Articles

Scales and instruments to measuredepression in primary care

Escalas e instrumentos para la medición de la depresión en el primer nivel de atención

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Abstract: Background: Depression is a public health problem, it is a disorder that is underdiagnosed within the first level of care and to detect it requires brief, valid and reliable instruments that allow health personnel to perform a screening that facilitates early diagnosis and timely treatment. **Objective:** To present the scales and instruments for the measurement symptoms of depression that can be used in the first level of care by health personnel, and that meets the criteria of validity and reliability for the Mexican population. **Method:** In this systematized review study, scales and instruments were selected that can be applied by health personnel at the first level of care. The selection was made in the Bank of Instruments and Methodologies in Mental Health CIBERSAM and the Inventory of Psychosocial Scales in Mexico 1984-2005. Subsequently, in the databases of Scielo, Redalyc and PUBMED, adaptations and validations were sought for the Spanish-speaking population and the Mexican population. **Results:** Eight scales and instruments were included that meet the necessary characteristics to be used in the first level of care, which aim to assess the level of depression or identify the presence and frequency of depressive symptoms and have adequate psychometric properties in their adaptations and validations for Spanish-speaking population and/or Mexican population. **Conclusions:** The vast majority of scales and instruments favour health personnel so that they can make a timely diagnosis of depressive disorder. The choice of which is the best for the evaluation will depend on the experience of the health professional in the diagnosis and management of depression.

Keywords: Depression, measurement, psychometric properties, screening, systematized review.

Resumen: Antecedentes: La depresión es un problema de salud pública, es un trastorno que está subdiagnosticado dentro del primer nivel de atención y para detectarlo se requiere de instrumentos breves, válidos y confiables que permitan al personal de salud realizar un tamizaje que facilite el diagnóstico temprano y tratamiento oportuno. **Objetivo:** Presentar las escalas y los instrumentos para la medición de los síntomas de depresión que el personal de salud puede utilizar en el primer nivel de atención y que cumplan con los criterios de validez y confiabilidad para población mexicana. **Método:** En este estudio de revisión sistematizada, se seleccionaron escalas e instrumentos que puedan ser aplicados por el personal de salud

en el primer nivel de atención. La selección se realizó del Banco de Instrumentos y Metodologías en Salud Mental CIBERSAM y del Inventario de Escalas Psicosociales en México 1984-2005. Posteriormente, en las bases de datos de Scielo, Redalyc y PUBMED se buscaron adaptaciones y validaciones para población de habla-hispana y población mexicana. **Resultados:** Se incluyeron ocho escalas e instrumentos que cumplen con las características necesarias para ser empleados en el primer nivel de atención, los cuales tienen como objetivo evaluar el nivel de depresión o identificar la presencia y frecuencia de síntomas depresivos y tienen adecuadas propiedades psicométricas en sus adaptaciones y validaciones para población de habla-hispana y/o población mexicana. **Conclusiones:**La gran mayoría de escalas e instrumentos favorecen al personal de salud para que pueda realizar un diagnóstico oportuno del trastorno depresivo. La elección de cuál es el mejor para la evaluación dependerá de la experiencia del profesional de la salud en el diagnóstico y manejo de la depresión.

Palabras clave: Depresión, medición, propiedades psicométricas, tamizaje, revisión sistematizada.

INTRODUCTION

According to the World Health Organization (WHO) depression is one of the most frequent mental disorders among the world 's population.[1] Besides, it will be one of the main conditions of Healthy Years of Life Lost in the world for the year 2030.[2]

Depression is a term used to refer to a mood disorder characterized by symptoms such as the presence of a feeling of sadness and guilt most of the time, loss of interest, anhedonia, low self-esteem, difficulty concentrating, perception of tiredness and sleep or appetite disorders.[1]

It is a disorder with a high prevalence in the world 's population. Affects more than 300 million people worldwide, positioning it as a public health problem that requires more attention.[3] Also, the symptoms that characterize this disorder place it as one of the most disabling because it causes great suffering both to the person who suffers from it and to the people around the affected person, significantly altering family, social environments, school and work.[4]

Depression is multifactorial, which is more frequent in women and, in many cases, can be associated with suicidal behaviours and consummated suicides in both sexes.[3] These factors add a more complicated situation because the majority of the individuals who suffer depression do not receive a timely diagnosis and, therefore, an adequate treatment.[5,6] The social stigma that exists regarding mental disorders, specifically depression, is the main reason why people do not seek specialized attention, and it is common for symptoms to be covered up, complicating the diagnosis.[7]

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Depression at the First Level of Care

