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Cultural adaptation of instruments to measure stigma and mental illness in Mexico City

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Original article

SUMMARY

This article is part of a collaborative study in which research teams from Canada and Mexico participate.

The overall purpose is to describe the cultural adaptation and semantic validation process of three instruments for measuring stigma and mental illness in Mexico City. The criteria of understanding, acceptability, relevance and semantic integrity were used to adapt the following instruments: the Internalized Stigma towards Mental Illness Inventory (ISMI), the Opinions about Mental Illness Scale(OMI) and the Devaluation-Discrimination Scale (DDS). Thus, four individual interviews and four group interviews were carried out with 37 informants from different groups (health personnel, persons with diagnosis of major mental illness, relatives and general population). Lastly, a content analysis of the information obtained was carried out. The adapted instruments proved to be culturally appropriate for the population of the different groups studied in Mexico. The adapted versions will be useful for establishing comparative analyses with other countries. The scope and limitations of the process of semantic equivalence were analyzed in the transcultural research.

Key words: Cultural adaptation, semantic validation, opinions towards mental illness (OMI), devaluation-discrimination scale (DDS) towards mental illness, internalized stigma of mental illness inventory (ISMI), Mexico City.

RESUMEN

Este trabajo forma parte de un estudio colaborativo en el que participan equipos de investigación en Canadá y México.

El objetivo general consiste en describir el proceso de adaptación cultural y validación semántica de tres instrumentos de medición sobre el estigma y la enfermedad mental en la Ciudad de México. A partir de los criterios de comprensión, aceptación, relevancia e integridad semántica se adaptaron los siguientes instrumentos: el Inventario de Estigma Internalizado (ISMI), el Cuestionario de Opiniones hacia la Enfermedad Mental (OMI) y la Escala de Percepción de la Devaluación y Discriminación hacia la Enfermedad Mental (DDS). Para ello se llevaron a cabo cuatro entrevistas individuales y cuatro grupales con 37 informantes de diversos sectores (personal de salud, personas con diagnóstico de trastorno mental grave, familiares y población general). Finalmente se efectuó un análisis de contenido de la información obtenida. Los instrumentos adaptados fueron culturalmente apropiados para la población de los diferentes grupos estudiados en México. Las versiones adaptadas serán de utilidad para establecer análisis comparativos con otras regiones. Se analizan los alcances y limitaciones del proceso de equivalencia semántica en la investigación transcultural.

Palabras clave: Adaptación cultural, validación semántica, Cuestionario de Opiniones hacia la Enfermedad Mental (OMI), Escala de Percepción de la Devaluación y Discriminación hacia la Enfermedad Mental, Inventario de Estigma Internalizado de la Enfermedad Mental (ISMI), Ciudad de México.

INTRODUCTION

Nowadays, transcultural research on processes of exclusion and discrimination towards people affected by mental disorders has become significant issue, since it is a central issue related to human rights and the struggle for equity in the affected population's access to care.[1]

The suggested purpose is to have an effect on international public policies for diminishing the stigma regarding such conditions, for which researches based on the evidence are required to support these proposals, thus the growing interest to develop studies in specific populations (for instance, health personnel, people affected, general population, etc.) and different regions.[2,3] One of the main difficulties is to have common measuring standards that may be culturally sensitive instruments in order to use them in comparative studies.[1]

This work is part of a comparative and transcultural research in which teams from Canada[4] and Mexico take part;[5] its purpose is: "to achieve a multidisciplinary breakthrough in the research of the stigma and the dynamics of the structural discrimination and social exclusion towards mental illness", considering different sectors of the population, which

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initial stage consisted in the semantic adaptation of the instruments used: a) the Devaluation-Discrimination Scale (DDS) towards mental illness, b) the Internalized Stigma of Mental Illness Inventory(ISMI) and c) the Opinions about Mental Illness Scale (OMI).

