

From Pain to Diagnosis: Somatic Presentations of Anxiety and Depression in Albanian Adults _____

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Abstract

This study explores the prevalence of, and relationships among, somatic symptoms, depressive symptoms, anxiety symptoms, and general help-seeking behaviors in the Albanian context. A cross-sectional quantitative design was employed using convenience and snowball sampling, involving 181 adult participants (116 women and 65 men). Data were collected through the standardized instruments PHQ-15, PHQ-9, GAD-7, and GHSQ. The results revealed significant associations between psychological and somatic symptoms, no significant differences across gender and age groups, and a strong orientation towards informal sources of help-seeking. Depressive and anxiety symptoms emerged as stronger predictors of help-seeking behavior than somatic symptoms or demographic factors such as gender and age. These findings highlight the need for a stronger integration of mental health services into primary healthcare in Albania.

Introduction

To the present day, the integration of psychological well-being into primary healthcare has remained limited, particularly in the Albanian context, where the Semashko model has historically predominated, focusing primarily on physical illnesses. The transition of the 1990s toward a less centralized system, combined with economic difficulties, led to the prioritization of emergency services and the neglect of the psychological dimension [38,20]. However, the literature emphasizes that quality care requires the integration of the health triad—physical, social, and psychological—reflecting the close link between physical symptoms and psychological disorders^{12; 13}. Within this framework, somatic symptoms represent one of the most common ways in which psychological distress presents in primary care, characterized by physical complaints that often cannot be fully explained and are associated with biological, psychological, and sociocultural factors^{32; 7; 30}.

In contemporary diagnostics, somatization is included within the category of Somatic Symptom Disorder (SSD), which emphasizes cognitive, emotional, and behavioral reactions to bodily symptoms and their impact on everyday functioning. Epidemiological studies indicate a considerable prevalence of these disorders (approximately 4.6%), with higher rates among women^{1; 6; 19}. The literature also highlights the prevalence of somatic symptoms among younger age groups and in high-stress contexts, where such symptoms often serve as a means of expressing emotional distress, particularly in cultures that discourage the direct expression of emotions^{30, 35}. In primary care, patients with depression or anxiety often initially

present with physical complaints, whereas somatization may function as a defense mechanism and is associated with increased use of healthcare services and delayed diagnosis^{30; 41}.

The significance of this study lies in its contribution to a deeper understanding of the conjunction between somatic symptoms, depression, and anxiety, particularly in primary healthcare settings, where patients most commonly present with physical complaints. As somatic symptoms often conceal underlying psychological disorders, this study highlights the role that depressive and anxiety symptoms play in how somatization is experienced and intensified, thereby helping reduce the risk of misdiagnosis and fragmented care.

The goal of this study is to explore the relationship between somatic symptoms, depressive symptoms, and anxiety symptoms among the Albanian population, taking into consideration the impact of these symptoms on daily functioning and health-related help-seeking behavior. The study aims to provide a deeper understanding of somatization as a biopsychosocial phenomenon by analyzing the interconnection between bodily symptomatology and affective and emotional components, as well as the role that demographic and sociocultural factors may play in the presentation and subjective experience of somatic symptoms.

Somatization as a psychological phenomenon

Somatic symptoms do not constitute a specific disease but rather a mode of presentation of an underlying pathology, often one that cannot be fully explained through traditional physiological assessments. It was not until the late 17th century that psychological factors began to be considered a possible cause of somatization⁴². These symptoms are closely linked to brain functioning and unprocessed emotional states and are interpreted as a means through which the body expresses psychological distress. Within this framework, somatization is defined as the tendency to experience and communicate psychological distress through physical symptoms and to seek medical help for those symptoms³², while diagnostically it is characterized by an excessive focus on physical symptoms and disproportionate cognitive, emotional, and behavioral responses to them². The literature distinguishes between two main forms of somatization: presentational somatization, in which symptoms serve as an expression of emotional concerns, and functional somatization, in which symptoms remain medically unexplained and persist over time¹⁴.

