

## THE ICD-11 DEVELOPMENTAL FIELD STUDY OF RELIABILITY OF PSYCHOTIC DISORDERS AND BIPOLAR DISORDERS: RESULTS AMONG TUNISIAN ADULT PATIENTS

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## The ICD-11 developmental field study of reliability of psychotic disorders and bipolar disorders: results among Tunisian adult patients

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**Abstract.** The ICD-11 developmental field study of the reliability of psychotic disorders and bipolar disorders: Results among Tunisian adult patients. As part of the revision of the diagnostic guidelines for mental, behavioral, and neurodevelopmental disorders, the World Health Organization conducted field studies to test the reliability of the International Classification of Diseases and Related Health Problems in its 11th edition (ICD-11). The objective of the study was to evaluate the interrater reliability of the ICD-11's diagnostic guidelines for schizophrenia, bipolar disorders, and other primary psychotic disorders among a sample of 203 adult patients in Tunisia. A cross-sectional study was performed at Razi Hospital, Tunis, from June to September 2017. Mental health clinicians working at the hospital were part of the data collection. Patients eighteen years of age and above exhibiting any psychotic symptoms and presenting for care at the hospital were eligible to participate in the study. The average clinical experience of the clinician raters was  $6.5 \pm 6.6$  years. The mean age of patients was  $43.2 \pm 12.6$  years, 53.2% of the participants were male, and 70.4% were outpatients. The main results showed that the kappa estimates were high for schizophrenia (0.84), substantial for bipolar I disorder (0.69), and moderate for schizoaffective disorder (0.59). Thus, the results of the Tunisian field study of the ICD-11 for psychotic and bipolar disorders were in accordance with those reported by the international sample, supporting the usefulness of the ICD-11 in Tunisia.

**Key words:** psychosis, bipolar disorder, ICD, ICD-11, medical diagnosis, assessment, Tunisia

**Résumé.** Étude de terrain évaluant la fiabilité des troubles psychotiques et des troubles bipolaires dans le cadre du développement de la CIM-11 : résultats chez des patients adultes tunisiens. Dans le cadre de la révision des directives de diagnostic des troubles mentaux, comportementaux et neurodéveloppementaux, l'Organisation mondiale de la santé a mené des études de terrain pour tester la fiabilité de la Classification internationale des maladies et des problèmes de santé connexes dans sa 11<sup>e</sup> édition (CIM-11). L'objectif de cette étude était d'évaluer la fiabilité inter-juges des directives diagnostiques de la CIM-11 pour la schizophrénie, les troubles bipolaires et les autres troubles psychotiques primaires parmi un échantillon de 203 patients adultes en Tunisie. Une étude transversale a été réalisée à l'hôpital Razi de Tunis de juin à septembre 2017. Les cliniciens de santé mentale travaillant à l'hôpital ont participé à la collecte des données. Les patients âgés de dix-huit ans et plus, présentant tout symptôme psychotique et se présentant pour des soins à l'hôpital étaient éligibles pour participer à l'étude. L'expérience clinique moyenne des cliniciens évaluateurs était de  $6,5 \pm 6,6$  ans. L'âge moyen des patients était de  $43,2 \pm 12,6$  ans, 53,2 % des participants étaient des hommes et 70,4 % étaient des patients externes. Les principaux résultats ont montré que les estimations kappa étaient élevées pour la schizophrénie (0,84), substantielles pour le trouble bipolaire I (0,69) et modérées pour le trouble schizo-affectif (0,59). Ainsi, l'étude de terrain tunisienne de la CIM-11 pour les troubles psychotiques et bipolaires était en accord avec celles rapportées par l'échantillon international soutenant l'utilité de la CIM-11 en Tunisie.