During many years, the adaptation was limited to the almost literal translation of the measuring instruments for subsequent application, without further attention to its contents that, without a doubt, have important implications on the findings[6] and their interpretation. Today, within the transcultural research field, the instrument adaptation implies a more rigorous process pervading the language translation of an instrument, particularly when it is used within a sociocultural context linguistically different than the context for which it was created, in order to reach the meaning equivalence in both contexts. In the field of health research,[7] there are several experiences, specifically for mental health these methods have been used for the study of psychosis,[8] food behavior disorders;[9] anxiety and social phobia disorders[10] and schizophrenia,[11] as well as for the assessment of quality of life in persons with attention deficit-hyperactivity disorder (ADHD)[12] and in children,[13-15] among others.

While there is no consensus regarding the most appropriate methodological procedure to make the instrument adaptation, group strategies are a resource commonly used during the process. The Delphi Method[16] that consists in a forecasting technique based on a group process with key informants, has inspired a considerable part of the research. One of the principles in which it is based is on the idea that the subjective judgment of a group of experts in a particular field contributes for a greater knowledge about certain topics from the group reflection, which have a large scope in with the individual work, a crucial aspect for decision-making.[17]

The Delphi Method involves a series of stages in which an expert panel on a given topic is invited, collaborating with the analysis and discussion in order to achieve a certain consensus.[18] This procedure is particularly useful, especially when dealing with topics in which knowledge is controversial, there is not enough evidence or they are considered as "taboo" among the population.[7,19] Therefore, group participation not only contributes in widening knowledge, but in helping to develop new ideas and hypothesis. In order to achieve this purpose the participant selection is essential, not only for their wide knowledge on the topic, but also for the level of willingness and openness they may have to share their ideas with others. Likewise, the diversity of the panel members enriches knowledge, since this allows the inclusion of different outlooks.[20]

Authors like Westermeyer, Janca,[21] Van Ommeren et al.,[22] Wild et al.[23] and Eremenco et al.[17] have suggested interesting methodological contributions which are exceedingly helpful during the cultural adaptation process. Among them stand out the reflection on the discrepancies between the measuring instruments the sociocultural aspects, a clearer expression of which can be found in the effect defined by Kleinman[24] as *category fallacy*. This concept refers to the application of a nosologic category developed by a particular group and its implications on persons of other cultures for whom this category lacks consistency and their validity has not been established. This gives rise to an imposition of diagnostic criteria that at the end ignore the social, cultural, economic and politic context of the widest group, which is put forward as one of the main variation sources in the health-disease field.[25] Accordingly, the qualitative aspects inclusion contributes not only in achieving a better understanding of the studying environment, but also in validating the instruments for data collection and interpretation of results.[26,27]

Therefore, the second methodologically emphasized contribution is to point out the importance of using multi-method strategies, besides the effort to develop basic rules that may guide the researcher during the whole process. Other strategies are the evaluations of the concepts quality and their level of difficulty, and of the interpretation similarity; as well as the preparation of *back-translations* of versions adapted to the local context and to the original language of the instruments.[15,28]

The diversity of approaches and proposals,[19,22] makes the adaptation processes a complex task, but in turn a necessary task to have more rigorous analysis, so the selection of the most suitable method to achieve semantic equivalence is established based on the objectives and interests suggested in the research. In this regard, Manson[29] proposes four fundamental criteria to accomplish that an instrument can be culturally suitable: 1) level of understanding, 2) acceptability, 3) relevance and 4) *completeness*[22] (this term refers to the idea of totality, that is to say to achieve incorporating every aspect that reports a phenomenon of study to attain certain conceptual integrity. These criteria are shown in Table 1.

The level of understanding relates to specific attributes such as simplicity and clarity of the questions. An incomprehensible concept has contents that are not evident for the population, for example, the use of medical terminology, which in many cases does not have a clear meaning for the population. Hence the importance to consider the sociocultural characteristics of the target population. An instrument meets with the acceptability criteria when its contents are culturally appropriate for the population, so it is important to avoid using confusing or offensive language. Relevance relates to the importance that the questions keep a close relationship with the object of study, that is to say, that such questions are useful and relevant. Finally, *completeness* (conceptual integrity) that refers to the capacity to integrate —insofar as possible— all local elements of the phenomenon of study into the instrument structure. If this correspondence did not exist, the instrument would not meet the semantic, conceptual and technical equivalence levels necessary for its application.

