Originals

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Spanish version of the Family Interview for Genetic Studies (FIGS)

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Introduction. The use of the Family Interview for Genetic Studies (FIGS), has made it possible to advance in the performance of family studies   for research in genetic psychiatry. This study aimed to adapt this interview into Spanish and develop a validation process of the FIGS in a sample of Cuban families with a family background of schizophrenia.

Methods. The English version of the FIGS was translated into Spanish and was used in this study. The content was validated through the consensus score of several referees. The questionnaire was administered to at least two informants of 146 families of patients diagnosed of schizophrenia. Internal consistency of the items was analyzed, calculating Pearson's correlation coefficients and Cronbach's alpha of the FIGS and reliability.

Results. In general the Spanish version of the FIGS interview was found to be useful. Internal consistency of the FIGS as measured by Cronbach's alpha coefficient has been found to be 0.92 for depression, 0.99 for mania, 0.94 for psychosis, 0.94 for alcohol and drugs and 0.97 for personality disorders, which indicates values having satisfactory reliability. In addition, Pearson's correlation coefficient varied from the 0.41 to 0.99 for the different lists of symptoms mentioned above and all were statistically significant ($p < 0.0001$).

Conclusions. This questionnaire is reliable and valid for gathering diagnostic information about relatives of probands and thus suitable for use in genetic studies of Cuban families with a history of schizophrenia.

Key words:
Genetics. Schizophrenia. Validity. Interview.

Versión en español de la Entrevista Familiar para Estudios Genéticos (FIGS)

Introducción. El uso de la Entrevista Familiar para Estudios Genéticos (FIGS) ha permitido un avance para la realización de los estudios familiares con fines investigativos en psiquiatría genética. El presente trabajo tuvo por objetivo realizar la adaptación al español y desarrollar un proceso de validación de la FIGS en una muestra de familias cubanas con historia familiar de esquizofrenia.

Métodos. Se realizó la traducción y cambios lingüísticos al castellano de la versión en inglés de la FIGS y la validación de contenido por el procedimiento de la validez interjueces. El cuestionario fue aplicado al menos a dos informantes a 146 familias de pacientes con diagnóstico de esquizofrenia. Se hizo el análisis de la consistencia interna de los ítems calculando los coeficientes de correlación de Pearson y el coeficiente alfa de Cronbach.

Resultados. La adaptación al español de la FIGS resultó ser un instrumento útil. La consistencia interna de la FIGS fue medida con el coeficiente alfa de Cronbach, que fue de 0,92 para la depresión, 0,99 para manía, 0,94 para psicosis, 0,94 para alcohol y drogas y 0,97 para los trastornos de personalidad, lo que indica valores de fiabilidad satisfactorios. Los coeficientes de correlación variaron de 0,41 hasta 0,99 para las distintas listas de síntomas y todos fueron estadísticamente significativos ($p < 0,0001$).

Conclusiones. La adaptación al español de la FIGS mostró fiabilidad, validez de apariencia y contenido y valores elevados en el análisis de la consistencia interna de los ítems para el estudio genético familiar en familias cubanas con diagnóstico de esquizofrenia.

Palabras clave:
Genética. Esquizofrenia. Validez. Entrevista.

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INTRODUCTION

There has been an advance in the development and study of the genetic component in complex diseases in recent decades. Within this group, psychiatric diseases have received great attention due to their high prevalence and the need to find

more effective treatments that lead to prevention, cure or at least improvement in the quality of life of these patients[1-4].

The familial nature of mental diseases has been recognized since ancient times. It has been observed that the risk of developing mental disease increases when any other family members suffer it[5,6].

The evidence that has shown the existence of genes involved in the development of mental illness has mainly come from four genetic epidemiology strategies: studies in families, studies of twins, adoption studies and molecular biology studies[5,7] the first study, that in families, indicates greater occurrence of these diseases among the family of persons with mental disorders. The studies in families have provided data that show greater presence of several of the psychiatric diseases in the family all the probands on the contrary to that expected in the general population[8]. Studies of the family continue to be a method used in genetic psychiatry at present. In order to achieve conclusive findings, research in genetic psychiatry requires diagnostic strictness and clarity within a precise and reliable phenotyping not only for the clinical diagnoses in the patient but also for family studies[9-11].