Considering that in the first level of care it is the first contact with the population, where resources for early detection of diseases must be optimized, as well as the satisfaction of basic needs through health promotion activities, the instruments for measuring depression symptoms have to meet specific characteristics for their use in this level of attention.[8] Generally, the detection of depressive symptoms in the first level of care is complicated, sometimes generating a sub diagnosis, which delays treatment and negatively impacts the person's life.[4]

During 2016, in Mexico, the consultation rate at the outpatient level for depression care was 70.42 / 100,000 inhabitants. The lack of availability of services limits attention to mental disorders, and the vast majority of people are cared for in tertiary level hospital services when symptoms are severe.[9]

Lara et al. mention that the instruments that can be used by health personnel and not necessarily a mental health specialist should be brief for screening and with an easy application.[10]

It is important to recognise the need to use assessment instruments to establish a better diagnosis, applying them judiciously and appropriately to determine the level of severity of the condition.[4,11] Lara and collaborators conducted a brief review of the instruments used in patients treated in hospital settings, in non-psychiatric units or with general population, however, the objective of their study was to present the validity and reliability of the Questionnaire of Mental Health (MIH-5) in a sample of women who attend the first level of care.[10] It is essential to highlight that the study was carried out almost two decades ago, so it is required an update to the scales that can be used today

According to Campagne the diagnosis of depression can be expedited when valid instruments are used.[12] However, it will also depend on the ability and knowledge of the health professional to address depression. For this reason, it is necessary that health personnel, such as doctors, psychiatrists, psychologists, and researchers, have valid and reliable tools that allow them to measure depression in the first level of care.

The interest of this work is focused on presenting the scales and instruments for the measurement symptoms of depression that can be used in the first level of care by health personnel, and that meets the criteria of validity and reliability for the Mexican population.

METHOD

A systematic review of the scales and instruments considered for the evaluation of symptoms of depression was performed.[13] The information search process was carried out in two moments: 1) identification of the instruments used for the measurement of symptoms of depression, and 2) search for adaptations and validations for the Mexican population and Spanish-speaking population in the Scielo, Redalyc, and PUBMED databases. For the instruments searching, two primary sources of information were used: a) Bank of instruments and Methodologies in Mental Health CIBERSAM of the Center for Biomedical Research in Mental Health Network[14] that compiles instruments in Spanish that is used in the area of Mental Health, and b) The Inventory of Psychosocial Scales in Mexico 1984-2005[15] that compiles the scales and instruments designed or adapted for the Mexican population. Subsequently, the scales and instruments were selected, considering whether they meet the characteristics mentioned by Lara et al.[10]:

1. Short scales or instruments.
2. That it can be applied by a health professional and not necessarily a specialized clinician.
3. That it is not composed mostly of items that measure physical symptoms.
4. Sensitive to the effect of an intervention.

Besides, only those scales or instruments that only evaluate depressive symptoms in the adult population were considered. In the second moment, the Scielo, Redalyc, and PUBMED databases were used to search if the scales or instruments underwent a psychometric adaptation and validation process. For this, the names of the scales or instruments were searched, followed by the validation keywords, *psychometric properties, adaptation*, and *Mexican population*.

RESULTS

According to the previously established characteristics, eight scales and instruments were selected.

TABLE 1
Scales included in the review.

Table 1. Scales included in the review.

Name of scale or instrument	Authors and year of validation for Mexican population	Authors and year of validation for other Spanish-speaking populations	Objective	Type of application	No. of items	Reliability
Hamilton Depression Rating Scale (HDRS) by Hamilton (1960)[16]	Not applicable	Conde and Franch (1984)[17]; Ramos-Brieva and Cordero (1986)[18]	Determine the severity of the depressive condition.	Applied by a health professional	17	α = 0,76 - 0,92
Montgomery-Asberg Depression Rating Scale by Montgomery and Asberg (1979)[19]	Not applicable	Lobo et al. (2002)[20]; Cano, Gómez and Rondón (2015)[21]	Evaluate the symptomatic profile and the severity of depression.	Applied by a health professional	10	α = 0,88
Beck Depression Inventory (BDI-I y BDI-II) by Beck, Ward, Mendelson, Mock and Erbaugh (1961)[22]	BDI-I: Jurado, Villegas, Méndez, Rodríguez, Loperana and Varela (1998)23; BDI-II: Moral de la Rubia (2013)[24], González, Rodríguez, and Reyes-Lagunes (2015)[25]	Conde and Useros (1975)[26]; Váldes et al. (2017)[27]	To assess the severity of the depressive condition, through clinical symptoms of melancholy and intrusive thoughts.	Self-applied	21	α = 0,87 - 0,92
Bech-Rafaelsen Melancholia Scale (MES) by Bech and Rafaelsen (1980)[28]	Not applicable	Vieta et al. (2007)[29]	Evaluate the presence and intensity of depressive symptoms.	Applied by a health professional	11	α = 0,80 - 0,90
Self-applied scale for the measurement of Depression of Zung and Conde by Zung (1965)[30]	Rivera, Corrales, Cáceres and Piña (2007)[31]	Conde (1976)[32]; Conde, Escribá, and Izquierdo (1969)[33]	Determine how often each of the symptoms explored is experienced.	Self-applied	20	α = 0,88
Clinically Useful Depression Outcome Scale (CUDOS) by Zimmerman, Chelminski, McGlinchey and Posternak (2008)[34]	Not applicable	Agüera-Ortiz et al. (2013)[35]	Determine the level of severity of the depressive condition.	Self-applied	18	α = 0,93
Inventory of Depressive Symptomatology Self-Rated (IDS-SR) by Rush, Guillion, Basco, Jarret and Trivedi (1996)[36]	Not applicable	Gili et al (2011)[37]	Sift the level of severity of depression.	Self-applied	30	α = 0,87 - 0,94
Patient Health Questionnaire (PHQ-9) by Kroenke, Spitzer and Williams (2001)[38]	Not applicable	Diez-Quevedo et al. (2001)[39]; Saldivia et al. (2019)[40]	Facilitate the diagnosis of depression.	Self-applied	9	α = 0,89

