

**"CAROL DAVILA" UNIVERSITY OF MEDICINE AND
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**STUDY OF THE CORRELATIONS BETWEEN HYPNIC
DISORDERS AND SOMATOFORMAL ACCUSATIONS IN PATIENTS
WITH PSYCHIATRIC COMORBIDITIES
PHD THESIS SUMMARY**

**PhD supervisor:
PROF. DR. IOANA ANCA BĂDĂRĂU**

**PhD student:
IONESCU CLAUDIU GABRIEL**

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Introduction

Somatoform disorders are conditions in which the patient's mental state is altered due to the many physical symptoms that he accuses and to which, despite the numerous medical investigations to which he undergoes, no organic substrate has been found [1]. Present as a clinical manifestation in various forms over time, doctors have encountered this pathology that could not be correctly and clearly classified and separated from other comorbid pathologies such as somatic, psychopathological or so-called functional, with which often is accompanied. This type of disorder has always been situated under the dual concept of physical-mental, being associated with many names such as "psychogenic, psychosomatic, conversion, hypochondria, somatization, hysteria" until now when it is called somatic symptoms disorder-SSD). Thus, SSD has been frequently underdiagnosed over time, although it associates many clinical pictures in primary and specialist care. The prevalence of SSD is 5-7% in the general population but is in the range of 5-35% in primary care units. [4,5,6,7]. Also, two-thirds of the symptoms presented in the primary care offices are of the somatoform or "medically unexplained" type. [8]

From a psychiatric point of view, somatic symptoms are common as part of the clinical picture of other comorbidities such as depressive and anxiety disorder or conversion disorders, but there are enough cases of somatic symptoms diagnosed per se, with insufficient data on their prevalence in care. specialized psychiatrist in our country. Recently, the emergence of this type of disorder seems to be marked by a much greater interest and awareness on the part of mental health professionals but also of those in primary care and, last but not least, of the general population, as part of awareness of mental disorders in general. This paper describes a category of population little studied at the national level so far, namely that of patients with somatic symptoms, adding to the clinical picture the presence of hypnotic disorders and anxious-depressive affective curtain, assessed by questionnaires but also perceived by to patients.

The importance of studying the disorder with somatic symptoms and its correlations with hypnotic and psychopathological variables lies in a number of scientific and clinical aspects but especially the potential impact that this condition has on the individual, family and community. From a scientific point of view, establishing the correlations between the somatic symptoms and the hypnotic and psychopathological changes is a mandatory point in compiling epidemiological, neuroimaging, genetic studies in the case of these types of patients.

CHAPTER 1. Peculiarities of Adult Somatic Symptom Disorder

The first chapter of the general part reviews the main aspects of the type of somatic symptom disorder (SSD), touching on issues such as diagnosis, existing assessment tools, clinical picture and associated comorbidities, and functional prognosis of the pathology.

Current criteria focus more on patients' subjective feelings about the symptoms they are experiencing than on the symptoms themselves [36,37]. In 1997, an Italian study by Faravelli and co-workers estimated that the prevalence of somatic symptoms was 13% in the general population of the Florence area, and this was one of the first attempts to estimate European statistics on this type of disorder. [39]. In 2001, Nimnuan and his colleagues conducted a study on the prevalence of somatic disorders in the general population of a hospital. 890 subjects were interviewed and the results showed that 52% presented the criteria for diagnosing this condition. Psychiatric comorbidities were more closely associated with subjects with multiple somatic charges. Most subjects attributed somatic symptoms to physical causes and when they did not, they tended to resort to alternative treatments more frequently [40]. In 2002, Sha and co-workers found an average of 4.3 somatic symptoms in a cohort of 3,500 patients, the most common being joint pain-65%, fatigue-55%, back pain-45%, difficulty breathing-41%. , insomnia-38%, nausea / indigestion-36%, constipation / diarrhea-34% [41].

Disorder of somatic symptoms has the highest cost in terms of functional disability and unemployment, according to a study of 13,334 subjects by Thomassen in 2003 [42]. In 2016, a study in Croatia on the population aged 10-25 years (N = 1512) showed a higher prevalence of somatic symptom disorder in females but also in the subgroup aged 15-16 years with progressive growth of the number of symptoms as we progress into adolescence. Possible explanations include, in the author's opinion, psycho-sexual development factors, socio-cultural and physiological factors [50].

In Norway, under the leadership of Leiknes, a prospective study was conducted between 1990-2001 that evaluated a number of 605 participants the evolution of the stability of the diagnosis of somatic symptom disorder and its comorbidity with anxiety-depressive disorders. Among the results we notice the similarity of the clinical manifestations of the somatic symptom disorder among the participants, concluding improperly the subdivision of this disorder into several distinct categories, a situation valid at that time. Also, depressive disorders detected at the beginning of the study were considered a negative prognostic factor on the evolution and maintenance of somatic symptoms over the years and at the time of the “current state” examination as opposed to anxiety disorders which were only a negative prognostic factor. for the disturbance of somatic symptoms during the interval: "lifetime" [136].

CHAPTER 2. Hypnotic disorders in patients with psychiatric comorbidities

Non-organic hypnotic disorders (TH), a category that includes primary non-organic insomnia, are difficulties encountered in initiating or maintaining sleep and are the most common sleep disorder with a rate of 35-45% in adults. Insomnia is defined as a patient's dissatisfaction with the quality or quantity of sleep with symptoms such as: difficulty initiating, maintaining or waking up in the morning with inability to resume sleep. This chapter aims to present a systematic synthesis of research studies that have evaluated the involvement of hypnotic disorders and inorganic insomnia in the onset, evolution and prognosis of somatic symptoms disorders mediated by psychiatric comorbidities present. Although the diagnosis of primary insomnia does not preclude the existence of psychiatric or somatic comorbidities, the causes of hypnotic disorder are not given by the pathophysiological effects of comorbid disorders. However, a difficult situation to differentiate is that of depressive disorders, where sleep-related conditions may precede the onset or may be the manifestation of psychiatric disorders or may be comorbid to other medical conditions [146,147].