Somatization is prevalent across many psychological disorders, particularly depression and anxiety, and is associated with reduced functioning, disability, and high healthcare costs. It is strongly linked to depressive and anxiety symptoms, moderately linked to other disorders, and more weakly linked to substance use²⁸, while factors such as childhood trauma and lack of family support contribute to its

development⁸. Other contributors are biological and psychosocial factors, while the symptoms are associated with negative affect, irrational health-related beliefs, and an increased focus on the body.

The relationship between somatization and depression

Depression is one of the most prevalent mental disorders worldwide, affecting approximately 332 million people, and is characterized by low mood and cognitive and somatic disturbances that impair daily functioning^{42; 3; 11}. In primary care settings, it often presents through somatization, with individuals reporting physical symptoms such as fatigue, sleep disturbances, and bodily pain^{15; 22}. This relationship is associated with biological mechanisms, including alterations in serotonin and dopamine, as well as changes in the prefrontal cortex, amygdala, and hippocampus, which are involved in emotional processing and stress regulation^{39; 22}.

From a clinical and cultural perspective, individuals often present with physical complaints while avoiding emotional expression, which is associated with stigma and increases the risk of misdiagnosis^{30; 40}. Studies show that a large proportion of individuals report only physical symptoms during initial visits (69%), with considerable cross-cultural variation^{12; 30}, while in cultures where emotional expression is limited, somatization becomes a dominant form of articulating stress²⁶. This highlights the need for a biopsychosocial assessment, as focusing solely on physical symptoms may mask underlying disorders, whereas professional awareness improves their identification^{6; 17; 31}.

The relationship between somatization and anxiety

Anxiety is defined as a physiological and psychological response to stress, mediated by the sympathetic nervous system and the “fight-or-flight” mechanism, which activates the release of adrenaline and cortisol and increases heart rate and breathing. Although this response is adaptive in the short term, prolonged activation may lead to anxiety disorders and functional impairment^{2; 36}. In this context, somatization represents the expression of psychological distress through physical symptoms that are not fully explained, such as pain and fatigue^{23; 32; 37}, while the relationship between anxiety and somatization is explained by the activation of stress systems and increased sensitivity to bodily sensations^{28; 5}.

From a clinical and epidemiological perspective, anxiety often co-occurs with somatization and depression, with a high prevalence of bodily symptoms and positive correlations among them¹⁶. In primary care settings, patients mainly present with physical complaints, while emotional symptoms remain underreported, leading to an underestimation of psychological causes^{27; 35}. The co-occurrence of these disorders is associated with lower quality of life and increased

disability₃₃, while cultural factors influence how symptoms are expressed. This evidence emphasizes that somatic symptoms are part of an interconnected psychological network and require integrated biopsychosocial approaches to treatment_{21; 18}.

Methodology

This study employed a cross-sectional quantitative design, aiming to explore the relationships between somatic symptoms, depressive symptoms, anxiety symptoms, and general help-seeking behaviors among the Albanian adult population. This study used non-probability convenience and snowball sampling, whereby a Google Forms questionnaire was distributed online through social media for data collection. Before completing the questionnaire, participants were clearly informed about the purpose of the study and were assured that all information would remain confidential. Participants were required to be over 18 years old and to have no diagnosis of chronic pain. These exclusion criteria were clearly stated in the form, and all personal information was handled with full respect for participants' privacy.

Assessment instruments

The instruments used in this study were translated into Albanian and adapted for the purposes of the study. Before their administration in the main sample, the translated versions were piloted in order to assess clarity and suitability for the Albanian context. After data collection, internal consistency was examined using Cronbach's Alpha coefficients.

Somatic symptoms were assessed using the PHQ-15, an instrument derived from the Patient Health Questionnaire, which includes 15 items related to common somatic complaints. Participants reported symptoms experienced during the past four weeks on a 3-point Likert scale ranging from 0 to 2. The PHQ-15 showed very high internal consistency in the present study, with Cronbach's Alpha $\alpha = 0.944$. Depressive symptoms were measured using the PHQ-9, anxiety symptoms using the GAD-7, and help-seeking intentions using the General Help-Seeking Questionnaire. In the present study, the PHQ-9 demonstrated acceptable internal consistency, $\alpha = 0.785$, while the GHSQ also showed good reliability, $\alpha = 0.821$. The GAD-7 showed moderate internal consistency, $\alpha = 0.673$, which should be interpreted with some caution but was considered acceptable for exploratory use in this sample.

