

Presence of anxiety and depressive symptoms in outpatients with neurological disease

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Original article

SUMMARY

There is little information available describing psychiatric symptoms in non-psychiatric patients, with 25% of these patients being reported with such symptoms. Psychiatric symptoms are frequently diagnosed on neurological disorders given the severity and degree of disability that they cause. The objective of this research was to identify the factors associated with the presence of anxiety and/or depressive symptoms in patients with a neurological disorder. A transversal, descriptive study was conducted, comprising 209 outpatients from the neurology department, with the aim of obtaining a period prevalence of the presence of anxiety and depressive symptoms using the extended version of the Kessler Psychological Distress Scale (K10), and a sociodemographic interview to determine the association with factors that might influence the presence and severity of such symptoms. All the participants signed an informed consent form. We found scores above 21 points on the K10 scale (highly suggestive of the presence of an anxiety and/or depressive disorder) in 63.2% of the patients. These scores were more frequently found in patients with cerebrovascular diseases (85.7%), who stood above 60% of the rest of the disorders. These results suggest a greater association for more than half of the neurology outpatients to suffer from anxiety and/or depressive symptoms severe enough to benefit from an integral approach, with a greater association in relation to more severe or incapacitating disorders. The association was also found to be greater in women. Therefore, we need further research to determine the components of this association and identify effective interventions aiming to improve not just the patients' health, but also their quality of life.

Key words: Anxiety, depression, K10, Mexico.

RESUMEN

La información referente a la presencia de síntomas psiquiátricos en la práctica no psiquiátrica es escasa, cerca del 25% de los pacientes son reportados con esta sintomatología. Esto se observa más comúnmente en trastornos neurológicos dada la severidad de los síntomas y el grado de discapacidad que ocasionan. El objetivo de la presente investigación es identificar factores asociados a la presencia de síntomas de ansiedad y/o depresión en pacientes con patología neurológica. Se realizó un estudio transversal, descriptivo, tomando 209 pacientes de la consulta externa del servicio de neurología del Hospital General del Estado de Sonora a fin de obtener una prevalencia de periodo de la presencia de síntomas de ansiedad y depresión mediante la Escala de Malestar Psicológico de Kessler en su versión extendida (K10), así como una encuesta sociodemográfica para determinar su asociación con factores que pudieran influir en la presencia y severidad de dicha sintomatología. Todos los participantes otorgaron su consentimiento informado. Se encontraron puntuaciones superiores a 21 puntos en la escala K10 (altamente sugestiva de la presencia de un trastorno de ansiedad y/o depresión) en 63.2% de los pacientes. Estas puntuaciones fueron más frecuentes en los pacientes con enfermedades cerebrovasculares (85.7%), manteniéndose por arriba del 60% para el resto de los trastornos, con una mayor frecuencia en el sexo femenino (85%). Los resultados sugieren una mayor asociación, para más de la mitad de los pacientes que acuden a la consulta de neurología, de padecer sintomatología ansiosa y/o depresiva con una severidad suficiente para verse beneficiados por un tratamiento integral. Existe una mayor asociación en relación con padecimientos más severos o discapacitantes, así como con el sexo femenino, por lo que se proponen investigaciones subsecuentes a fin de determinar los componentes de esta asociación e identificar intervenciones eficaces a fin de mejorar no solamente el estado de salud de estos pacientes sino su propia calidad de vida.

Palabras clave: Ansiedad, depresión, K10, México.

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INTRODUCTION

In psychiatry, the study of the development of psychopathology in recent years has been focused on identifying and analyzing comorbidities^{1,2} and their effects on the development, course, and prognosis of the illnesses. Because of this, it is important that hospital units have a service which is focused on treating psychiatric comorbidities that present themselves, identifying patients with undiagnosed psychiatric disorders that would be seen as potentially beneficial for an integrated focus.³⁻⁵ In 1997, an analysis was made of the global burden of illness which encapsulated the importance of mental disorders as a priority problem for world health services. Some 10% of global pathology is attributed to these conditions (with an expected increase to 15% by the year 2020). In the same way, it is calculated that more than 20% of the global population will suffer some sort of affective disorder that will require medical treatment at some point in their lifetime.⁶