Based on these ideas, members of the National Institute of Mental Health (NIMH) of the United States developed the Family Interviews for Genetic Studies, FIGS. This gathers diagnostic information on families in genetic and family studies on mental disorders, such as schizophrenia and bipolar disorders[12]. The instrument and manual are available at the website of the National Institute of Mental Health[13].

The FIGS offers diagnostic information that becomes a part of the combined data for each family of the study subject. It of especial use to obtain more reliable information from the family members. It is designed to contribute to a more complete evaluation with research purposes in this study of the family in genetic psychiatry.

The application of this instrument includes the elaboration of a genealogical tree, which is reviewed with the informant. General screening questions are asked in regards to all the known family members. Based on the answers of the informant, a profile sheet with one or more lists of symptoms (depression, mania, alcohol and drug abuse, psychoses, paranoid/schizoid/schizotypal personality disorders) for each first degree blood family member, spouse or any other family member who is well known by the informant is administered. These specific lists of symptoms are applied if, based on the answers of the informant to the general screening questions, the interviewer suspects that the psychopathology evaluated in each list specifically reflects symptoms present in the subject.

The use of the FIGS has been extended to several research groups on genetics of psychiatric disorders in the world. In spite of its enormous advantages for family gene-

tic studies, this interview had not been validated in Spanish. Thus, it had to be validated, considering that it had originally been designed in different cultural and language regions[14-23]. Other work groups have used the method of the family history to obtain the relevant data. When the information obtained from each one of the methods is compared, it is found that the method of the family history is less expensive, faster and that it has the same specificity. However, when the latter method it used, there is a loss of diagnostic sensitivity[5].

This article aims to present the results of the adaptation and validation of the FIGS content to Spanish.

METHODS

The study was performed in several stages: *a)* translation of the instrument and establishment of validity of appearance and content; *b)* training in the application of the instrument FIGS; *c)* family genetic study in the community of 146 relatives of patients diagnosed of schizophrenia, and *d)* analysis of internal consistency of the items.

Translation and procedure of the validity of appearance and content

The adaptation of the instrument began with a workshop between the authors of this article and three experts where all its content was defined in exact terms by consensus. The original instrument was translated into Spanish by two experts independently. This first version was backtranslated to English by a third English native speaking expert and compared with the original. In this way, it was possible to detect any deviation from the original concepts. Finally, all those items that showed any problem in the written expression were rewritten in another workshop with the same participants. On that basis, we made the Spanish version that we applied. This «test version» of the instrument was administered to our pilot sample (20 persons). This made it possible to make small changes in the writing in order to facilitate understanding of the wording.

A workshop, in which group discussion was carried out in relationship to the concepts, was held. Based on the results, the items were analyzed, first individually and then as a group to achieve consensus.

To verify the validity of the content in both the degree of adhesion and rigor with which the instrument contemplates the theoretical setting in which the categories studied are included, we proceeded to perform a validation in regards to the theoretical-logical domain.

In order to establish this content validity, the procedure of inter-rater validity was applied once the language changes were made in the Interview. To do this, a complete copy

of the FIGS was sent to nine expert raters who had voluntarily accepted to assess the adequacy of the instrument.

The raters were informed of the objectives and characteristics of the research, the study purposes and the utility of their assessment. Furthermore, they were given a questionnaire to use to grade the Interview, studying each one of their Lists of symptoms in accordance with the principles of Moriyama[24] and in accordance with the following grading scale: 1: «much», 2: «little» and 3: «none». In addition, they had to consider 5 judgment dimensions or categories: «reasonable and understandable», «sensitive to variations», «justifiable supposition», «clearly defined» and «data that are feasible to obtain».

- Reasonable and understandable: if the questions of each list of symptoms (or the Interview as a whole, as pertinent) is understandable for the supposedly healthy subject.

- Sensitive to variations in the phenomenon that is being measured: if it refers to whether the questions on each list of symptoms could distinguish the subjects with these different diseases.

- With basic suppositions that are justifiable or intuitively reasonable: it refers to whether there is justification for the list of symptoms to be included in the interview.

- With clearly defined components: it refers to the clarity with which the questions on the list of symptoms are defined.

- That which can be derived from data that are feasible to obtain: it refers to the opinion of the expert on the possibility of obtaining information from the subject based on his/her answers to each list of symptoms (or the interview as a whole, as pertinent).