**Mots clés :** psychose, trouble bipolaire, CIM, CIM-11, diagnostic médical, évaluation, Tunisie

**Resumen.** Estudio de campo sobre el desarrollo de la fiabilidad de los trastornos psicóticos y bipolares de la CIE-11: resultados en pacientes adultos tunecinos. Como parte de la revisión de las directrices de diagnóstico de los trastornos mentales, del comportamiento y del neurodesarrollo, la Organización Mundial de la Salud realizó estudios de campo para comprobar la fiabilidad de la Clasificación Internacional de Enfermedades y Problemas de Salud Afines en su 11<sup>a</sup> edición (CIE-11). El objetivo de este estudio era evaluar la fiabilidad entre árbitros de las pautas diagnósticas de la CIE-11 para la esquizofrenia, los trastornos bipolares y otros trastornos psicóticos primarios en una muestra de 203 pacientes adultos de Túnez. Se realizó un estudio transversal en el Hospital Razi de Túnez de

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junio a septiembre de 2017. Los clínicos de salud mental que trabajan en el hospital participaron en la recogida de datos. Podían participar en el estudio los pacientes de dieciocho años o más que presentaran cualquier síntoma psicótico y que acudieran a recibir atención en el hospital. La experiencia clínica media de los clínicos evaluadores fue de  $6,5 \pm 6,6$  años. La edad media de los pacientes era de  $43,2 \pm 12,6$  años, el 53,2% de los participantes eran hombres y el 70,4% eran pacientes externos. Los principales resultados mostraron que las estimaciones kappa eran altas para la esquizofrenia (0,84), sustanciales para el trastorno bipolar I (0,69) y moderadas para el trastorno esquizoafectivo (0,59). Por lo tanto, el estudio de campo tunecino de la CIE-11 para los trastornos psicóticos y bipolares coincidía con los reportados por la muestra internacional apoyando la utilidad de la CIE-11 en Túnez.

**Palabras claves :** psicosis, trastorno bipolar, CIE, CIE-11, diagnóstico médico, evaluación, Túnez

## Background

In their daily practice, clinicians need reliable and clinically useful guidelines and diagnostic classification. Furthermore, standardized, adapted, and generalized guidelines can facilitate communication between clinicians. Following the ICD-10, the World Health Organization (WHO) carried out the new international classification of diseases and related health problems in its eleventh revision (ICD-11) (WHO, 2018) [1] which, in 2019, was adopted by the World Health Assembly (WHO, 2019 [2]).

As part of the test for the reliability and clinical utility of the diagnostic criteria for mental disorders proposed by the ICD-11, the Department of Mental Health and Substances Abuse has conducted field studies to examine its wide-scale applicability across thirteen countries worldwide (Reed, *et al.*, 2018 [4]). In fact, the Ecological Implementation Field Studies (EIFS) for the proposed ICD-11 Clinical Descriptions and Diagnostic Guidelines (CDDG) were conducted in a broad spectrum of secondary and tertiary mental health care settings across countries, including some Arab countries of the Middle East and North Africa (MENA) region, such as Tunisia.

Authors have also already started to study the contribution of this new ICD-11 classification for many diagnosis in particular psychiatric ones such as psychosis and bipolar related disorders by comparing it with other classification systems such as the Diagnostic and Statistical Manual of Mental Disorders (DSM 5) and older versions of the ICD (Choudry & Farook, 2018 [3]).

The main aim of these studies was to determine the reliability of the newly suggested ICD-11 diagnostic guidelines. The study protocol 1 was implemented in the Tunisian site (Razi Hospital, Tunis) to assess the reliability of the proposed ICD-11 diagnostic guidelines for schizophrenia and other primary psychotic disorders and for bipolar disorders. Protocol 1 assesses schizophrenia, other primary psychotic disorders and bipolar disorders.

Razi Hospital is a Tunisian university public health establishment located in La Manouba, a town in the northwestern suburbs of Tunisia. It is the only hospital center specializing in psychiatry in Tunisia. The hospital

takes care of psychiatric patients coming essentially from the north regions of the country. Razi Hospital is a general psychiatric hospital whose activity includes hospital and emergency care and outpatient care.

## Methods

### Study design and procedures

The study protocol 1 was implemented in the Tunisian site (Razi Hospital, Tunis) to assess the reliability of the proposed ICD-11 diagnostic guidelines for schizophrenia and other primary psychotic disorders and for bipolar disorders, according to the study design developed by the WHO Department of Mental Health and Substance Abuse (Reed *et al.*, 2018 [4]).