Through valid questionnaires, the prevalence for depression has been found between 16% and 43%, and for anxiety, among other pathologies, it has been reported between 16% and 30%.⁷⁻¹⁰ However, these disorders remain underdiagnosed in non-psychiatric practice, being reported in between just 1%-3% of cases,^{11,12} primarily due to being based on subjective assessments. More than 60% do not receive treatment, even with a diagnosis during a period of hospitalization or subsequent follow-up,¹² in spite of the known difficulty in obtaining treatment even with a suitable diagnosis. It is also known that early detection and preventative strategies are useful to avoid the development of a full blown syndrome.¹³ Another important point is that anxiety and depressive disorders often tend towards chronicity, generating different degrees of disability,¹⁴ and if these psychiatric symptoms coexist with neurological disorders, this causes a worse level of therapeutic adherence as well as a decreased quality of life.^{15,16} The question of whether the presence or severity of anxiety or depressive symptoms rely on the severity of the underlying physical illness has been discussed,¹² but conclusive results have yet to be obtained, especially in the case of neurological disorders, in which neuropsychiatric symptoms frequently include affective or anxiety symptoms. However, studies on the presence of neurological disorders and psychiatric symptomatology in the Mexican population are scarce, and furthermore, the pathologies assessed in this study are the most prevalent and generate greater problems of therapeutic adherence and medical complications. Because of this, an integrated approach and timely treatment could significantly improve the quality of life of patients.

Neuropsychiatric symptoms are found in some neurological disorders, which could be confused with major depressive disorder or some other pathology within the spectrum of anxiety disorders.¹⁷⁻¹⁹ They could even present themselves in a comorbid fashion given the severity and tendency towards chronicity shown by neurological dis-

orders. The prevalence of these comorbidities is not well described. However, it has been documented that between 20% and 62% of patients with epilepsy present depressive and/or anxious symptoms,^{20,21} through to 72% of patients with vascular dementia and 38% to 70% of patients with Alzheimer's disease having comorbid anxiety.²² It is also reported that up to 33% of patients with dementia have a depressive disorder, and up to 54% have both symptomatology.¹⁷ Regarding brain tumors, inconsistent results have been reported that vary between 25% and 93% for depression, and from 13% to 30% for anxiety.²³ In terms of migraines, 20% of patients are reported to have depressive symptoms, and 50% have anxiety symptoms.²⁴ These results are not conclusive but they indicate an approximation of the frequency with which these symptoms are present in neurological illnesses. Finally, it has been reported that 47.5% of patients with major depressive disorder suffer some sort of anxiety disorder, and up to 26.1% of patients with an anxiety disorder meet the criteria for a major depressive disorder, which supports the importance of focusing on these aspects.²⁵

In Mexico, in spite of the interventions available for care of depression, this continues to be underdiagnosed.⁶ The National Survey of Psychiatric Epidemiology provided the first national estimates of mental disorders, estimating that 8.4% of the population had suffered a depressive episode at some time in their lives, with a median starting age of 24 years.²⁶ These results demonstrate the high prevalence of the disorder, and it could be interpreted to be due to the existing difficulty in administering diagnostic strategies and effective therapies. This in turn could be because of the varied symptomatology it presents, the multifactorial etiology of the disorder and its high rate of recurrence.²⁷

Due to the above, the proposed objective of this study is to determine the presence of depressive and anxiety symptoms in the course of a neurological pathology, given that they are the symptoms most frequently reported.⁷⁻¹² The aim was also to see whether they could potentially benefit from comprehensive diagnosis and timely treatment, with the purpose of affecting not only the patients' state of health, but their quality of life.²⁸⁻³⁰

MATERIALS AND METHODS

A non-experimental, quantitative, descriptive, transversal study was carried out, taking outpatients from the Neurology Service at the Sonora State General Hospital "Dr. Ernesto Ramos Bours" in the state capital, Hermosillo. These patients had a certain neurological diagnosis, with no previous institutional history of having suffered a psychiatric disorder. These people were given the extended version of the Kessler Psychological Distress Scale (K10) to screen for anxious and depressive symptomatology. Furthermore, a

section for sociodemographic data was included within the body of the scale. If a piece of data was not available, it was possible to access the institution's electronic files in order to collect the missing information. Authorization was also sought to be assessed via an informed consent form.

