., Gerschler, A., Scholl, L., & Wittchen, H. U. (2014). Twelve Month Prevalence, Comorbidity and Correlates of Mental Disorders in Germany: the Mental Health Module of the German Health Interview and Examination Survey for Adults (DEGS1MH). International Journal of Methods in Psychiatric Research, 23(3), 304-319.

Katz, J., Rosenbloom, B. N., & Fashler, S. (2015). Chronic Pain, Psychopathology, and DSM-5 Somatic Symptom Disorder. The Canadian Journal of Psychiatry, 60(4), 160-167. https://doi.org/10.1177/070674371506000402

Ladipo, M. M., Obimakinde, A. M., & Irabor, A. E. (2015). Familial and Socio-Economic Correlates of Somatisation Disorder. African Journal of Primary Health Care and Family Medicine, 7(1), 1-8.https://hdl.handle.net/10520/EJC169853

Lieb, R., Zimmermann, P., Friis, R. H., Höfler, M., Tholen, S., &Wittchen, H. U. (2002). The Natural Course of DSM-IV Somatoform Disorders and Syndromes among Adolescents and Young Adults: A Prospective-Longitudinal Community Study. European Psychiatry, 17(6), 321-331. https://doi.org/10.1016/S0924-9338(02) 00686-7

Limburg, K., Sattel, H., Radziej, K., & Lahmann, C. (2016). DSM-5 Somatic Symptom Disorder in Patients with Vertigo and Dizziness Symptoms. Journal of Psychosomatic Research, 91, 26-32. https://doi.org /10.1016/j.jpsychores.2016.10.005

Löwe, B., Levenson, J., Depping, M., Hüsing, P., Kohlmann, S., Lehmann, M., & Weigel, A. (2022). Somatic Symptom Disorder: A Scoping Review on the Empirical Evidence of a New Diagnosis. Psychological Medicine, 52(4), 632-648. https://doi.org/10.1017/ S0033291721004177

Marengoni, A., Angleman, S., Melis, R., Mangialasche, F., Karp, A., Garmen, A., & Fratiglioni, L. (2011). Aging with Multimorbidity: A Systematic Review of the Literature. Ageing Research Reviews, 10(4), 430-439. https://doi.org/10.1016/j.arr. 2011.03.003

Neeleman, J., Ormel, J., & Bijl, R. V. (2001). The Distribution of Psychiatric and Somatic Ill Health: Associations with Personality and Socioeconomic Status. Psychosomatic Med. 2001; 63:239-247. http://dx.doi.org/10.1097/00006842-200103000-00007

Noble, K. G., Houston, S. M., Brito, N. H., Bartsch, H., Kan, E., Kuperman, J. M., ... & Sowell, E. R. (2015). Family Income, Parental Education and Brain Structure in Children and Adolescents. Nature Neuroscience, 18(5), 773-778. https://doi.org/10. 1038/nn.3983

Peverill, M., Dirks, M. A., Narvaja, T., Herts, K. L., Comer, J. S., & McLaughlin, K. A. (2021). Socioeconomic Status and Child Psychopathology in the United States: A Meta-Analysis of Population-Based Studies. Clinical Psychology Review, 83, 101933. https://doi.org/10.1016/j.cpr.2020.101933

Power, C., Stansfeld, S. A., Matthews, S., Manor, O., & Hope, S. (2002). Childhood and Adulthood Risk Factors for Socio-Economic Differentials in Psychological Distress: Evidence from the 1958 British Birth Cohort. Social Science & Medicine, 55(11), 1989-2004. https://doi.org/10.1016/S0277-9536(01)00325-2

Raza, A., & Zainab, H. (2019). Somatization and Medically Unexplained Symptoms–Prevalence and Correlates among Women at Nahaqi–Khyber Pakhtunkhwa, Pakistan. The Professional Medical Journal, 26(07), 1042-1050. https://doi.org/10.29309/TPMJ/2019.26.07.3444

Schäfer, I., Hansen, H., Schön, G. et al. The Influence of Age, Gender and Socio-Economic Status on Multimorbidity Patterns in Primary Care. First Results from the Multicare Cohort Study. BMC Health Serv Res 12, 89 (2012). https://doi.org/10.1186/1472-6963-12-89

Skarstein, S., Lien, L., & Abebe, D. S. (2023). The Burden of Somatic Diseases among People with Alcohol-and Drug Use Disorders are Influenced by Mental Illness and

Low Socioeconomic Status. A Registry-Based Cohort Study in Norway. Journal of Psychosomatic Research, 165, 111137. https://doi.org/10.1016/j.jpsychores.2022.111137

Suryoputri N., Kiesow H., Bzdok D. (2022). Population variation in social brain morphology: Links to socioeconomic status and health disparity. Social Neuroscience, 17(3), 305–327. https://doi.org/10.1080/17470919.2022.2083230

Tomenson, B.; Essau, C.; Jacobi, F.; Ladwig, K. H.; Leiknes, K. A.; Lieb, R.; Meinlschmidt, G.; McBeth, J.; Rosmalen, J.; Rief, W.; Sumathipala, A.; Creed, F. (2013). Total Somatic Symptom Score as a Predictor of Health Outcome in Somatic Symptom Disorders. The British Journal of Psychiatry, 203(5), 373–380. https://doi.org/10.1192/bjp.bp.112.114405

Tu, C. Y., Liu, W. S., Chen, Y. F., & Huang, W. L. (2020). Is Severity a Clinically Meaningful Specifier of Somatic Symptom Disorder?. Journal of Psychosomatic Research, 133, 110108. https://doi.org/10.1016/j.jpsychores.2020.110108

Vogel, L. (2019). Poor Mental Health, Poverty Threaten Canadian Kids: Report. Canadian Medical Association Journal, 191(38), E1065–E1066. https://doi.org/10.1503/cmaj.1095814

Von Dem Knesebeck, O., & Barbek, R. (2023). Public Stigma Toward Fatigue—Do Social Characteristics of Affected Persons Matter? Results from the SOMA. SOC Study. Frontiers in Psychology, 14, 1213721.doi: 10.3389/fpsyg.2023.1213721

Von Dem Knesebeck, O., Löwe, B., Lehmann, M., & Makowski, A. C. (2018). Public Beliefs about Somatic Symptom Disorders. Frontiers in Psychiatry, 9, 616.doi: 10.3389/fpsyt.2018.00616.

Wani, R. T. (2019). Socioeconomic Status Scales-Modified Kuppuswamy and Udai Pareekh's Scale Updated for 2019. Journal of Family Medicine and Primary Care, 8(6), 1846.

Wolters, C., Gerlach, A. L., & Pohl, A. (2022). Interoceptive Accuracy and Bias in Somatic Symptom Disorder, Illness Anxiety Disorder, and Functional Syndromes: A Systematic Review and Meta-Analysis. Plos One, 17(8), e0271717. https://doi.org/10.1371/journal.pone.0271717