Table 1. Analysis criteria in the cultural adaptation and semantic validation

Levels	Description
Understanding	• Assessment of contents allowing to define how understandable is the question for the target population. • Translation free from medical terminology with the purpose of being more easily understood by the population.
Acceptability	• Determinates that the contents of the questions do not inconvenience or offend the population.
Relevance	• Refers to the fact that questions are to be related to the phenomenon or construct being measured in the local culture.
Semantic integrity	• Implica la total equivalencia que debe existir entre los contenidos de ambas versiones de los instrumentos.

*Table prepared according to the criteria proposed by Manson (1997).[29]

Based on the foregoing, the purpose of this article is to put forward the transcultural adaptation process of three measuring instruments that have a wide tradition on the stigma and mental disease (DDS, ISMI and OMI) research,[30] due to the interest of having versions in agreement with the language and sociocultural characteristics of Mexican population allowing a comparative analysis with other populations. At the end, the scope and limitations found during the process are analyzed and, lastly, the discussion regarding the importance of carrying out the semantic equivalence of instruments in transcultural research is put forward.

MATERIALS AND METHODS

This work is part of a wider comparative and transcultural research in which research teams from Canada and Mexico participate. It is a proposal originally put forward by Pedersen (2009),[4] which global objective was to make a research network in order to achieve a multidisciplinary breakthrough in the research of the stigma and the dynamics of the structural discrimination and social exclusion towards mental illness. Mexico adds to this interest and develops a similar study using the same measuring instruments applied in Canada. Once the financing is obtained, this project shall start up.

This research was assessed by the Ethics Committee of the Ramón de la Fuente Muñiz National Institute of Psychiatry. Informed consent forms were used in the whole process, besides the informants' approval for the audio recording of the interviews.

Figure 1 shows the methodological procedure that was followed for the instrument adaptation.

Procedure for cultural adaptation

The process starts with the sending of the English original versions of the instruments by a Canadian team of researchers from the Douglas Hospital Research Centre, in Montreal. The first step was the translation, into the Spanish language, of each survey, which was performed by an English specialist with a wide experience in psychosocial research.

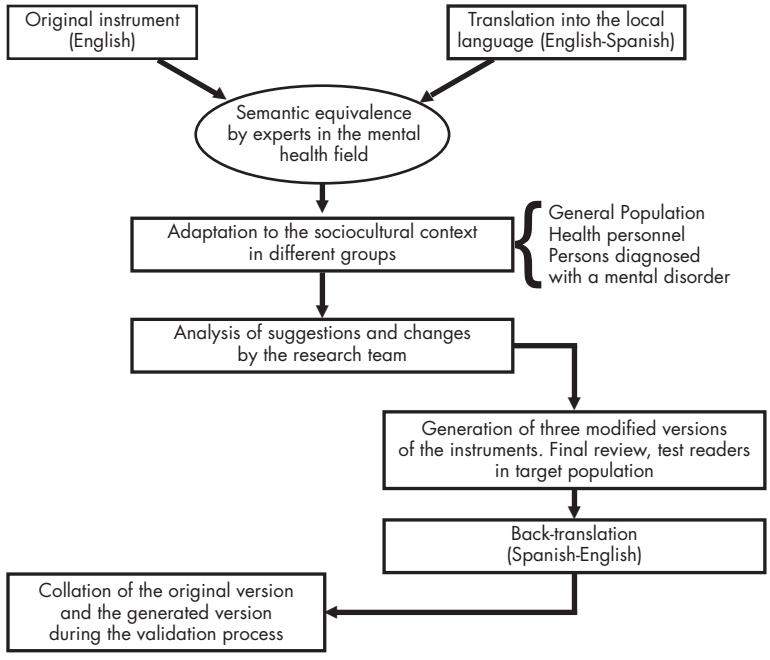

Figure 1. Methodological strategy for the cultural adaptation of the instruments.