Overall, although the Albanian versions of the instruments were not previously validated, in this specific study population they were translated, adapted, and piloted before use. Their internal consistency values supported their use in the present study.

TABLE 1: Shapiro–Wilk test of normality for the main study variables

Variables	W	df	p
Somatic symptoms (PHQ-15)	.977	181	.005
Depressive symptoms (PHQ-9)	.955	181	< .001
Anxiety symptoms (GAD-7)	.913	181	< .001
Help-seeking behaviors (GHSQ)	.990	181	.246

Note. The Shapiro–Wilk test was used to assess the normality of the distribution of the variables. A p-value of < .05 indicates a statistically significant deviation from normality.

TABLE 2: Correlations *–PHQ15, PHQ9, GAD7 AND GHSQ*

	PHQ-15	PHQ-9	GAD-7	GHSQ
PHQ-15	1	.668**	-.569**	-.171*
PHQ-9	.668**	1	.768**	-.279**
GAD-7	-.596**	.768**	1	-.117
GHSQ	-.171*	-.279**	-.117	1

** . Correlation is significant at the 0.01 level (2-tailed), $p < .01$.

* . Correlation is significant at the 0.05 level (2-tailed), $p < .05$.

TABLE 3: Multiple linear regression predicting general help-seeking behaviors (GHSQ)

Predictor	B	SE	β	t	p
Konstante	29.19	1.95	-	14.99	<.001
Anxiety (GAD-7)	0.44	0.21	.24	2.10	0.037
Depression (PHQ-9)	-0.73	0.20	-.46	-3.74	<.001
Somatic symptoms (PHQ-15)	-0.01	0.18	-.01	-0.08	.938

Note. Dependent Variable: General Help-Seeking Behaviors (GHSQ)

TABLE 4: ANOVA: Gender differences in general help-seeking behaviors (GHSQ)

Variance source	SS	df	Ms	F	P
Between groups	3.71	1	3.71	0.04	.840
Within groups	16268.52	179	90.98	-	-
Total	16272.23	180	-	-	-

TABLE 5: ANOVA: Differences in general help-seeking Behaviors (GHSQ) across age groups

Variance source	SS	df	Ms	F	P
Between groups	111.56	2	55.78	0.61	.542
Within groups	16160.67	179	90.79	-	-
Total	16272.23	180	-	-	-

Note. Dependent Variable: General Help-Seeking Questionnaire (GHSQ).
The assumption of homogeneity of variances was met (Levene's test, $p = .604$).

Statistical analysis

The statistical analyses used in this study included descriptive analyses, Pearson correlation analyses, ANOVA, and linear regression. First, descriptive analysis was conducted to describe the sociodemographic characteristics of the participants and the distribution of the main study variables. Normality was tested using the Shapiro–Wilk test and visual inspection, and although some deviations were statistically significant, the distributions were considered suitable for parametric analyses due to the sample size₃₄.

The analyses were conducted in IBM SPSS on a sample of 181 participants (64.1% female; mean age = 25.5 years), with the level of statistical significance set at $p < .05$. The descriptive results showed consistent symptom levels in line with the literature on non-clinical populations. Using standard cut-off scores, 41.6% ($n = 77$) of participants had clinically significant depressive symptoms ($\text{PHQ-9} \geq 10$), while 65.9% ($n = 122$) had anxiety symptoms ($\text{GAD-7} \geq 10$), indicating a high prevalence of psychological distress in the sample.

Pearson correlation analysis showed strong and statistically significant associations between somatic, depressive, and anxiety symptoms. Somatic symptoms were strongly associated with depression ($r = .668$, $p < .01$) and anxiety ($r = .596$, $p < .01$), while the strongest association was found between depression and anxiety ($r = .768$, $p < .01$), reflecting high comorbidity. In contrast, help-seeking behaviors showed weak negative correlations with symptoms, particularly depression, suggesting that higher symptom intensity may hinder help-seeking.