The Statistical Package for Social Sciences (SPSS 19) was used for statistical analysis. A univariate analysis was performed for qualitative and quantitative variables. For qualitative variables, percentages and graphs were used, and for quantitative variables, median and standard deviation were used. A bivariate analysis was then used to apply measures of association, and a logistical regression model was applied to the variables of interest with the aim of determining the probability that these scores were associated to other factors. Efforts were also made to identify differences within each one of these; the Hosmer-Lemeshow test was used as a predictive analysis of the events observed and analysis of variance (ANOVA) was used to compare the medians obtained. In this research project, a confidence level of 95% ($Z_{\alpha}=1.16$) and an error of 5% were sought. Given the design of the research, these results are not able to be extrapolated to generate a prevalence, however, they can be replicated for the same period in subsequent years.

An initial sample was obtained of 261 patients, of which seven did not cooperate with the interview, 12 were not found in a condition to respond (due to severity of the diagnosis or alterations in the state of consciousness), six had missing data that could not be completed using the electronic report, 15 did not have a neurological diagnosis, and a further 12 attended as neurological outpatients on more than one occasion during the described period. In these cases, only the initial assessment was taken as valid. A final sample of 209 patients was obtained for the present study.

The Kessler Psychological Distress Scale

The extended (K10) version of the Kessler Psychological Distress Scale was used,³¹⁻³³ which is brief and easy to apply. It has been used in different studies at a population level. The K10 scale is one-dimensional and consists of ten specific questions about "psychological wellbeing" which, as a construct, refers to the combination of anxiety and depressive symptoms present in a person during the four weeks prior to the application. The scores range between 10 and 50 points. The instrument's ranges have four levels: low (10-15), moderate (16-21), high (22-29) and very high (30-50). Scores above 21 are considered to be the suggested cut-off point for the presence of an anxiety/depression disorder in accordance with previous research.^{33,34}

In accordance with available evidence, this instrument can be appropriate for estimating the needs of the population in mental health services.³⁵ Furthermore, investigations demonstrate that there is a strong association between high scores on the K10 and the CIDI for diagnoses of anxiety and

depression. On the other hand, sensitivity and specificity indicate that the K10 is a screening instrument to suitably identify these disorders.³⁶

RESULTS

The sample can be characterized as follows: 44% of the population was male, and 56% was female. Ages fluctuated between 18 and 85 years (statistical median: 40.66 years, SD 15.68). These were split into four groups: under 19 (3.3%), 20-39 (47.4%), 40-59 (34.4%), and over 60 (14.8%). In terms of civil status, participants were classified as single (41.1%), married (43.1%), cohabiting (9.6%), divorced (3.3%), and widowed (2.9%). Regarding place of origin, the sample was firstly divided into those residing in the city of Hermosillo (67%) and those who lived outside the city (33%). They were then split into urban (86.1%) and rural (13.9%) locations, in accordance with regional urbanization set out in the 13th General Census of Population and Housing. Finally, the sample was made up of beneficiaries (86.6%) and non-beneficiaries (13.4%) of Seguro Popular (a government-funded health care system). Diagnoses were formed into five categories: patients with epilepsy (62.7% of the study sample); headaches (9.6%); cerebrovascular illnesses (10%); dementias (7.7%), and other various conditions (10% of the subjects). Then, to carry out the analysis, the diagnosis were dichotomized into patients with epilepsy (62.7%) and those without (37.3%), as shown in Table 1.

The K10 scores were measured in the univariate analysis; the first measurement was based on a dichotomization of the K10 scores in the presence or absence of anxious or depressive pathology, and it was observed that 36.8% of the subjects in the study had scores <20, and 63.2% had scores >21. A second measurement was regarding the severity of the symptomatology according to the stratification of scores on the scale, based on the risk of presenting the aforementioned symptoms, classifying subjects into four severity groups: low (15.8%), moderate (25.8%), high (38.8%), and very high (19.6%). A third measurement was taken from the total points obtained on the K10 scale, which were between 10 and 44 points (Figure 1).