Data collection took place between June and October, 2017.

The ICD-11 guidelines, training materials, and all material for the study were initially developed in English. The ICD-11 guidelines, but not all of the other training materials, were then translated into French to be used in this study with the collaboration of field study centers, using a thorough forward and back-translation process (Reed *et al.*, 2018 [4]). The Tunisian site obtained ethical clearance from the local institutional review board prior to the study implementation.

A site director and two site coordinators were responsible for recruiting clinician raters. Volunteers' clinician raters (psychiatrists and psychologists) were qualified to make mental disorders diagnoses independently as a part of their scope of practice. Advanced residents in psychiatry (following completion of first two years of residency) could function as interviewers but were always paired with a fully qualified clinician.

Training was organized on-site where clinician raters were provided with the ICD-11 diagnostic guidelines being tested and were asked to review them prior to the training session. The training session, using a standard set of slides developed by the WHO, reviewed central features of the ICD-11 diagnostic guidelines in those areas covered by the protocols and their differences with

ICD-10. Interactive exercises provided an opportunity for practice in applying the guidelines to case vignettes.

Clinician raters were informed that they were required to assess for schizophrenia and other primary psychotic disorders and for bipolar disorders, as well as for any other diagnosis they deemed relevant to reach a diagnostic formulation. No other instruction was given about how to approach the interview, and it was left to the judgment of the clinician raters to determine how best to perform the assessment, according to their professional training and usual practice, as will be the case when the ICD-11 is implemented.

The training session lasted for approximately two hours and covered the study flow as well as data collection procedures.

Post-training and prior to starting data collection, clinician raters registered to participate using an online registration system, providing demographic information as well as details regarding their clinical experience.

A broader group of clinicians at each study site were given information on the study inclusion and exclusion criteria and referral procedures and asked to refer qualifying patients to Protocol 1.

Referring clinicians were invited to participate in the training sessions for interviewers. Upon referral, two research coordinators explained the study to referred patients and obtained their informed consent.

Following the informed consent, patients were interviewed by two clinicians who had no prior clinical contact with the patient. One clinician rater served as the primary interviewer and the second as an observer. The observer could ask additional follow-up questions at the end of the interview. The Tunisian dialect was used for the diagnostic interviews.

Clinician pairings were varied as much as possible given constraints of availability and scheduling, and participating clinicians alternated as primary interviewer and observer.

The clinician raters were instructed to set aside 60-90 minutes for the joint-rater interview, and were asked to approach the diagnostic interview as they would in their clinical practice.

The range and length of the diagnostic interviews were therefore substantially consistent with usual practice in participating mental health centers. Based on the interview, clinician raters independently arrived at a diagnostic formulation consisting of up to three diagnoses. Diagnoses were non-hierarchical (i.e., not specified as primary, secondary, or tertiary) and could fall within any mental, behavioral or neurodevelopmental disorder diagnostic grouping. Participating clinicians could also specify a non-mental or behavioral disorder diagnosis, or no diagnosis. For diagnoses included in Protocol 1, additional detailed questions were asked about symptom presentation and clinical utility of the guidelines. Following the interview, both clinician raters independently provided data based on the interview using a

secure web-based data collection system. Participating clinicians were instructed to record their data independently from each other within 24 hours.

The information provided included each clinician rater's diagnostic formulation, and ratings of the presence or absence of each element of any disorder from the diagnostic groupings that were the focus of Protocol 1. Data provided by each clinician also included responses to detailed questions about the clinical utility of the diagnostic guidelines as applied to that patient.

### Participants

Patients who were at least 18 years old and exhibiting any psychotic symptoms and presenting for care at the participating field study center, in the period from June 2017 to September 2017, were eligible to participate in the study protocol. These requirements were intended to produce an enriched sample that was likely to have at least one of the conditions being tested, but whose diagnosis was not determined in advance. All participants completed interviews on the days they were enrolled. Exclusion criteria were the following: communication difficulty sufficient to interfere with participation in the diagnostic interview; cognitive dysfunction to an extent that would interfere with participation in the diagnostic interview; current incapacitation due to severe physical illness or pain; current substance intoxication or withdrawal or serious medication side effects; and current imminent risk of harm to self or other. Eligible patients were provided with appropriate information about the research project before beginning the interviews. Participants were assigned unique identification numbers, and no confidential or identifying information was reported to anyone outside the site.