A study conducted in Germany by John and Meyer's team in 2005 focused on short sleep duration as an integrative indicator of the influence on other psychiatric comorbidities. 4075 participants answered questionnaires related to various conditions such as anxiety, depression, somatoform complaints, psychotropic substance abuse and sleep duration. The results showed that subjects with psychiatric comorbidity were more likely to have a sleep duration of less than 7 hours, a relationship that is valid for depressive, anxiety, or addictive

disorders, not somatoform charges. A similar study assesses the relationship between sleep quality and overall functionality and quality of life in a sample of 35 people, highlighting an increased association between short sleep duration, mixed hypnotic disorders and exacerbation of psychiatric symptoms associated with subjects, such as depression, anxiety or somatoform. [156]. A study evaluating the impact of insomnia on other psychiatric comorbidities shows that insomnia was the first symptom in the onset of affective disorders in over 40% of cases but also that insomnia occurred after the diagnosis of anxiety disorders in 40% of cases [154]. Insomnia influences the evolution and prognosis of other psychiatric disorders such as psychoactive substance use [186]. In the same study, only 2.4% of patients were diagnosed with "pure" insomnia, without other psychiatric comorbidities, which shows a complex relationship between these pathologies.

CHAPTER 3. Working hypotheses and research objectives

The research hypothesis from which the study was conducted in this paper states that hypnotic disorders and somatic symptoms have a two-way relationship in terms of their onset, evolution and independent prognosis in patients with psychiatric comorbidities. This hypothesis was formulated as a possible answer to the general goal of highlighting a common feature in the clinic of these patients and in the future global therapeutic approach, targeting both somatoform symptoms and hypnotic disorders.

In an attempt to demonstrate the research hypothesis, two general objectives of the study were established, each with a set of specific, directly measurable objectives.

General Objective I: Can an analysis of the typology of somatic symptom disorder be performed in adults with psychiatric comorbidities of the anxiety-depressive type?

Specific objectives:

- Can the specific symptoms of the studied disorder be identified?
- Can psychiatric comorbidities be described and quantified among the group of selected subjects?
- Can the symptoms that make up the somatic symptoms disorder and its individual perception on the selected subjects be analyzed in detail (can socio-demographic correlations be made)?

- Can the severity of these symptoms and their relationship to the presence of psychiatric comorbidities be quantified?

Overall Objective II: Can an analysis of hypnotic disorders and their severity be performed in adults with anxiety-depressive psychiatric comorbidities?

Specific objective:

- Can an assessment of hypnotic disorders be made in selected subjects (can socio-demographic correlations be made)?

Overall Objective III: Is there agreement between the assessed hypnotic disorders and the assessed somatic symptoms in the selected subjects?

Specific objectives:

- Can there be associations between hypnotic disorders and psychiatric comorbidities in the evolution of somatic symptoms disorder?
- Is there a possible two-way relationship within the group of selected subjects?

CHAPTER 4. Materials and methods

4.1 Description of lots

The study in this paper is a non-experimental cross-sectional study with a case-control design performed on a group of 180 patients divided into two groups. The first group consisted of 103 subjects diagnosed with Somatic Symptom Disorder (STD) and psychiatric comorbidities of an anxious-depressive type in history or diagnosed during hospitalization and study. Of these, 80 are female and 15 are male, all participants aged 21-78. The selection was made from the patients of the psychiatric wards of the Clinical Hospital of Psychiatry "Prof. Dr. Alexandru Obregia" in Bucharest. The second batch (B control batch) consisted of 77 healthy subjects with no present or historical diagnosis of a TSS or other psychiatric disorder, of whom 50 are female and 45 are male, aged between 20-69 years, selected from the medical staff and students working in the faculty of general medicine.

The data collection was carried out in the period 2018-2020 and for the participation in the study the written consent of the participants was obtained. This work did not receive

any financial support during its completion. The conduct of the study and the research methodology complied with the applicable ethical requirements regarding the protection of patients' confidential data by their informed consent. Due to the non-experimental design of the study, the participation of the subjects did not involve any risk to their physical or mental health.

In the process of selecting the subjects from the two groups, a set of eligibility, inclusion and exclusion criteria was taken into account, presented in detail in the following lines:

Inclusion criteria:

➤ **TSS lot:**

- TSS diagnosis according to DSM-V and ICD-10
- Diagnosis of depressive and / or anxiety disorder in varying degrees of severity according to DSM-V and ICD-10
- Written consent to participate in the study

➤ **Control Lot:**

- Clinically healthy patients at the time of study entry and medical history
- Matching according to sex, age and educational level with subjects from the TSS group
- Written consent to participate in the study

➤ **Exclusion criteria:**

- Presence of diagnoses of mental retardation (IQ <70), the presence of medical diagnoses that influence the cognitive function of the subjects (both groups)
- Visual / hearing impairments that may have influenced the completion of the questionnaires (both lots)
- Presence of diagnoses of medical conditions that may cause hypnotic disorders of organic causes (sleep apnea syndrome, asthma, heart

ischemia, chronic obstructive pulmonary disease, epilepsy, gastroesophageal reflux disease, etc.) (both groups)