Table 1. Table of frequencies (Categorized diagnosis)

Categorized diagnosis	Frequency	Percentage	Accumulated percentage
Epilepsy	131	62.7	62.7
Headaches	20	9.6	72.2
Cerebrovascular illnesses	21	10.0	82.3
Dementia	16	7.7	90.0
Other	21	10.0	100.0
Total	209	100.0	

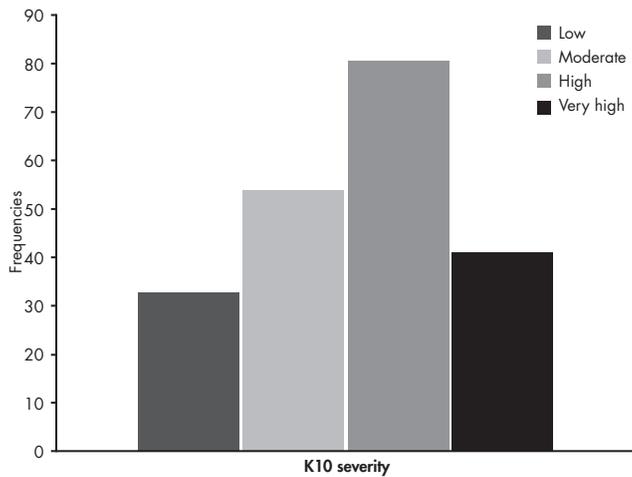


Figure 1. Frequencies graph (K10 scale by severity).

Within the significant results, a statistical significance was found in the bivariate analysis upon comparing the results of the dichotomized K10 scale in relation to sex as a covariate; scores below 20 points on the scale were found in 42 men (20.1%) and 35 women (16.8%), while scores above 21 points were found in 50 men (23.9%) and 82 women (39.2%). It is notable that scores above 21 points are found in 63.2% of the sample. The value of this correlation showed a Pearson's r and a Spearman's coefficient of correlation (r_s) of .162 ($p=0.019$).

When the K10 scale scores were stratified by ranges of severity, it was observed that only 10.3% of the female patients ($n=12$) were found in the low severity range for anxiety and/or depression, with the rest of the patients distributed in the moderate (23.9%, $n=28$), high (42.7%, $n=50$), and very high (23.1%, $n=27$) severity ranges. In terms of men, it was found that the lowest scores were located in the very high severity range (15.2%, $n=14$), with the rest of the patients distributed in the low (22.8%, $n=21$), moderate (28.3%, $n=26$), and high (33.7%, $n=31$) severity ranges, the highest number of patients being within the latter range. The results reported were considered statistically significant ($p=0.006$) with values of $r=0.191$ and $r_s=0.187$ (Figure 2). In the same way, when the scores were categorized on the K10 scale taking into consideration the individual score of the patients, it was found as a main result that in females, the highest scores were 18 points (7.7%, $n=9$), 24 points (8.5%, $n=10$), and 25 points (9.4%, $n=11$). In males, the highest scores were 12 points (7.6%, $n=7$), 18 points (7.6%, $n=7$), and 22 points (7.6%, $n=7$). These results have statistically significant ($p=0.005$) values of $r=0.192$ and $r_s=0.193$.

When analyzing the relationship between the total scores in the K10 scale and the neurological diagnoses again, we found interesting results: upon dichotomizing the diagnoses between patients with epilepsy and the rest, we found higher scores in the former, with the highest

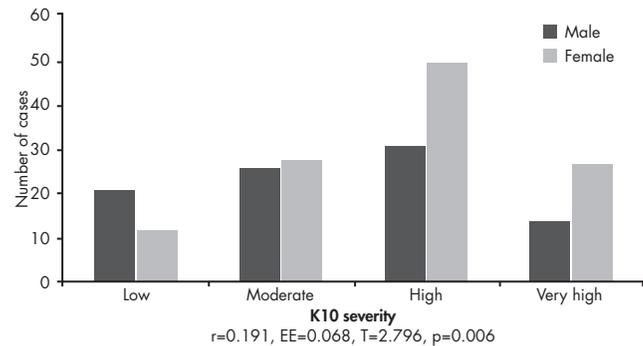


Figure 2. Association between categorized K10 and sex.