ANOVA analyses showed no statistically significant differences in help-seeking behaviors by gender ($F(1, 179) = 0.041$, $p = .840$) or age group ($F(2, 178) = 0.61$, $p = .542$), while the statistical assumptions were met according to Levene's test. This suggests that demographic factors are not significant determinants of these behaviors, highlighting the importance of psychological and sociocultural factors.

Multiple linear regression analysis showed that the model was statistically significant ($F(3, 177) = 6.59$, $p < .001$), explaining approximately 10% of the variance in help-seeking behaviors. Anxiety symptoms emerged as a positive

predictor, whereas depressive symptoms emerged as a negative predictor, while somatic symptoms did not contribute independently when emotional variables were controlled for. These findings indicate that emotional dimensions play a greater role in determining help-seeking behaviors.

GHSQ analysis showed that individuals have a greater tendency to seek help from informal sources, such as partners, family members, and friends, while formal sources, such as mental health professionals, are used less frequently. Some participants reported that they would not seek help from anyone, reflecting stigma, lack of trust, or the normalization of psychological suffering. Additionally, most participants had not consulted a family doctor, and only a small percentage had received a referral for professional help.

Overall, the findings indicate that help-seeking is primarily supported by informal social networks, while the use of professional services remains limited. This underscores the need to increase awareness, reduce stigma, and strengthen the role of primary care in the early identification and referral of mental health problems, thereby supporting a biopsychosocial approach to treatment.

Discussion

This study aimed to explore the interactions among somatic, depressive, anxiety symptoms, and general help-seeking behaviors in a population of Albanian adults, providing empirical evidence on how psychological distress is manifested and addressed within the context of primary healthcare. The findings contribute to the existing literature by shedding light on the cultural and structural specificities that influence the trajectory of help-seeking in Albania. The results revealed significant associations among somatic, depressive, and anxiety symptoms, confirming the interconnected nature of these experiences. This finding is particularly meaningful for Albanian primary care, where bodily complaints often constitute the primary reason for presenting to a family physician.

In the absence of systematic identification of the psychological component, these symptoms risk being treated only at the somatic level, leading to the underdiagnosis of depression and anxiety. The fact that depressive and anxiety symptoms emerged as stronger predictors of help-seeking behaviors than somatic symptoms suggests that, although distress is often expressed bodily, subjective awareness of emotional suffering may be the key factor that encourages individuals to seek support. This has direct implications for assessment practices in primary care. A central finding of the study is the dominance of informal sources of help-seeking, such as intimate partners, friends, and family, compared to formal sources. This pattern reflects a familiar reality in societies with strong family ties, but it also signals limitations in the access to, and perception of, professional mental health services. Particularly meaningful is the relatively low use of the GP as a source of help for emotional

concerns. In the Albanian context, where the GP represents the first point of contact with the healthcare system, this finding suggests a discrepancy between the theoretical role of primary care and actual practice.

This may be related to a lack of specialized training, time constraints during consultations, or individuals' own expectations, as they may not consider mental health to fall within the competence of the general practitioner. The presence of a considerable percentage of individuals who state that they would not seek help from anyone reinforces concerns about structural and cultural barriers. These barriers have direct consequences for the efficiency of the healthcare system and for the early detection of cases in primary care. The absence of statistically significant differences in general help-seeking behaviors by gender and age group suggests that the patterns described are relatively consistent across the adult sample.

This finding may reflect a homogenization of help-seeking experiences in the online context, but it also underscores the need for systemic interventions that address the entire adult population, rather than only specific groups. The findings of this study highlight the need for stronger integration of mental health into Albanian primary care. Improving assessment for depression and anxiety during GP consultations, training primary care professionals, and developing clear referral pathways to specialized services are essential steps toward increasing the efficiency of the healthcare system.