- Subjects who are chronic users of psychoactive substances or who are undergoing pharmacological treatment with substances that may alter the circadian rhythm (both groups)
- Presence of acute psychotic disorders or symptoms at the time of study (TSS group)

4.2 Psychometric tools

This subchapter presents the scales used as research tools in the study. For each, data are presented related to the way of their administration and interpretation of the results, as well as the main parameters considered variables of interest during the research. The tools used include:

- “Screening for Somatoform Symptoms” -SOMS-2 [220]: 53 items, five areas: musculoskeletal, pseudo-neurological, cardio-respiratory, sexual symptoms, impact of symptoms
- “The Somatic Symptom Disorder-B Criteria Scale” -SSD-12 [99]: 12 items, three subscales: cognitive impact, affective impact, behavioral impact
- “Screening for Somatoform Symptoms 7” -SOMS-7 [220]: 53 items, five domains, same as SOMS-2 but with different levels of reporting intensity with answers from “Not at all”, “easy”, “medium” , "Severe" to "very severe"
- Pittsburgh Sleep Quality Index -PSQI [217]: 19 items, seven areas: subjective sleep quality (I1), sleep latency (I2), sleep duration (I3), sleep effectiveness (I4), sleep difficulties (I5), use of hypnoinductive medication (I6), daytime dysfunction (I7)
- “Hamilton Depression Rating Scale” -HAM-D [223]: 21 items, assess depressive mood, feelings of guilt, suicidal ideation / attempt, insomnia,

professional and social activity, psychomotor slowness, psychomotor anxiety, etc.

- “Hamilton Anxiety Rating Scale” -HAM-A [226]: 14 items, assesses anxiety, tension, insomnia, phobias, concentration deficiencies, somatic symptoms, etc.

4.3 Data analysis

After the data collection stage, they were recorded as variables of interest and analysis using the R statistical program, version 4.0.2 (2020-06-22) Copyright (C) 2020 The R Foundation for Statistical Computing, R Core Team (2020). A: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL <https://www.R-project.org>. In addition to the standard packages, the psych package was used Revelle, W. (2020) psych: Procedures for Personality and Psychological Research, Northwestern University, Evanston, Illinois, USA, <https://CRAN.R-project.org/package=psych> Version = 2.0.7.

The statistical tests used were carefully selected, taking into account the type of variables, the distribution of the values that the variable takes and, last but not least, the questions that need to be answered through statistical analysis. To signal a significant effect, indicators of the effect size produced were reported (d , η^2 , η^2 partially), statistical significance (p value), analysis of the consistency of Alpha Cronbach questionnaire scores (along with IC95%), correlation plot together with the distributions, the Pearson correlation index. The first subchapter of the results section presents the analysis of the reliability and diagnostic accuracy of the scales used by analyzing the internal consistency of the scores obtained using the Alpha Cronbach index (along with IC95%), the correlation plot with the distributions, the Pearson correlation index, unusual values of the distributions (outliers) as observations for which the distance Mahalanobis to the square is greater than 25.

CHAPTER 5. Results

5.1 Analysis of the internal consistency of the scales used for the study group

PSQI scale

The internal consistency analysis of the PSQI scale was performed by including all subjects participating in the study in the same group (n = 103). The scale consistency index represented by Alpha Cronbach was calculated. The resulting index shows a poor consistency of the scale, including all the present items grouped in the following groups: "Perceived sleep quality", "Sleep latency", "Sleep duration", "Sleep efficiency", "Sleep disorders" ", 'Medication Use', 'Daytime Dysfunction'. There are small values (compared to the other items) for items 4 "Sleep Efficiency" and 5 "Sleep Disorders", the highest values being for item 6, "Use of Medication". The PSQI questionnaire had very low values in item 5 "Sleep disorders", and given the very high score in item 6, "Use of medication" a possible explanation is the effectiveness of hypnoinductive therapy in most patients. There were no comments that were outlier.

HAM-A scale

In evaluating the HAM-A scale that describes the anxiety disorder, the value of the Cronbach's alpha index was 0.77, a large one associating an optimal consistency of the questionnaire. Thus, for the HAM-A score, 11 observations were identified (the largest 5 being represented on the graph) with extreme values ($D2 > 25$), a reasonable number considering the size of the group of patients. The Cronbach alpha value was 0.72, showing an optimal consistency of the psychiatric anxiety questionnaire. Four outliers were identified for HAM-A, the psychic component, an insignificant value. In the case of the analysis of outliers of the Somatic Anxiety type, an outlier value was detected.

HAM-D scale

The averages of the scale items with important results (> 2) were analyzed for the following items: I1 "Depressive mood", I2 "Feelings of guilt", I7 "Work and hobbies". Results 1-1.5 for I10 "Mental Anxiety", I11 "Somatic Anxiety", I4 "Genital Symptoms", I15 "Hypochondria" and results close to "0" are also observed. 'for I3 ,, Suicide' ', I8 ,, Psychomotor retardation' ', I9 ,, Agitation' ', I16 ,, Weight loss', I17 ,, Insight ". These values correlate with the HAM-A anxiety scale and its components for high-value items. Also, items with low values are to be expected in the context of the criteria for inclusion in the study and the severe potential for evolution of Depressive Disorder with "Suicide", "Weight Loss" or "Agitation". "Psychomotor retardation."

SSD-12 scale

There was an analysis of the average scores for the three components of the scale: "Cognitive aspect", "Affective aspect" and "Behavioral aspect" highlighting the low value of the cognitive component compared to the other two (Figure 5.13). Scores close to the maximum score "12" are found for the behavioral component with a value of "9" and the affective component "8.5" while C1 is at the value of "6.5". The identification analysis of the outlier factors was performed and no observations were identified as being outlier.