### Data analysis

All analyses were performed using SPSS (v. 22). Descriptive analyses were conducted on patient and clinician demographic data. Means and standard deviations for continuous variables (M, SD), and frequencies (N) and percentages (%) for categorical variables were generated.

The main analysis of the study addressed the reliability of diagnoses included in Protocol 1.

Diagnostic reliability was estimated based on agreements between clinician raters irrespective of whether the diagnosis was listed first, second or third. Only diagnoses that occurred at least 15 times across the study were included in these analyses, as diagnoses assigned less frequently were not considered to have sufficient reliability for the present evaluation.

To test interrater reliability, the studies first determined the extent to which two independent clinicians agree (interrater reliability) on the assignment of diagnostic categories to patients, based on the same information (including simultaneous observation), using the ICD-11

**Table 1.** Demographics of Tunisian clinician raters.

	Total (N=12)
<b>Age, years (mean ± SD)</b>	38.3 ± 9.3
<b>Gender, N (%)</b>	
Male	1 (8.3)
Female	11 (91.7)
<b>Clinical profession, N (%)</b>	
Psychiatry	10 (83.3)
Psychology	1 (8.3)
Other medical	1 (8.3)
<b>Years of experience (mean ± SD)</b>	6.5 ± 6.6

N: number of participants, SD: Standard deviation.

diagnostic guidelines for mental and behavioral disorders.

To estimate diagnostic reliability, intraclass kappa coefficients for diagnoses weighted by prevalence were calculated. Kappa statistics ( $\kappa$ ), standard errors, and bootstrapped 95% confidence intervals for kappa were calculated. Adjectives of Landis & Koch were used to describe ranges of reliability values for kappa: slight (from 0 to 0.20), fair (from 0.21 to 0.40), moderate (from 0.41 to 0.60), substantial (from 0.61 to 0.80), and almost perfect (from 0.81 to 1.0) (Landis & Koch, 1977).

## Results

Twelve clinicians served as clinician raters for the current study. Demographic data are shown in *table 1*. The mean age of clinician raters was 38.3 ± 9.3 years. The majority of clinician raters in the study were female (91.7%) and psychiatrists (83.3%). Their average clinical experience was 6.5 ± 6.6 years.

Two-hundred-and-three patients were recruited into the study for Protocol 1. The sociodemographic data are shown in *table 2*. The average age of participating patients was 43.2 ± 12.6 years. Recruited patients were outpatients in 70.4% of cases and 29.6% were inpatients. Fifteen patients refused to participate in the study. Reasons for refusal included lack of time (N=10) and lack of interest (N=5).

Estimates of joint-rater agreement are shown in *table 3*, along with bootstrapped 95% confidence intervals. The point estimate of kappa ranged from 0.59 to 0.84 and would be considered moderate to almost perfect according to Landis and Koch adjectives for the three diagnoses for which it was calculated. The kappa estimates were almost perfect for schizophrenia (0.84), substantial for bipolar I disorder (0.69) and moderate for schizoaffective disorder (0.59).

The estimates of kappa were precise for all diagnoses for which it was calculated (confidence interval < 0.5; standard error < 0.1). The lower bound estimates of the confidence interval for kappa were higher than 0.4 (fair

**Table 2.** Demographics of patients.

	Total (N = 203)
<b>Age, years (mean ± SD)</b>	43.2 ± 12.6
<b>Gender, N (%)</b>	
Male	108 (53.2)
Female	95 (46.8)
<b>Relationship status, N (%)</b>	
Single	78 (38.4)
Married / cohabitating	99 (48.8)
Separated / divorced	23 (11.3)
Widowed	3 (1.5)
<b>Employment, N (%)</b>	
Full time	88 (43.3)
Part time	23 (11.3)
Unemployed	81 (39.9)
Student	6 (3.0)
Retired	6 (3.0)
<b>Treatment setting, N (%)</b>	
Outpatient	143 (70.4)
Inpatient	60 (29.6)

N: number of participants, SD: Standard deviation

reliability) for schizophrenia & bipolar I disorder. However, the lower bound estimate was only in the fair range (0.3) for schizoaffective disorder.