This study should be interpreted in light of several limitations. First, the cross-sectional design does not allow conclusions about causal relationships between the symptoms and behaviors examined in this study. Secondly, the use of self-report instruments may have introduced response bias, as participants may have underreported or overreported symptoms based on personal perception, stigma, or social desirability. Third, the online convenience and snowball sampling method may have limited the representativeness of the sample, as participation was more accessible to individuals who use social media and are more willing to complete online questionnaires. In addition, the relatively young mean age of the sample may limit the generalizability of the findings to the wider Albanian adult population, particularly older adults, who may experience somatic symptoms and help-seeking behaviors differently. Nevertheless, despite these limitations, the study provides valuable exploratory evidence on the relationship between psychological distress, somatic presentation, and help-seeking patterns in the Albanian context.

As a methodological recommendation for future research, the inclusion of qualitative interviews with general practitioners is strongly suggested, with the aim of collecting direct information on their experience in identifying, managing, and referring patients with somatic and psychological symptoms. Such an approach would enable an assessment of the actual efficiency of the healthcare system from the perspective of primary care professionals and would help identify structural and organizational gaps.

In conclusion, this study provides important evidence on the interconnection between psychological and somatic symptoms and help-seeking patterns in the Albanian context. The findings emphasize the need for a more integrated and mental health-sensitive approach in primary care, laying the groundwork for evidence-informed interventions and further multidisciplinary research.

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References

1. American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (DSM-5®). American Psychiatric Publishing.
2. American Psychiatric Association. (2022). DSM-5-TR: Diagnostic and statistical manual of mental disorders (5th ed., text rev.). American Psychiatric Publishing.
3. APA Dictionary of Psychology. (2018). <https://dictionary.apa.org/depression>
4. Bar-Haim, Y., Lamy, D., Pergamin, L., Bakermans-Kranenburg, M. J., & van IJzendoorn, M. H. (2007). Threat-related attentional bias in anxious and nonanxious individuals: A meta-analytic study. *Psychological Bulletin*, 133(1), 1–24. <https://doi.org/10.1037/0033-2909.133.1.1>
5. Barsky, A. J. & Borus, J. F. (1999). Functional somatic syndromes. *Annals of Internal Medicine*, 130(11), 910–921.
6. Becker, A. E., Kleinman, A., & Good, B. (2021). Culture, somatization and mental illness. *Psychosomatic Medicine*, 83(6), 549–556. <https://doi.org/10.1097/PSY.0000000000000953>
7. Becker, J. P., Paixão, R., & Quartilho, M. J. (2021). Psychopathology and Somatic Complaints: A Cross-Sectional Study with Portuguese Adults. *Healthcare*, 9(4), 478. <https://doi.org/10.3390/healthcare9040478>
8. Brown R., Schrag A., Trimble M. (2005). Dissociation, childhood interpersonal trauma, and family functioning in patients with somatization disorder. <https://pubmed.ncbi.nlm.nih.gov/15863791/>
9. Busaidi Z. (2010, July 19). The concept of somatization. A cross-cultural perspective. <https://pmc.ncbi.nlm.nih.gov/articles/PMC3074701/>
10. Chalmers, J. A., Quintana, D. S., Abbott, M. J.-A., & Kemp, A. H. (2014). Anxiety Disorders are Associated with Reduced Heart Rate Variability: A Meta-Analysis. *Frontiers in Psychiatry*, 5(80). <https://doi.org/10.3389/fpsy.2014.00080>
11. Chand, S. P., & Arif, H. (2023). Depression. *StatPearls-NCBI-Bookshelf*. <https://www.ncbi.nlm.nih.gov/books/NBK430847/>
12. Dahli, M. P., Šaltytė-Benth, J., Haavet, O. R., Ruud, T., & Brekke, M. (2021). Somatic symptoms and associations with common psychological diagnoses: a retrospective cohort study from Norwegian urban general practice. *Family Practice*. <https://doi.org/10.1093/fampra/cmab038>