The surveys included in the analysis were the following:

a) *Devaluation-Discrimination Scale* (DDS) towards mental illness.[31] It includes twelve questions, which answers are made according to what "most of the people believe or think," in order to reduce social desirability bias. The response format is a four-point Likert scale ranging from 0=strongly disagree to 3= strongly agree. The instrument has a global internal consistency of 0.76 (Alpha de Cronbach).

b) *Internalized Stigma of Mental Illness Inventory* (ISMI).[32] The instrument's authors use again Corrigan's (1998) definition of internalized stigma as "the devaluation, shame, secrecy and withdrawal triggered by applying negative stereotypes to oneself",[32] and they put forward a 29-question survey measuring five wide areas: a) alienation; b) stereotype adhesion, c) experience of discrimination, d) social withdrawal and e) resistance to stigma. The response format is a four-point Likert scale (0=strongly disagree to 3= strongly agree). The internal consistency is appropriate (alpha=0.90).

c) *Opinions about Mental Illness Scale* (OMI).[33] It was originally developed by Cohen and Struening during the sixties. It has 51 questions evaluating five dimensions: 1) authoritarianism, 2) benevolence, 3) ideology on mental hygiene, 4) social restrictiveness and 5) interpersonal etiology. The range of response is from 0=strongly disagree to 5=strongly agree. The internal consistency of the test is 0.83.

Expert panel

A working group was organized with health care providers from different disciplines who met the following qualifications: 1) wide experience in the mental health field, and 2) preferably bilingual. The group consisted of eight members—three female psychologists, three psychiatrics, one of them a woman; a female social worker and an anthropologist (researcher). Except for two researchers and the anthropologist, all worked at specialist care centers. Once they accepted to take part in the study, they were provided with an English and Spanish copy of the instruments, so that they could read and corroborate their semantic correspondence and subsequently share their comments and points of view with other mental health experts regarding the contents.

The group interview lasted two hours and a half, on a single session at the health center facilities. Two female psychologists of the research team took part in the session, one of them acted as coordinator and the other as observer. The information was registered through notes and audio recording during the interviews, with the previous authorization of interviewees.

The research topics were as follows:

1) The instruments versions adjustment from English into Spanish.
2) Understanding of contents.
3) Clearness of questions.
4) Relevance and appropriateness of the stigma questions.
5) Opinions about the questions—if they could be offensive or violate the integrity of informants.
6) Questions not included in the instruments but important for stigma assessing purposes.
7) Remarks and suggestions from informants that could be useful for the study and for the final comments.

Once the versions of the three instruments previously revised by the group of experts were obtained, the validation of their contents was carried out, based on the population they were addressed to.Two working groups of general population were organized in order to analyze the contents of the DDS. One of these groups consisted of relatives of persons affected by a mental illness. For analyzing the ISMI contents two individual interviews were carried out with persons diagnosed with a severe mental illness; while in the case of OMI, two individual interviews were carried out with health care providers. Below is a description of the characteristics of target population members.

a) *Relatives of persons who have been diagnosed with a mental illness*. A group interview was organized with the participation of fifteen members of nonprofit organizations, who voluntarily collaborated with the research and even lent their facilities for the interview. The contact was made through a member of such organization. Although the participation of a lower number of members was envisaged, other persons were incorporated during the group dynamics. In spite of some difficulties to listen to all participants' opinions, the interview was developed properly and valuable inputs were made in relation to the instrument's contents. It took about an hour and —at the end— relatives were thanked for their collaboration, establishing contact with them for subsequent research stages.

b) *General population*. Members of a nonprofit organization were summoned to perform the group interview. At the end, only four persons attended: two men and two women ranging between 37-55 years of age. Three of them offered community services in such organization and the other person worked at the administrative area of a public institution.

c) *Persons with a psychiatric diagnosis*. Two individual interviews where conducted with test readers; both were male and with a severe mental illness diagnosis, who were contacted in the institution where they were receiving care. Besides having a severe mental illness diagnosis, other inclusion criteria were being under ambulatory treatment and accepting to take part in the study. Interviews lasted 50 minutes.

d) *Health care providers*. A female psychologist and a psychiatrist were summoned as test readers through two indi-

vidual interviews. Both had wide mental health experience, one on research field and the other on mental care. Interviews lasted approximately one hour and a half.

Finally, the whole translation and adaptation process took place over the course of three months, discussing and reflecting on controversial aspects, through an open-ended questions approach, analyzing meanings in depth, trying to incorporate the participants' different points of view about the surveys contents.