Source: Own elaboration

All scales and instruments aimed to measure the level of the depressive condition or to identify the presence and frequency of depressive symptoms, which is why they favour the diagnosis of this mental disorder. The instruments were designed between 1960 and 2001, and at least ten years passed for their adaptation and validation for the Spanish-speaking population. Likewise, only three scales require application by a health professional.

However, the time for the application is short. The Patient Health Questionnaire (PHQ-9) is the shortest instrument, since it consists of 9 items, while the Inventory of Depressive Symptomatology Self-Rated is the most extensive with 30 items. The eight scales and instruments have adequate psychometric properties, having a Cronbach's alpha higher than 0, 70. Table 1 shows names, psychometric properties, authors, year of publication, year of validation for Mexican population, objective, type of application and number of items for each scale or instrument.

Beck's Depression Inventory, in addition to reporting reliability, also reported a concurrent validity of 0.87 when compared against the Zung scale. [22-27]

In the Zung scale, standardization reduced it to 18 items, although that of 20 items is still used, but it must be considered that the clinical sample was 62 people, and there was no comparison against the general population. There are also no proposed cut points for the new scale. [30-33]

DISCUSSION

Depression is a public health problem due to the negative impact it generates in the physical, psychological, social and economic areas of the person suffering from it.[1]

Considering the negative impact of depression, it is necessary to have measurement tools to detect and diagnose it in a timely manner. The purpose of this systematic review is to provide information about the scales and instruments to assess symptoms of depression and to facilitate the decision-making of health personnel at the first level of care.

At the first level of care, decision-making based on scientific evidence is required, so instruments with adequate psychometric properties must be used to screen for depressive disorders.

This systematic review considered eight scales and instruments that allow the measurement of depression in the primary care.

They are short scales and questionnaires validated for different populations and meet adequate psychometric properties. However, only two instruments were adapted to the Mexican community.

It is essential to mention that there are different scales and instruments for the Mexican population. Still, they do not meet the criteria previously specified to use it in the primary care.

When an instrument is designed or adapted to measure a construct, it is necessary to test its psychometric properties and thus check if it can be used in the target population, determining through a pilot phase its levels of reliability and validity. Having screening tools in the first level of health care spaces allows the health team to have adequate, fast and useful tools.

Finally, it was identified that the Beck Depression Inventory in its two versions is the most used within hospital contexts[41–44], and the only one that reports reliability and appropriate validity. The evolution of the measurement instruments requires identifying the sensitivity and specificity in order to construct the predictive indices that the scales must have. However, that will be the subject of another document.

To identify depression promptly or when the first symptoms occur is relevant to have adequate instruments and scales that allow early diagnosis and therefore reduces the personal, social, and economic damage that results from this mental disorder. In this way, the objectives related to disease prevention and health promotion are covered, that is, in the first place to make a timely identification, secondly the immediate attention, and thirdly the harm reduction.

CONCLUSIONS

The high prevalence of depression in the world population, which justifies the use of self-assessment scales to detect it early. The reviewed scales and instruments allow the health staff to diagnose a depressive disorder.

The scale choice that best suits the objectives of the evaluation will depend on the needs and experience of the health professional related to the diagnosis and management of depression symptomatology. Despite the fact that screening and timely detection of depression in the first level of care is carried out mainly by the medical or nursing area, the diagnosis and treatment must be made by a mental health specialist.

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