scores in the ranges of 22 (9.2%, $n=12$), 25 (9.2%, $n=12$), and 24 points (8.4%, $n=11$), while for the rest of the disorders, the highest scores were found at 18 points (8.97%, $n=7$), as well as 28 points (11.5%, $n=6$) both statistically significant ($p=0.048$). When classifying the neurological diagnoses by categories and the K10 scale by level of severity, the reported results can be observed from another perspective, noting a greater severity in scores on the K10 scale, primarily in the case of epilepsy, with some 43.5% of the subjects who have it in the high severity range ($n=57$) and 26.7% in the moderate range ($n=35$). It is also noted that 60% of the patients with headaches have scores in the moderate-high severity range ($n=12$) and that 100% of the patients with cerebrovascular illnesses have severity scores above moderate ($n=21$), with a peak in high scores, where 57.1% of the patients ($n=12$) are concentrated. Another interesting finding was the increase of scores on the K10 scale in the very high severity range for patients with dementia (43.8%, $n=7$) and those who suffer from "other disorders" (61.9%, $n=13$). These results are considered statistically significant (Figure 3).

To assess the goodness of fit of these models, an analysis of variance (ANOVA) was applied, finding a Pearson's coefficient of correlation of .274, as well as a coefficient of determination (r^2) of 0.75 in that referring to the relationship between variables (r^2 adjusted to 0.38). In particular, differences of association were sought between the neurological diagnoses in relation to epilepsy, in respect of location, between urban and non-urban areas, and comparing local patients with those outside the area. Regarding ages, young patients were compared with older ones, and males and females were compared. In general, the linear regression model found a sum of squares of 3.655 for regression and 44.977 residual, the degrees of freedom were 8 for regression and 200 residual, the quadratic median was .457 in regression and .255 residual, and the Fischer-Snedecor was 2.031, with statistical significance. Furthermore, the standardized and non-standardized coefficients of regression were measured, and for the latter, the *odds ratio* in the case of each variable were measured, giving significant results

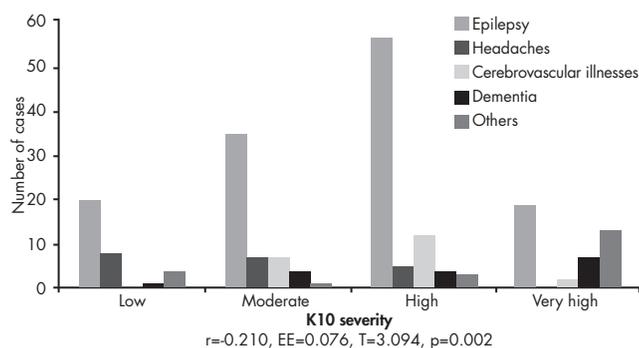


Figure 3. Association between categorized K10 and diagnosis.

in the categories of diagnosis ($B=0.347$, $p=0.012$) and sex ($B=0.174$, $p=0.017$).

A logistical regression model was also performed in order to predict the result of the response variable (K10 scale) in terms of the covariates, with the aim of observing the probability that the variation in K10 scores is related to the rest of the factors. In terms of the covariates, statistical significance was found in the following variables: diagnosis of epilepsy in the categorized classification, as well as headaches, cerebrovascular illnesses and sex (Table 2).

From the previous results, an *odds ratio* was found for the diagnosis of headaches of 0.298 ($p=0.036$) compared with the diagnosis of epilepsy, which suggests a lower possibility of presenting raised scores on the K10 scale when comparing these two items. On the other hand, the cerebrovascu-

lar illnesses reported an *odds ratio* of 6.045 ($p=0.013$) which demonstrates a greater association of these disorders with high scores in the K10 scale when compared with the diagnosis of reference (in this case, epilepsy). Finally, in terms of sex, an association greater than 1:2 was observed in the man/woman relationship for suffering anxiety and depression disorders ($OR=2.332$, $p=0.013$).