Information analysis

The information obtained from individual interviews and from working groups was recorded in audio and subsequently transcribed to make easier the analysis of contents. Remarks and comments were organized by type of interviewed population, taking as a reference point those criteria proposed by Manson30 and Van Ommeren et al.[22] for cultural adaptation, in terms of: 1) understanding, 2) acceptability, 3) relevance and 4) semantic integrity.

RESULTS

Tables 2 and 3 show the main findings based on the criteria described above to achieve semantic equivalence of instruments.

1) *Devaluation-Discrimination Scale (DDS) towards Mental Illness.*

a) Understanding. Main comments were related to the extent of questions (e.g. "*Most people would accept a fully recovered former mental patient as a teacher of young children in a public school.*"); therefore, they were considered as unclear and confusing.Others included a negative clause in the contents: "*Most people would not hire a former mental patient to take care of their children, even if he or she had been well for some time*" or "*Most of job opportunities would not consider a job application of someone who has been hospitalized due to a severe mental illness*". Other questions were considered as ambiguous (e.g. "*Most people think that a person with a mental illness tends to be violent*" and "*Most of the relatives of a person who is mentally ill are ashamed of him/her*"), hence it was difficult to give an answer, which was according to more specific aspects such as type of illness, level of severity, as well as social support resources.

b) Acceptability. In general, informants agreed that the DDS contents were appropriate for the population. However, the fact that the instrument questions are formulated in terms of "*what most people think*", with the purpose of diminishing social desirability bias, created discomfort among participants, since they believed that their personal opinion was left aside.

c) Relevance. Informants agreed on the appropriateness of the DDS questions, although insufficient to tackle

Table 2. Comments to the instruments during the cultural adaptation and semantic validation process

	ISMI	DDS	OMI
Understanding	• Length of questions (combination of two different ideas in a single sentence). • Ambiguity of certain terms and necessity to specify aspects associated with the contents of some questions (contextualization). • Avoid using negative clauses in questions.	• Length of questions (combination of two different ideas in a single sentence). • Ambiguity of certain terms and necessity to specify aspects associated with the contents of some questions (contextualization). • Avoid using negative clauses in questions.	• Length of questions (combination of two different ideas in a single sentence). • Ambiguity of certain terms and necessity to specify aspects associated with the contents of some questions (contextualization).
Acceptance	• The application and repeated use of the term mental illness was considered offensive or created discomfort on informants who disagreed with the medical diagnosis. • Questions related to marriage or feelings of inferiority and shame were considered by some informants as offensive.	• Answers based on the opinion of "most people think" created discomfort and confusion. It was suggested that it would be more appropriate to inquire into the informant's opinion.	• The contents were considered acceptable for the addressee population • No offensive questions were identified.
Relevance	• Its contents were considered appropriate, relevant and related to the research topic. • 5 questions were included for convenience purposes of understanding the research topic.	• Its contents were considered appropriate, relevant and related to the research phenomenon. • 7 questions were included for convenience purposes of understanding the research topic.	• Its contents were considered appropriate, relevant and related to the research phenomenon. • Updating of terms used. • 8 questions were included for convenience purposes of understanding the research topic.
Semantic integrity	• Versions translated and adapted to Spanish of the three instruments (ISMI, DDS and OMI) were analyzed by the research team in Canada in order to achieve the appropriate level of semantic equivalence regarding the original instruments.		

Table 3. Questions incorporated to the instruments during the cultural adaptation

Internalized Stigma of Mental Illness Inventory (ISMI)
30. I deserve more consideration from others because I have a mental illness.
31. Due to my mental illness I'm feeling closer to my family.
32. Having a mental illness isn't an obstacle for a relationship.
33. Most of my problems would be solved if I hadn't a mental illness.
34. Having a mental illness makes me see the future with great uncertainty.
Devaluation-Discrimination Scale (DDS) Towards Mental Illness
13. Most people think that a woman is more prone to mental illnesses.
14. Most people think that that a person with a mental illness tends to be violent.
15. Most people are afraid of being with a person with a mental illness.
16. Most people think that a person with a mental illness is a weak character.
17. Most of the relatives of a person who is mentally ill are ashamed of him/her.
18. Most of the schools would not accept a person who has been hospitalized due to a mental illness.
19. Most people think that a person has a mental illness because is being punished for something he/she did.
Opinions about Mental Illness Scale (OMI)
52. Psychiatric hospitals should be located as far away as possible from the general population.
53. I feel calm when being close to a person with a severe mental illness.
54. People who masturbate in excess are more likely to have a mental illness.
55. Women are more likely to develop a mental illness.
56. Maintaining regular contact with persons with any severe mental illness may increase the risk of developing a mental illness.
57. Health care professionals working in the mental health area are more likely to develop a mental illness.
58. Those psychiatrists and psychologists who have a severe mental illness but have already recovered should be banned from serving other psychiatric patients.
59. In many cases the only way to treat psychiatric patients is with a heavy-handed form.