13. Engel, G. L. (1977). The need for a new medical model: A challenge for biomedicine. *Science*, 196(4286), 129–136. <https://doi.org/10.1126/science.847460>
14. Fischler, B., Gucht V. (2002). Somatization. A critical Review of conceptual and Methodological Issues.
15. Fu, X., Zhang, F., Liu, F., Yan, C., & Guo, W. (2019). Editorial: Brain and Somatization Symptoms in Psychiatric Disorders. *Frontiers in Psychiatry*, 10, 146. <https://doi.org/10.3389/fpsyt.2019.00146>
16. Garrusi, B., Danaei, M., & Aboosaeidi, R. (2019). The prevalence and predictive factors of somatization and its relationship with anxiety and depression in Iranian population. *Journal of preventive medicine and hygiene*, 60(4), E400–E406. <https://doi.org/10.15167/2421-4248/jpmh2019.60.4.1006>
17. Gerrits, M. M., van Marwijk, H. W., van Oppen, P., van der Horst, H., & Penninx, B. W. (2013). The role of somatic health problems in the recognition of depressive and anxiety disorders by general practitioners. *Journal of Affective Disorders*, 151(3), 1025–1032. <https://doi.org/10.1016/j.jad.2013.08.030>
18. Haug, T. T., Mykletun, A., & Dahl, A. A. (2004). The association between anxiety, depression, and somatic symptoms in a large population: The HUNT-II study. *Psychosomatic Medicine*, 66(6), 845–851. <https://doi.org/10.1097/01.psy.0000145823.85558.0c>
19. Henningsen, P., Zipfel, S., & Herzog, W. (2018). Management of functional somatic syndromes. *The Lancet*, 391(10123), 946–955. [https://doi.org/10.1016/S0140-6736\(17\)32190-7](https://doi.org/10.1016/S0140-6736(17)32190-7)
20. Ismaili, E., Rama, R., & Dragoti, E. (2024). Access to healthcare services among vulnerable groups in Albania: unveiling barriers and proposing solutions. KONT. (policy / access paper that helps frame care-seeking behaviors and barriers in adults).
21. Jurado-González, F., García-Torres, F., Contreras, A., Muñoz-Navarro, R., González-Blanch, C., Medrano, L. A., Ruiz-Rodríguez, P., Cano-Vindel, A., & Moriana, J. A. (2024). Mapping bridges between anxiety, depression, and somatic symptoms in primary care patients: A network perspective. *Current Psychology*, 43, 4292–4304. <https://doi.org/10.1007/s12144-023-04657-3>
22. Kapfhammer, H. (2006). Somatic symptoms in depression. *Dialogues in Clinical Neuroscience*, 8(2), 227–239. <https://doi.org/10.31887/dcns.2006.8.2/hpkapfhammer>
23. Kelt Mental Health Resource Centre. (2025). Somatization. <https://keltymentalhealth.ca/somatization>
24. Kemp, A. H., & Quintana, D. S. (2013). The relationship between mental and physical health: Insights from the study of heart rate variability. *International Journal of Psychophysiology*, 89(3), 288–296. <https://doi.org/10.1016/j.ijpsycho.2013.06.018>
25. Kim, J. H., Tsai, W., Kodish, T., Trung, L. T., Lau, A. S., & Weiss, B. (2019). Cultural variation in temporal associations among somatic complaints, anxiety, and depressive symptoms in adolescence. *Journal of Psychosomatic Research*, 124, 109763. <https://doi.org/10.1016/j.jpsychores.2019.109763>
26. Kim, J. Y., McLaughlin, K. A., Keyes, K. M., & Hatzenbuehler, M. L. (2019). Cultural differences in somatic symptoms, anxiety, and depressive symptoms in adolescence. *Journal of Youth and Adolescence*, 48(6), 1115–1128. <https://doi.org/10.1007/s10964-019-01005-4>
27. Kirmayer, L. J., & Young, A. (1998). Culture and somatization: clinical, epidemiological, and ethnographic perspectives. *Psychosomatic medicine*, 60(4), 420–430. <https://doi.org/10.1097/00006842-199807000-00006>
28. Kroenke, K. (2003). Patients presenting with somatic complaints: Epidemiology, psychiatric comorbidity and management. *International Journal of Methods in Psychiatric Research*, 12(1), 34–43.