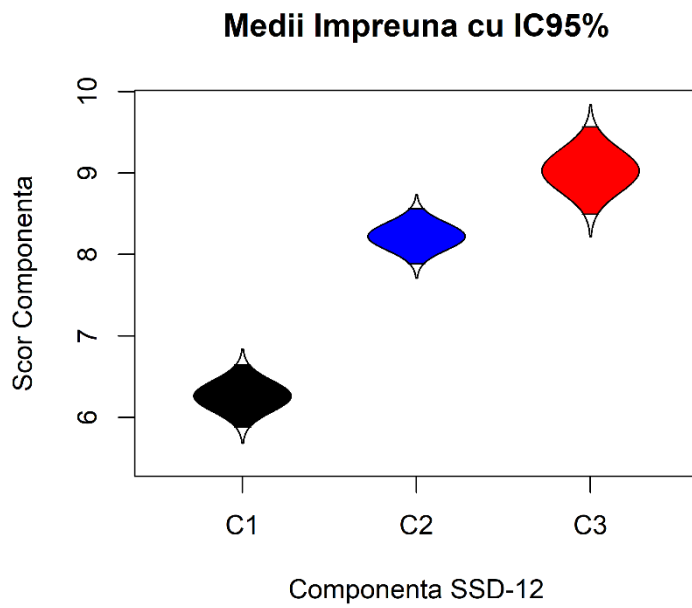


Figure 5.13- Averages of SSD-12 scale components

SOMS-7 scale

In connection with the identification of outlier values, 99 observations resulted, which were detected as outlier values, which can be explained by the very large number of items on the scale (Figure 5.15).

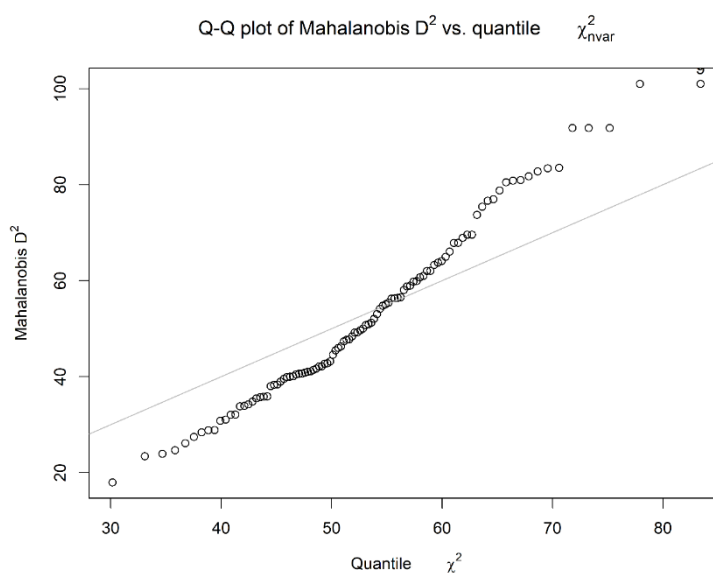


Figure 5.15-Identification of outliers for the SOMS-7 scale

5.2. The influence of socio-demographic and clinical factors on the scores of the scales used

5.2.1. Demographic characteristics of the participants in the study group

For the present study a number of 103 patients was included in the study group with an average age of 52.8 years of which 84% are women and the remaining 16% are men as illustrated in Table 5.8. The demographic data included in the study attempted to present a picture of the biopsychosocial background of the study participant. SSD is predominantly found in females, with a long evolution and an unfavorable prognosis unlike men, which explains the high percentage of women in this study, somatizations being a definite criterion for inclusion. In terms of social conditions, 56% of the participants included in the group come from rural areas. A total of 66 participants declared the presence of a life partner, including married or cohabiting participants, while the remaining 37 participants were included in the "no partner" category, including divorced, widowed, single participants. . The educational status indicates a high percentage of participants in the category "secondary education" - 49% while 34% declare "lower education" and 17% "higher education". These averages show a significant share of over 80% of participants without higher education, a share that respects the generally valid socio-demographic data regarding somatization disorders associated with other psychiatric comorbidities. The educational status is associated with the type of work performed, the percentages respecting the proportions of the group, namely, 65% performing physical work, the remaining 35% intellectual or mixed work. Regarding the clinical data, we observed a lack of family history of hypnotic disorders in 60% of participants but with a psychiatric hereditary-collateral history in 53% of participants. This confirms the degree of subjectivism in reporting psychiatric and / or hypnotic family disorders among psychiatric patients, an important role being played by stigma or the presence of personality traits involved in reporting different family patterns.

Only 7 participants out of the total included in the study reported participation in psychotherapy sessions throughout their medical history, a result that confirms the status of psychotherapeutic techniques in Romania, with an addressability and continued participation at an extremely low level due to cultural, economic and social type.

5.2 years is the average time period from the onset of this type of somatizing symptomatology, a time that places the onset at the age of 46-47 years, taking into account the average age of the study. Regarding the previous administration of sleep disorders medications, 78% stated that they did not receive or have not received hypnoinductive, anxiolytic, antidepressant or antipsychotic medication prior to the study period.

5.2.3. The influence of demographic factors on the scores of the scales used in the study group

Regarding the influence of sex, on the HAM-D scale, the average total score for women was about 10% higher than the average for men, the value being statistically significant ($p < 0.05$). In the case of the influence of the assertion of hypnotic disorders on the scale scores, it is observed that the average total score in HAM-A was approximately 20% higher in patients without current hypnotic disorders, the effect being statistically significant ($p < 0.01$) as illustrated in Table 5.22.