Training in the application of the instrument

Another theoretical-practical workshop was conducted for training in the application of the FIGS instrument. The trainees were specialists in psychiatry and had great experience in the application of clinical measurement instruments in the psychiatric practice.

Family genetic study in the community with the FIGS

Fifteen teams made up of two psychiatrists participated. A total of 146 schizophrenic patients previously diagnosed with the SCAN system (Schedules for Clinical Assessment in Neuropsychiatry) were evaluated[25]. The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) was used as the criteria. In order to elaborate the diagnoses, part II of the Present State Examination (PSE-10) was used for the psychotic symptoms and the Categor 5 computer program[26].

The FIGS was applied to the relatives of the 146 patients after obtaining their informed consent. The FIGS data were gathered from all those interviewed, above all from the known members of the family. At least two informants were interviewed in each family, considering that the greater the number of informants, the greater the accuracy of the diagnoses identified in the families[12]. A total of 4042 relatives, 834 of whom were first degree, were evaluated with the FIGS interview through the informants.

Analysis of the internal consistency of the items. Reliability

The statistical program STATISTICA for Windows, version 6,0 was used to obtain the results. The analysis of internal consistency of the instrument was conducted by calculating the item-total in each List of symptoms with the Pearson correlation coefficients. Its reliability was analyzed with Cronbach's alpha coefficient[27].

The reliability coefficient represents the fraction of variability observed between the individuals that is true and not attributable to measurement errors. Calculation of Cronbach's alpha coefficient has the advantage that it requires only a single administration of the measurement instrument. It can use values between 0 and 1, where 0 means null reliability and 1 represents total reliability. This coefficient can be counted related on the bases of the variance of the items or, as in our case, using the correlation metrics of the items.

RESULTS

Validity of appearance and content

Calculations were made for the total FIGS interview. In accordance to the principles of Moriyama, and in accordance with the grading scale, the percentage of leaders who evaluated each one of the indicators of total FIGS as «much» was the following:

- Reasonable and Understandable: 85%.

- Sensitive to variations: 75%.

- Justifiable supposition: 100%.

- Clearly defined: 80%.

- Data that are feasible to obtain: 75%.

The same criterion defended by Moriyama, who considered as valid those subtests where the answers of the experts had a level of agreement equal to or greater than 70% on the scale «much» was considered for the correction of the

results. Therefore, the FIGS has been shown to be a valid instrument for the purposes pursued, since the level of interrater expert agreement offers percentages above the 70% minimum established by Moriyama (1968).

Internal consistency of the items

Internal consistency of the scales was calculated with Cronbach's alpha coefficient. This was greater than 0.8 in each one of the list of symptoms of the FIGS interview. The number of cases evaluated with each list of symptoms varied according to the psychopathology reported by the informant of the families studied. Table 1 shows a greater number of relatives with symptoms characteristic of the schizophrenic spectrum and also with alcohol and drugs. This result has been reported in other studies[28-31].

CONCLUSIONS

The adaptation process of FIGS to the Spanish language rigorously followed the methodologies commonly used in sociolinguistic adaptations. The conceptual framework of the FIGS is fundamentally based on expert's opinion and bibliography.

The indicators used have revealed the content validity. The results obtained are encouraging for the future use of this instrument.

In order to evaluate the concurrent validity of the FIGS, it is necessary to obtain diagnoses from the families included in this list of symptoms, preferable blind obtained ones, in order to assume that they are valid or to be used as a «gold standard».

The adaptation of the FIGS to Spanish was demonstrated to have reliability, validity of appearance and content and elevated values in the analyses of internal consistency of the items for the familial genetic study in Cuban families with diagnosis of schizophrenia.

Table 1	Cronbach's alpha coefficients in the list of symptoms of the FIGS Interview			
List of symptoms	Amount of items	Cases	Inter-Item correlation	Cronbach's Alpha
Depression	12	32	0.61185	0.92478
Mania	12	5	0.99999	0.99456
Psychosis	37	64	0.41881	0.94550
Alcohol and drugs	18	48	0.51414	0.84728
Paranoid, schizoid and schizotypal personality disorders	16	22	0.87505	0.97738

Adaptation to Spanish of the FIGS Interview is a useful instrument that makes it possible for us to make a detailed familial genetic study in our setting of persons with mental disorder such as schizophrenia. The details of the interview make it possible to generate possible diagnoses according to the data collected through the informants and these may be used in the familial studies in genetic psychiatry.

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