29. Kroenke, K., Spitzer, R. L., Williams, J. B. W., Linzer, M., Hahn, S. R., deGruy, F. V., & Brody, D. (1998). The association between anxiety, depression, and somatic symptoms in a large population: The HUNT-II study. *Psychosomatic Medicine*, 60, 468–475. <https://doi.org/10.1097/00006842-199807000-00014>
30. Li X, Zhang H, Han X, Guo L, Ceban F, Liao Y, Shi J, Wang W, Liu Y, Song W, Zhu D, Wang H, Li L, Fan B, Lu C and McIntyre RS (2023). Predictive potential of somatic symptoms for the identification of subthreshold depression and major depressive disorder in primary care settings. *Front Psychiatry* 14:999047. <https://doi.org/10.3389/fpsyt.2023.999047>
31. Li, Y., Jia, S., Cao, B., Chen, L., Shi, Z., & Zhang, H. (2023). Network analysis of somatic symptoms in Chinese patients with depressive disorder. *Frontiers in Public Health*, 11, 1079873. <https://doi.org/10.3389/fpubh.2023.1079873>
32. Lipowski, Z. (1987). Somatization. *Medicine's Unsolved Problem*.
33. Löwe, B., Spitzer, R. L., Williams, J. B., Mussell, M., Schellberg, D., & Kroenke, K. (2008). Depression, anxiety and somatization in primary care: syndrome overlap and functional impairment. *General hospital psychiatry*, 30(3), 191–199. <https://doi.org/10.1016/j.genhosppsych.2008.01.001>
34. Malato, G. (2025, January 23). An Introduction to the Shapiro-Wilk Test for Normality | Built In. [builtin.com. https://builtin.com/data-science/shapiro-wilk-test](https://builtin.com/data-science/shapiro-wilk-test)
35. Marple, R. L., Kroenke, K., Lucey, C. R., Wilder, J., & Lucas, C. A. (1997). Concerns and expectations in patients presenting with physical complaints. Frequency, physician perceptions and actions, and 2-week outcome. *Archives of internal medicine*, 157(13), 1482–1488.
36. McEwen, B. S. (2007). Physiology and neurobiology of stress and adaptation: Central role of the brain. *Physiological Reviews*, 87(3), 873–904. <https://doi.org/10.1152/physrev.00041.2006>
37. Merriam-Webster. (2025). Somatization. In Merriam-Webster.com dictionary. <https://www.merriam-webster.com/dictionary/somatization>
38. Saric, J., Kiefer, S., Peshkatari, A., & Wyss, K. (2021). Assessing the quality of care at primary health care level in two pilot regions of Albania. *Frontiers in Public Health*, 9, Article 747689. <https://doi.org/10.3389/fpubh.2021.747689>
39. Tang, L., Zhong, J., Zeng, M., Deng, W., Huang, C., Ye, S., Li, F., Lai, D., Huang, W., Chen, B., Deng, X., Lai, X., Wu, L., Zou, B., Qiu, H., & Liao, Y. (2025). Construction and verification of a predictive model for depression risk of patients with somatization symptoms. *Frontiers in Psychiatry*, 16, 1555513. <https://doi.org/10.3389/fpsyt.2025.1555513>
40. Tylee, A., & Gandhi, P. (2005). The importance of somatic symptoms in depression in primary care. *Primary care companion to the Journal of clinical psychiatry*, 7(4), 167–176. <https://doi.org/10.4088/pcc.v07n0405>
41. World Health Organization. (2023). Depression. WHO. <https://www.who.int/news-room/fact-sheets/detail/depression>
42. World Health Organization. (2025). Depressive disorder (depression). <https://www.who.int/news-room/fact-sheets/detail/depression>
43. Zheng, F., Duan, Y., Li, J., Lai, L., Zhong, Z., Hu, M., & Ding, S. (2019). Somatic symptoms and their association with anxiety and depression in Chinese patients with cardiac neurosis. *Journal of International Medical Research*, 47(10), 4920–4928. <https://doi.org/10.1177/0300060519869711>