the research topic, therefore, it was necessary to explore different labor, family, school, community and relationship level areas. To cover these absences they suggested the inclusion of twenty-one questions, which were analyzed in order to choose relevant questions for their relation to the study object.The selected questions are posed in Table 3.

2) *Internalized Stigma of Mental Illness Inventory* (ISMI).
   a) Understanding.In this heading certain problems were identified in the understanding of questions including, for instance, a double negative clause: "*I try not to get closer to people who don't have a mental illness so I can avoid rejection*".Other examples included more than one idea, resulting very long (e.g. "*I don't socialize as much as I used to because my mental illness might make me look or behave in a "strange" way*). On the other hand, certain ambiguity was observed in some questions, such as: "*People who suffer from mental illnesses tend to be violent*", "*People with a mental illness should not get married*" and "*People with a mental illness cannot live a good, rewarding life*". According to test readers, the foregoing relates to the illness type and level of severity, besides the social and family context, hence it is difficult to generalize an answer. Nevertheless, in general terms the instrument was understandable for the population.
   b) Acceptability. The main observance for this instrument relates to the interviewee's level of illness awareness. In this regard, the term "mental illness" may be offensive in cases where the informant does not agree with the medical diagnosis, so that hearing this term reiteratively creates discomfort: "*I'm embarrassed or ashamed that I have a mental illness.*", "*I feel out of place in the world because I have a mental illness.*", "*I feel inferior to others who don't have a mental illness*" and "*I cannot contribute anything to society because I have a mental illness.*"). There was controversy on this matter with other informants who did not consider this term offensive.
   c) Relevance. In general, participants considered the ISMI questions relevant. The expert panel and test readers suggested the inclusion of fifteen additional questions, which were analyzed by the research team identifying those that were agreed and useful to explore such topics. Five questions were included in the final version of the instrument, shown in Table 3.
3) *Opinions towards Mental Illness Scale* (OMI).
   a) Understanding. Generally, in accordance with the informants' point of view, the contents of the instrument met this criterion. They are put forward in a language that is simple and comprehensible to the target population. As with the previous instruments, the main observations were related to ambiguity (e.g. "*Most people who once where in psychiatric services may be reliable to take care of children*", "*All patients who are admitted to the psychiatric services should undergo a painless operation for birth control*"); which answers relate to other factors that require more contextualization to give a specific response. The "*If mentally ill parents' children were brought up by normal parents, probably they wouldn't become mentally ill persons*" question was considered as very lengthy, which could lead to confusion. Furthermore, participants suggested

a wider explanation of certain concepts such as "*normal people*", "*evil thoughts*", "*severe mental illness*", "*more privacy*" and "*mental illness*" that were ambiguous.

b) Acceptability. In general, the OMI complied with this criterion since no question was considered by the informants as inappropriate or offensive for the population.

c) Relevance. Despite informants described it as a lengthy survey, they considered that the contents were relevant since they covered different areas related to the research topic, like attitudes and beliefs —in connection with the mental illness— that they often hear during their professional work and that "*are closely related to the social context in which we live*", as one of the participants stated.

Other observation was the need to update certain terms, since the contents of some were created by their authors during the sixties and about that time the institutionalization of psychiatric patients predominated, so some of these terms have a different meaning. For example, the use of the term "*pabellón*" (annex), although is still used in some Mexican institutions, in many others is obsolete. As a result of the group reflection exercise, from the twenty-four questions initially proposed, only eight were chosen considered as the most important and shown in Table 3.