Table 5.22- Influence of reported hypnotic disorders on the scores of the scales used

Scala	Media Tulburări Prezente	Media Tulburări Absente	Diferența [IC95%] valoare p
PSQI	14.70	14.38	0.32 [-0.83 la 1.48] 0.5758
HAM-A	20.69	24.69	-4.00 [-6.79 la -1.20] 0.0062
HAM-D	23.18	25.41	-2.23 [-3.99 la -0.47] 0.0137
SSD-12	24.09	22.03	2.06 [0.35 la 3.76] 0.0191
SOMS-7	25.35	23.52	1.83 [-2.05 la 5.72] 0.3499

For the other scales used, no statistically significant differences ($p > 0.05$) were identified for the averages from the total scores for the PSQI and SOMS-7 scales. However, the mean total score on HAM-D was approximately 10% higher in patients without current hypnotic disorders, the effect being statistically significant ($p < 0.01$) (Figure 5.22). The mean SSD-12 score was 10% higher in patients with current hypnotic disorders ($p < 0.05$).

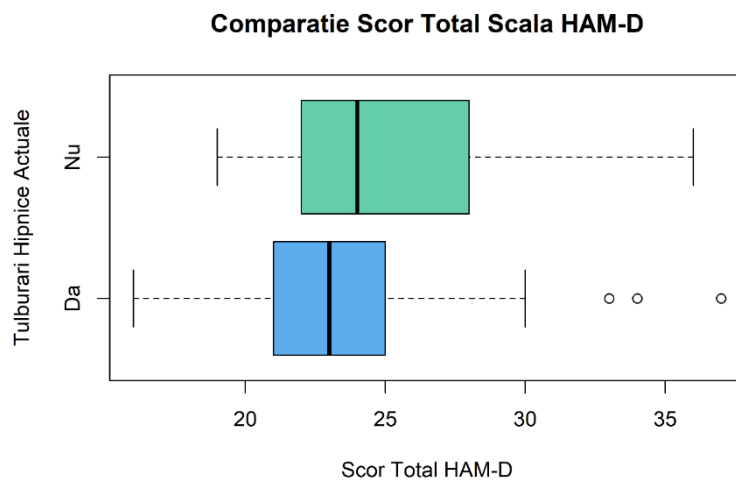


Figure 5.22- Comparison of the total HAM-D score in the case of the parameter "Current hypnotic disorders"

In the next part we will look at the results of declaring the use of substances based on caffeine, tobacco, alcohol or other psychoactive substances on the scores of the scales used to observe a potential correlation between the declaration of these types of behaviors and the severity of scores for comorbid psychiatric disorders. somatization and hypnotic disorders. Thus, in smoking participants, the average total score on the PSQI scale is almost 10% higher than in non-smoking participants, the effect being statistically significant ($p < 0.05$), see also the following boxplot charts (Figure 5.24).

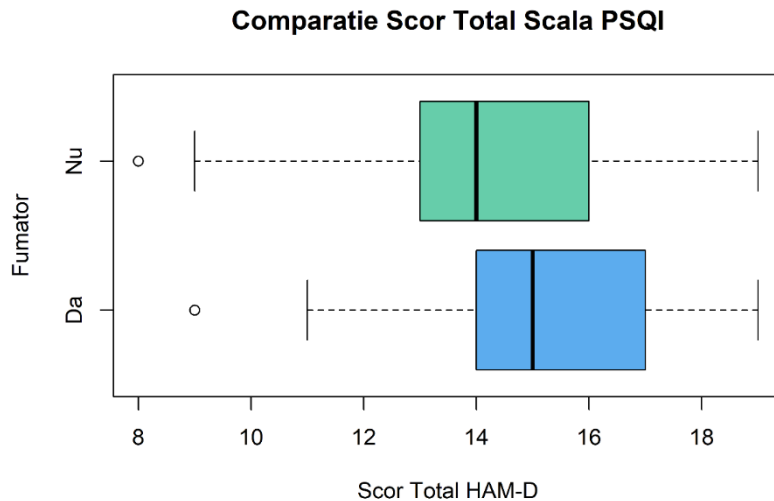


Figure 5.24- Comparison of the total PSQI score for the "smoker / non-smoker" parameter

In the same chapter, it was investigated whether the therapy applied during hospitalization contributed to the improvement of the overall score on the PSQI scale. Given that this is a design with correlated samples (measurements taken at different times in the same patient), we are interested in the distribution of differences in PSQI scores between outpatient and inpatient time (an average of 0 of these differences, implies a lack of response to treatment). From the analysis of the histogram (Figure 5.25), we notice that the patients had a PSQI score at discharge by about 6 units lower than at admission, the biggest improvement in the score was 12 units, there were also cases when there was a worsening of post-therapy score with one unit. The improvement is statistically significant ($p < 0.01$).