A greater association was observed between patients with epilepsy and the presence of high scores on the K10, and this was followed by cerebrovascular illnesses, dementia, other disorders, and finally, headaches; a greater association was found in women, as well as with younger ages. Associated civil statuses were these situations of loss (divorced or widowed). A greater association was found in beneficiaries of medical services than in those who were not beneficiaries, as well as in residents of urban areas.

DISCUSSION

It has been reported that approximately 25% of all the patients who attend medical care in general have severe psychopathology, above all anxiety and depression.³⁷ This affects both quality of life and the quality of medical care received, as it is associated with greater use of primary care services and also affects individual finances (associated in turn with sick days in the working population). However, in spite of this there is a high percentage that do not receive diagnosis or adequate treatment, and our main objective is therefore to present a tool that facilitates identification of individuals at risk with the aim of providing them with adequate care.³⁸

There are different points of interest from the results obtained in this study. If we observe the characterization of this population, we can note that there are similarities with the characteristics of the general population; in terms of neurological diagnoses, the prevalence of patients with epilepsy is notable (37.3% of patients without epilepsy *vs.* 62.7% of patients with this diagnosis). In terms of K10 scores, we found that 63.2% of the population was found to be at risk of suffering an undiagnosed depressive and/or anxiety disorder; in terms of severity, some 64.6% of the sample had scores in the moderate-high severity range with the greatest concentrations in patients with 18, 24, and 25 points. When relating with the rest of the covariates, we find that scores above 21 points were more frequent in women than men (39.2% *vs.* 23.9%, respectively). It was also found that 84.2% of the total patients had scores in the moderate to very high severity ranges with risk of suffering an undiagnosed anxiety/depressive disorder. The validity of this result was confirmed through regression analysis. In terms of neurological diagnoses, it is important to indicate the raised frequency of scores higher than 21 when comparing both epileptic patients (59.5%) and the rest of the population (65.4%). These re-

Table 2. Logistical regression model

Covariates	B	OR	EE	p
Diagnosis (epilepsy)				0.006
Diagnosis (headaches)	-1.210	0.298	0.576	0.036
Diagnosis (cerebrovascular illnesses)	1.799	6.045	0.721	0.013
Diagnosis (dementia)	0.935	2.548	0.717	0.192
Diagnosis (other)	0.701	2.015	0.585	0.231
Location (urban vs. rural)	-0.820	0.441	0.586	0.162
Location (local vs. non-local)	-0.355	0.701	0.438	0.417
Beneficiaries of Seguro Popular	0.647	1.909	0.495	0.192
Sex	0.847	2.332	0.340	0.013
Age (<19)				0.750
Age (20-39)	-0.603	0.547	0.911	0.508
Age (40-59)	-0.533	0.587	0.943	0.572
Age (>60)	-1.044	0.352	1.061	0.325
Civil status (single)				0.328
Civil status (married)	-0.200	0.819	0.393	0.611
Civil status (cohabiting)	-1.023	0.360	0.584	0.080
Civil status (divorced)	0.880	2.410	1.162	0.449
Civil status (widowed)	0.646	1.908	1.281	0.614
Constant	0.499	1.647	1.022	0.626