Conceptual integrity

The three adapted versions were sent to the research team in Canada, which analyzed similarities and differences with the purpose to establish the semantic equivalence level obtained in Mexico with regard to the original instruments. Finally, a consensus was established among the research teams in both countries, about the changes that would be incorporated before the application on the final study and thus facilitate the transcultural comparison.

During the comparative analysis, some discrepancies were observed in six questions, considering the three instruments, therefore, such questions were modified with the aim of reaching the required semantic equivalence. Likewise, other changes were made to the verb tenses and a better precision for some terms (e.g. "*psychiatric services*" instead of "*pabellón*" (annex), referring to other contexts as the services offered in general hospitals. In addition to carry out some precisions regarding the instructions, the response categories were maintained, only modifying the wording (e.g. "*strongly agree*" instead of "*heavily agree*"). It bears mention that other proposals came up that, at the end, could not be incorporated either because they were not completely part of the object of study or because implied major changes on the instruments structure, which somehow could hinder the transcultural comparison. The process finished with the translation of the semantically adapted version from Spanish into English.

DISCUSSION

The main contribution of this work was the obtaining of three instruments that have a wide tradition in international research about stigma towards mental illness, which were adapted for their application among Mexico City's population. The foregoing shall provide the comparative analysis with another research conducted simultaneously in Canada, which constitutes a valuable contribution before the challenge that has put forward in the research in such regard that consists in having common parameters to measure stigma.[1]

In general, the instruments considered in this research comply with the understanding, acceptability, relevance and semantic integrity criteria.[22,29] Nevertheless, the main observances put forward during the process are related to the understanding criterion, in three basic aspects: ambiguity, length and wording of the questions. Regarding the acceptability criterion, test readers considered that the ISMI, addressed to persons with a mental illness, could result offensive for those who disagree with the medical diagnosis or who are in an initial process for seeking care, due to the constant references to the term mental illness that, at a given point, could be inconvenienced.In the case of the OMI and the DDS no other relevant suggestions came up.

As for the relevance criterion stand out —on the one hand— the importance to update the OMI's contents, an aspect already pointed out by other authors,[34] since some questions of the original version include terms that are obsolete in the medical practice in Mexico (e.g. pabellón [annex], guardias [guards]) or that were limited to the specialized psychiatric services, excluding the psychiatric care offered in general hospitals; while for the DDS there were a greater number of proposals for the inclusion of new questions. The foregoing indicates that despite the original contents are relevant, they are at the same time insufficient to cover other aspects, regarded as major aspects, for the topic's approach in Mexico.

Finally, the delivery of the three instruments to the team of researchers in Canada, in order to meet the criterion of semantic integrity, allowed the incorporation of changes required for having equivalent versions in both countries. Likewise, other questions proposed specifically to tackle the topic in Mexico were included, with the intention of analyzing them independently due to their relevance, which made possible the identification of the scopes and limitations of such measures regarding the object of study at a local level. In the area of health, several authors have pointed out translation as trouble or technical problem and the solution has been the incursion of other specialists such as translators, who despite their capacity to refer to concepts or terms of the local culture, usually are not specialized in research topics. Therefore, their answers cannot be applied broadly.[24,25,27] Nonetheless, most of the time the role that sociocultural aspects play in such process is overlooked. The importance of local realities is diminished, and the culture is set aside in its role of a system

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modeling human experience and emotion,[25] placing the challenge of the cultural diversity approach on health research. In accordance with Sperber,[27] every research looking for the description or comparison of cultural differences among populations through the use of measuring instruments is required that these instruments are submitted to a rigorous process of translation and semantic validation. However, the promotion of a dialogue between interpretations and reflection on the culture itself, which implies the process of semantic equivalence, is an effort that is worth it, even though the purpose would be different than the transcultural analysis, since it allows optimizing resources and providing better attention to the sense and meaning that the research topics have for the target population. Thus, we agree with authors like Kachani et al.[9] who put forward that the semantic adaptation process goes beyond the simple translation of a language and is essential throughout the research process, particularly regarding studies that involve structured measurements.