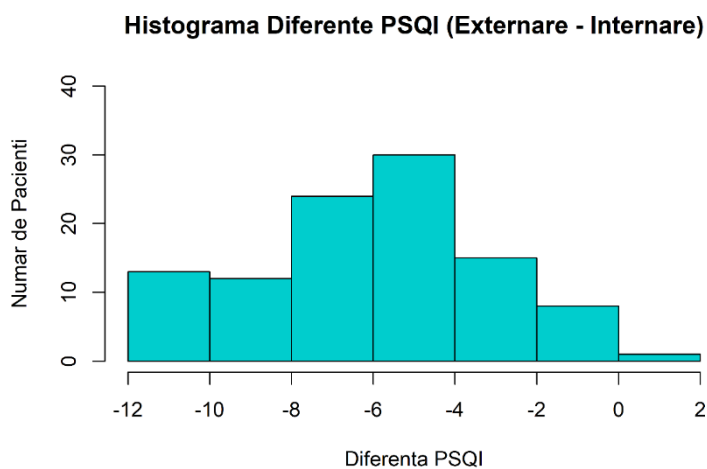


Figure 5.25- Difference of PSQI at discharge versus hospitalization

5.3. Comparative analysis of scores on the scales used in the study

PSQI scale

In the case of the PSQI scale administered to both groups of participants, an average score of 14.61 is observed for group A, slightly higher than the control group. In any case, the result of the Welch T test reveals that in the participants in group A, the average value of the total score is about 20% higher than the participants in group B, the effect being statistically significant ($p < 0.01$).

HAM-A scale

In the case of the HAM-A scale, the statistical analysis (Table 5.30) gives us data that show that in patients in group A, the average value of the total score is about 4 times higher than in patients in group B, the effect being statistically significant. ($p < 0.01$). Lot B falls on average in the "normal" category of the same interpretation of the scale. The maximum scores obtained are .45 "in group A and" 11 "in the control group, the last value being the minimum value of what is called" moderate anxiety ".

HAM-D scale

In the case of assessment of depressive symptoms, the analysis of the HAM-D scale (Table 5.32) reveals that in the participants in group A, the average value of the total score is almost 5 times higher than in patients in group B, the effect being statistically significant ($p < 0.01$) (Figure 5.27).

Table 5.32- Analysis of the HAM-D score reported in the two groups in the study

HAM-D	Lot A	Lot B
Medie ± D.S	23.81 ± 3.98	4.62 ± 2.92
Mediană (IQR)	23.00 (5.00)	5.00 (5.00)

Min la Max	16.00 la 37.00	0.00 la 13.00
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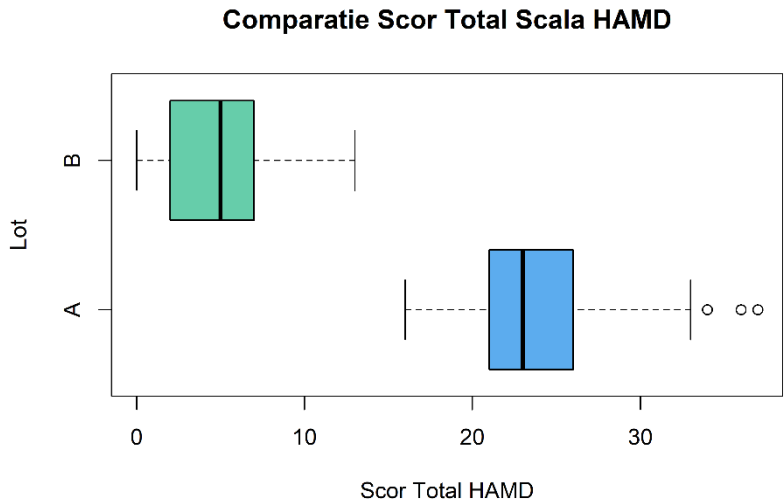


Figure 5.27- Comparison of total HAM-D scores for both groups included in the study

SSD-12 scale

In the case of the analysis of the SSD-12 scale, the results show that in the participants in group A, the average value of the total score is about 7 times higher than in the patients in group B, the effect being statistically significant ($p < 0.01$).

5.4. Correlations between the scores of the scales used for the study group

The following subchapter highlights the statistically significant correlations between the scores obtained by the study participants in group A, correlations that respond to certain hypotheses and objectives of this paper. The possibility of correlations / associations between the scores at the scales used was studied, using the Pearson correlation index. In the following table (Table 5.36).

Table 5.36 - Pearson correlation indices between the scores of the scales used

	HAMA	HAMD	PSQI	SOMS7	SSD12
HAMA	1.00	0.33*	0.04	0.01	-0.20*
HAMD	0.33*	1.00	-0.01	-0.16	-0.24*
PSQI	0.04	-0.01	1.00	-0.07	0.15
SOMS7	0.01	-0.16	-0.07	1.00	0.09
SSD12	-0.20*	-0.24*	0.15	0.09	1.00

The above table (Table 5.36) shows a positive, average association / correlation between HAM-A and HAM-D scores, scores that express the anxiety and depressive symptoms present in the same participant with higher values.

In the case of HAM-A and SSD-12, a negative, weak association / correlation is observed, which is shown in the next plot (Figure 5.30). The poor negative correlation between these scores represents a higher reporting of anxiety symptoms in the same participant who does not have a significant score when assessing the psychological impact of somatization symptoms.

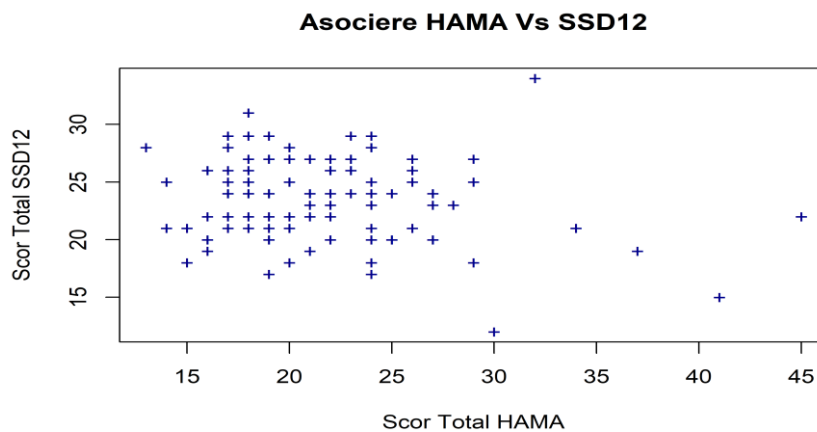


Figure 5.30- Correlation of HAM-A and SSD-12 scores in the study group participants