sults support the idea that symptoms of anxiety and/or depression could be associated with the level of disability or discomfort generated by the base neurological disorder itself and not just by underlying neurophysiological alterations. As explained in the cognitive model, psychopathology comes from errors or dysfunction in the perception of events, which directly influence thought and emotion.^{39,40} The implication of other individual factors in the development of maladaptive responses is also described, such as "uncertainty intolerance", a term that was coined based on various psychological theories^{41,42} that is explained as the tendency to avoid states of uncertainty. The experience of uncertainty in general can play an important part in the origin and maintenance of affective and anxious psychopathology.⁴³ In the particular case of headaches, this could be explained because in spite of having a raised percentage of patients with scores above 21 points, these scores were the lowest when compared between groups, given that despite extensive bibliography about the bidirectionality between these types of disorders with depression and anxiety disorders,⁴⁴ it is common to expect that headaches which present in a chronic and recurring fashion (such as chronic migraine) are accompanied by these symptoms, that is not the cases for episodic headaches.⁴⁵ In relation to epilepsy, its relation with psychiatric disorders has been widely documented. Different studies refer to its association with affective disorders, which is even above what is observed in some chronic illnesses such as asthma and diabetes mellitus.⁴⁶ In these patients, the frequency and severity of the crises has been seen to be directly related with the presence of psychopathology, both depressive and anxious, without this necessarily being related to a state of the epilepsy itself, but rather due to the individual's own perception of their illness. Furthermore, the unpredictable condition of appearance of the crisis and restrictions that come with activities in daily life generate alterations in self-esteem, stigmatization, and even difficulty in being involved in society.⁴⁷ Based on the above, we could explain the 'why' of these low scores in young people, who generally have a better support network, more ability to adapt, and not to mention that they generally have disorders dealt with in early childhood, contrary to what a first convulsive episode in adult life would represent, and also the series of adjustments to lifestyle that causes greater distress and as such, higher intensity in depressive and/or anxious symptomatology.⁴⁸ In summary, we could decide that the variations in the K10 scores are due to the various factors closely related to the type of neurological diagnosis, the severity, level of disability, and prognosis of the same. These factors play a fundamental role in the development of anxiety and/or depressive disorders in this group of patients. The present research is not exempt from limitations as a consequence of using a simple methodological design. Some factors that would have been interesting to study were left

out of the investigation due to difficulties in approaching patients in the waiting rooms; it was therefore not possible to correlate the results obtained on the Kessler Psychological Distress Scale with other tools to specifically measure anxiety or depressive disorders. However, there is a high sensitivity and specificity of this tool compared to instruments such as the Composite International Diagnostic Interview (CIDI) or the MINI International Neuropsychiatric Interview³⁴ which reinforce the study. In the same way, diagnoses of depressive and/or anxiety disorders were not used; rather, we focused on the presence and severity of symptoms. We avoided using a psychiatric diagnosis as this would represent a problem related to the required diagnostic criteria for the various disorders. For example, the majority of affective and anxiety disorders established in the DSM-IV-TR require the absence of a medical cause directly related as a diagnosis criteria, therefore individual analysis of psychiatric disorders will be carried out in subsequent studies.

Neither was there an independent analysis carried out of each individual neurological diagnosis, as is the case with epilepsy, where there was no description made by types of crisis such as temporal lobe epilepsy, which is largely associated with anxiety disorders during crises due to the neuroanatomical substrate involved.⁴⁶ However, such a sub-analysis could be investigated individually in subsequent studies, and it is not relevant for the objectives of the present study, as the association between these disorders was clearly established for the period studied. The number of patients who received a first neurological diagnosis was not identified either, it being suspected that the stress generated by a *de novo* diagnosis could affect the results obtained on the scale. This bias was attempted to be kept under control by using the instrument prior to admission to the neurology appointment. The type of treatment that the patients were receiving was not taken into consideration, it being suspected that the use of certain antipsychotics or anti-epileptic drugs could modify the results obtained, given that it is known that many of these drugs have a known anxiolytic effect and can even be affective modulators.⁴⁶ However, if this effect is present, the impact of the depressive and/or anxious symptomatology in these patients should be greater, due to which we believe that it does not affect the relevance of our research.

The objective of this research was to seek an association between the neurological disorders and depressive and/or anxious symptomatology in a vulnerable population group, finding an important relationship between these conditions (measured through severity scores on the K10 Scale), with a greater severity associated with epilepsy and cerebrovascular illnesses, and to a lesser extent in comparison between the above and headaches. However, more than 60% of the patients presented scores above 21 points on the scale, which is reported as an elevated risk of suf-

fering an anxiety and/or depressive disorder, and for this reason, they would benefit from a comprehensive assessment. A greater association was found in females (39.2% of the total sample); however, the majority of the men also presented scores above 21 points (55.55%). These results coincide with the findings of previous studies which relate the prevalence of anxiety and depression in patients with different medical illnesses. These factors, in association with the presence and severity of anxiety and depressive symptoms in our study, should be taken into consideration on further research. This would clarify the association of psychiatric disorders in patients who attend primary care services, and for early detection strategies to be established for these groups of patients, which would benefit them, the health services, and the community in general.

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