As for the choice of the most adequate strategies for adaptation, as has been found in the relevant literature, there is no consensus; on the contrary, there are several approaches and strategies. Therefore, the researcher is who decides the most suitable way, depending on the scopes and objectives of his/her research, as well as on the available resources. The criteria suggested by Manson[29] and Van Ommeren et al.[22] were extremely useful for the adaptation process followed in this work.Particularly, the understanding criterion was very useful, since emphasis is placed on the sense and meaning that the contents of the instruments have for the population. This guarantees a better meaning equivalence, beyond limiting to the literal translation of some terms.

Other scope when using this resource is the possibility to consider the informants not only as answering subjects but also integrating them in the decision-making. To attain the latter the methodological strategies of qualitative nature are crucial for the identification of relevant topics in specific groups, as well as to generate interesting proposals and ideas coming from the participants themselves. For instance, a fact that stood out among the relatives who took part in the study was their concern to attain legislation and labor changes and to have a medical health care coverage. Likewise, the main concerns expressed by those having a mental illness were based on job stability, trouble finding a partner, and sexuality. General population expressed its interest for aspects related to the health-mental illness process, since it is an issue which is seldom mentioned and has little orientation at community level. Furthermore, they said that taking part in the group activity provided an opportunity for dialogue not only to state their doubts or opinions, but also to share their experience. Thus, implications go beyond methodological aspects. The work of Flores, et al, 2011 is a good example of the importance of incorporating the experience of groups living under contexts of adversity in the psychosocial and community intervention.[35]

Some authors point out the usefulness of participatory strategies, such as group interviews, to explore topics and identify fundamental concepts in research.[27] In this regard, it bears mention —as one of the scopes of use of this strategy within this study— the possibility to include other topics that had not initially considered and that were theoretically relevant from the different participants' point of view, and to discard other less relevant topics. Equally, another very valuable aspect was to favor a space for the joint analysis around the research topics.[36] This coincides with the Knudsen's postulate (Knudsen et al.)[11] who consider focus groups as an strategy proper for the approach of problems, concepts, structure and translation of instruments, insofar as it allows an adjustment based on group reflection. To the extent of achievement for recovering the diversity of topics, concepts, sectors of the population, approaches and perspectives it shall be possible to enrich more the findings concerning the semantic equivalence.[29]

Finally, we agree with authors like Eremenco et al.[17,26] who put forward the importance to combine the qualitative and quantitative approaches in the evaluation of translation and equivalence of the contents of an instrument. While the strategy followed in Mexico during the cultural adaptation of the instruments was essentially qualitative, thus it was possible to have a broader view regarding the stigma, yet the truth is that this process in no way replaces the construct validity of such instruments. In that regard the purpose is to uphold this work and be able to carry out multivariate analysis in the different sectors of the population under study.

Limitations

The semantic adaptation of instruments is extremely useful for the analysis of the relevance of contents in transcultural researches. While it is a difficult process, it is fundamental to consider aspects related to the sense and meaning of the research topics in specific populations. However, it is important to take into account some difficulties that might occur during the process. For example, the organization of the working groups implies an investment of human and material resources. Neither is simple to incorporate all participants' observances and to establish a consensus, especially regarding controversial topics or with perspectives found. As pointed out by Powell[20] and Boulkedid et al.[37] the establishment of the consensus is an essential aspect to strengthen the validity of findings.

During the process, interesting contributions might come out that finally are not included. For instance, one of the informants stated the convenience of modifying the ISMI's response format, since rather than showing a certain agreement or disagreement with the contents, it should be based on terms of frequency, and hence capturing at a major extent the meaning of questions at process level. For example, in the case of the favorable beliefs this informant

put forward that at the beginning of his process he had unfavorable beliefs towards the illness that eventually were modified. In summary, to distinguish between pertinent and non-pertinent observations may be complicated. Nevertheless, a possible solution would be choosing the whole qualitative analysis by the research team, which would facilitate —at a great extent— the decision-making, avoiding as possible being in methodological risks that may deviate the main objective of the adaptation process, which consists in generating culturally appropriate instruments for the comparative and transcultural research.

Implications in policies, programs and actions of mental health

Among the actions intended to be developed in the future is the building of an intervention proposal addressed to the reduction of stigma towards mental illness; at a clinical and community level including the main actors linked to the problems, using qualitative strategies and approaches focused on recovering the experiences from the different social actors.

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