Another chapter in which differences with statistical significance were highlighted is that of the correlations between HAM-D and SSD-12, highlighting a weak, negative

association / correlation between these two scores, illustrated in the following graph (Figure 5.31). This correlation means that, as in the case of HAM-A, certain items on the SSD-12 scale may have close significance for the participant with items on the HAM-D scale. For example, the emotional aspect of items 2 "I'm very worried about my health", 5 "My symptoms scare me", 8 "I'm afraid my physical accusations will never stop" and 11 "I am afraid that my physical symptoms will continue in the future" can be correlated with "Mental Anxiety", "Hypochondria" and "Depressive Disorder" from the HAM-D scale, which may be more easily recognized and reported by the participant than those on the SSD-12 scale that have a general, global value on the participant's biopsychosocial status. No other clinically and statistically significant associations / correlations were identified.

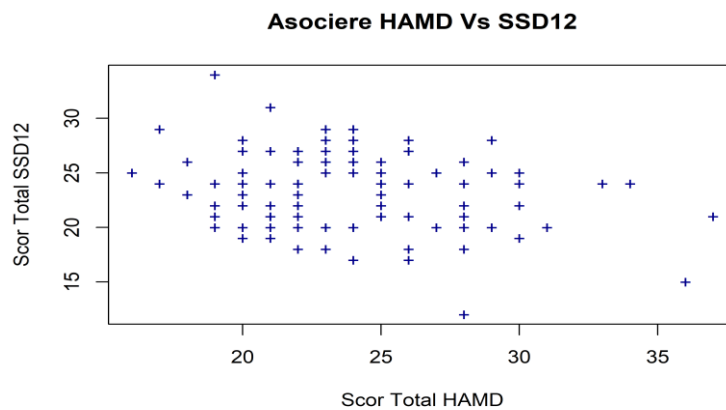


Figure 5.31- Correlation of HAM-D and SSD-12 scores in the study group participants

CHAPTER 6. Discussions

In this chapter, the main results of the research will be discussed, taking into account the already existing benchmarks in the literature, regarding the somatic symptom disorder correlated with hypnotic disorders in patients with psychiatric comorbidities.

Our results did not identify a positive association between somatization symptoms and hypnotic disorders while the role of psychiatric comorbidities such as depressive and anxiety disorders modulated the symptoms of both variables studied, often the subjective perception being one of overlapping symptoms, with important links biological, genetic and psychological. Other important variables are comorbidities that can be assessed separately, both psychiatric [232] and somatic [233]. This is in line with the suggestions of Aigner and Zhang who report the possibility of a two-way relationship between hypnotic and somatization disorders. Specifically, they argue that sleep disorders may be a factor in the

persistence and worsening of somatizing symptoms already present, modeled or not by anxiety-depressive disorders, as well as in improving psychosocial disability derived from somatization symptoms [234,235].

CHAPTER 7. Conclusions and personal contributions

In this last chapter will be briefly presented the conclusions that this paper brings in the field of research, by scoring the main results of research in response to the proposed objectives and finally describe the general conclusions of the thesis, reaching areas such as response to proposed objectives, the limits identified in the development of the present study, the novelty but also the applicability of the obtained results as well as the perspectives for further research in this field.

Personal contributions

Thus, in general objective I, it was possible to describe the typology of somatic symptoms. The specific objectives described their psychological impact on patients and the description of anxiety-depressive comorbid symptoms. The relationship between the severity of somatic symptoms and anxiety-depressive comorbidities and their correlations with socio-demographic factors was also observed, as can be seen from the following results:

- There is a negative correlation between "HAM-A" and "SSD-12" which is a higher reporting of anxiety symptoms in participants who do not have a significant score in assessing the psychological impact of somatization symptoms. There is also a negative correlation between HAM-D and SSD-12.
- There is a positive correlation between the "HAM-A" and "HAM-D" scores, this confirming the coexistence of anxiety and depressive disorder in the study group participants, none of the disorders definitely dominating the symptomatic picture.
- There is a negative correlation between the score of sub-category C1 "cognitive aspects" of the "SSD-12" scale and the overall score.
- Female participants have higher scores on the assessment scale for depressive disorder "HAM-D", 10% higher than male. (Chapter 5, Subchapter 5.2.3, Paragraph 4). Participants who declared "other denominations" had a score on the "HAM-A" scale 20% higher than the average of the other participants.

- Participants who reported the type of work performed "exclusively physical" had an average of the total score on the scale "HAM-D" higher by 7% compared to participants who reported the type of work performed including a component intellectual. Within the same parameter, it is observed that the average total score on the SOMS-7e scale was approximately 20% higher in patients with occupations involving an intellectual component, compared to patients with occupations involving only the physical component. A statistically significant score of SOMS-7e and HAM-D indicates a faster association of depressive symptoms in participants who report "physical work" and a higher association of somatic symptoms in participants who report "intellectual work".
- The participants in the study group have the average value of the total score "HAM-A" about 4 times higher than the participants in the control group.
- The participants in the study group have an average value of the total score "HAM-D" almost 5 times higher than the participants in the control group.
- The participants in the study group have an average value of the total score "SSD-12" about 7 times higher than the participants in the control group.
- The Romanian language version of the instruments that evaluate the depressive, anxious, somatizing symptoms and the psychological impact of the somatizations, "HAM-D", "HAM-A", "SOMS-7" and "SSD-12" " is accurate in detecting targeted symptoms, and instrument subscales demonstrate a high degree of reliability, with adequate levels of internal consistency parameters
- In the case of general objective II, the description of sleep quality was performed as well as the quantification of the severity of hypnotic symptoms. The correlation between socio-demographic factors and sleep quality was assessed, as can be seen from the following results:
 - The average total score on the "HAM-A" scale was about 20% higher in participants who reported the absence of current hypnotic disorders. Also, the average total score on the "HAM-D" scale was about 10% higher in patients who reported no current hypnotic disorders.
 - Participants who reported "harmful tobacco use" have an average total score on the PSQI scale almost 10% higher than non-smoking participants

- The participants in the study group had an average value of the total score "PSQI" about 20% higher than the participants in the control group

Objective III identified the degree of concordance between hypnotic disorders and somatic symptoms but also the possibility of a complex two-way relationship between the two variables studied, as follows:

- The average SSD-12 score was 10% higher in participants who reported the presence of hypnotic disorders. The psychological impact of somatization disorder is found in a high proportion of participants who report current hypnotic disorders. At the time of discharge, the perceived hypnotic and somatizing disorders were less severe than at the time of admission.

Conclusions

The results of the research complement the knowledge in the literature on possible two-way aspects between somatization disorders and hypnotic disorders in patients with psychiatric comorbidities. Through the established research methodology, but also the statistical analysis, the objectives proposed in the elaboration of the paper were answered, as follows:

- There was a negative association of anxiety and depressive symptoms in participants with a low impact of somatization disorder
- Anxiety and depressive symptoms were positively correlated in participants from both groups
- The cognitive aspect of somatizations was negatively correlated with the total impact of this disorder on the participants
- "Intellectual work" was associated with higher somatization scores while higher scores on anxiety and depression had participants who declared "physical work"
- Anxiety and depression scores were negatively associated with the presence of hypnotic disorders while the impact of somatization disorder was positively associated
- Harmful tobacco use has been associated with higher scores on the Hypnosis Disorders Assessment Scale
- At the time of discharge, the perceived hypnotic and somatization disorders were decreased in intensity compared to the time of admission

- There were no correlations between the scores of somatizations and the evaluation of hypnotic disorders

The disorder of somatic symptoms falls within the scope of psychiatric pathology, the manifestations of which may overlap with other types of psychiatric or physical disorders, which makes the identification of the specificity of these symptoms much more difficult in the diagnostic process. However, these difficulties can be overcome, and the specific tools used in this paper have been shown to be appropriate for identifying and describing the targeted symptoms. Correct diagnosis is essential due to the implications it has on the approach to disease and health, the awareness of the etiology of somatic pathology for each patient but also for pragmatic reasons such as the very high costs both individually and socially that these patients produce from due to the large number of interdisciplinary consultations, numerous investigations and overdiagnosis.

Hypnotic disorders have also been shown to be a real problem in patients with somatic symptoms, as in patients with other psychiatric disorders. However, it is not clear how sleep disorders impact somatic symptoms or what would be the most appropriate methods to quantify them, in order to observe a potential association / correlation. However, it is clear from the results of this paper that these disorders contribute to the subjective perception of somatizing symptoms as well as anxiety and depressive manifestations, especially when somatization disorders are assessed by instruments with high degrees of somatization. validity such as quantifying the number of symptoms and their psychological impact on the patient.

This thesis includes certain novelty elements brought to the knowledge in the field at national level, both by the topic approached, methodology, and by the results obtained. Thus, this paper is the first on the topic of somatic symptoms disorder in correlation with hypnotic disorders in adults in our country. From the research stage of the international specialized literature, carried out prior to the original study, there was ample information related to diagnosis, monitoring, clinical picture, assessment tools and profile of the disorders studied. Regarding the original study, the novelty lies on the one hand in the use for the first time in Romania of a specific tool for diagnosing somatic symptoms disorder and assessing their psychological impact on patients with psychiatric comorbidities and, on the other hand, in the concomitant use of assessment scales for existing hypnotic disorders.

The applicability of the results translates into an increase in the recognition in Romania of the profile of somatic and hypnotic symptoms, as separate clinical entities, in patients with psychiatric comorbidities of the anxious-depressive type. Although somatic symptoms disorder is one of the most common pathologies in the field of adult psychiatry, this diagnosis is currently far too rarely used by clinicians in our country. Moreover, the presence of somatic symptoms along with the complete clinical picture makes the research results have implications beyond the barrier of the medical psychiatric sphere through the useful effect of psychopharmacological and psychotherapeutic intervention on these types of symptoms in correlation with those of the hypnotic type.

Throughout the whole process of elaborating this paper, a series of challenges appeared, especially in the field of research methodology, but new, related perspectives of study also appeared. Among the problems found we can mention the low number of eligible participants, the reduced ability to complete the targeted evaluation scales due to the high degree of awareness of the symptoms of people with somatizing disorders.

The perspectives opened in this paper open to a multitude of scientific avenues. Thus, works can be organized in the epidemiological sphere, to estimate the prevalence of somatization disorder at the level of primary and secondary care centers, not only psychiatric and, at the same time, to increase the specificity of diagnostic and monitoring tools. Moreover, the evaluation studies of the specific therapy administered to each pathology of these patients but also genetic, epigenetic and psycho-neuro-biological studies that include the entire clinical picture of somatizations, hypnotic disorders and comorbidities of the anxious and depressive type.

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