## Discussion

The Ecological Implementation Field Studies for proposed ICD-11 Clinical Descriptions and Diagnostic Guidelines (CDDG) were conducted in a broad spectrum of secondary and tertiary mental health care settings across countries, including some Arab countries of the MENA region, such as Tunisia. The purpose of this ICD-11 clinical consistency study was to determine the inter-rater reliability of the diagnostic guidelines proposed for schizophrenia and other primary psychotic disorders and for bipolar disorders.

The approach consisted in determining the agreement of two clinicians, based on the same study site, and having access to the same information, on the diagnoses made for the same patient who seeks hospitalization or outpatient follow-up, which are the care structure of mental health in Tunisia. In fact, during the revision of the ICD, the WHO widened its fields of study in order to have guidelines more representative of cultures around the world (Clark et al, 2017) [5].

During the preparation of the ICD-10 thirty years ago, research was carried out in the Arab region to provide the validity and reliability including Egypt, Bahrain, United Arab Emirates, Tunisia and Morocco (Okasha and Dawla, 1992 [6]). For this classification, there was high inter-rater reliability among Arab psychiatrists, in field trials when

**Table 3.** Concurrent reliability of diagnoses (for disorders that were selected at least 15 times).

	Number of diagnoses (N)	Joint rater agreement (intraclass kappa)	Standard error	Bootstrapped 95% CI
Schizophrenia	57	0,84	0,044	0.75-0.92
Schizoaffective disorder	18	0,59	0,128	0.30-0.80
Bipolar I disorder	28	0,69	0,082	0.51-0.84

diagnosing mental disorders in the East Mediterranean and North African Countries (EMRO) (Okasha, 2011 [7]). Despite that, many cultural factors were not considered in the ICD-10 (Khoury & Ramadan, 2019 [8]). ICD-11 also strengthened the validity and reliability of psychiatric diagnosis across cultures around the world, using its field programs of testing linguistic and regional differences aimed at maximizing their global applicability before finalization of the diagnosis (Keeley *et al.*, 2016. [9]). To avoid adaptations according to cultural particularities between different regions around the world, many countries have contributed decisively to the elaboration of the ICD-11 in view of the important attention it paid to cultural differences (Sharan et Keely, 2018 [10]).

One of the strengths of the current study was the large sample size (203 patients) which was among the biggest sample sizes of the field studies across 13 countries (Reed *et al.*, 2018 [4]). Our sample included patients from both urban and rural areas. In fact, Razi hospital attracts patients from urban and rural areas of the east and north-west of Tunisia, which avoided a sampling bias

The main results of the current study were that the kappa estimates were almost perfect for schizophrenia ( $\kappa = 0.84$ ), substantial for bipolar I disorder ( $\kappa = 0.69$ ) and moderate for schizoaffective disorder ( $\kappa = 0.59$ ).

For schizophrenia, we found near perfect inter-rater reliability with an intraclass kappa of 0.84. Our results were similar to those from Lebanon, which was another study site in the Arab region ( $\kappa = 0.95$ ). The kappa found in our study was comparable to estimates found in many other countries around the world, namely Italy ( $\kappa = 0.85$ ), Mexico ( $\kappa = 0.87$ ) and Spain ( $\kappa = 0.84$ ). It was comparable to overall kappa estimates from 13 countries around the world for schizophrenia ( $\kappa = 0.87$ ) (Reed *et al.*, 2018) [4] (Luciano *et al.*, 2020 [11]).

These results concerning the inter-rater reliability for schizophrenia, found in many countries around the world despite their cultural, societal, and geographical differences are in favor of the usefulness of this new classification the ICD-11 and its universal and standardized value. In addition, these findings support the ease of use of the new guidelines, their comprehensibility, and their clarity. This will allow better communication between mental health professionals around the world. Moreover, the ICD-11 has opted for more clarification for primary psychotic disorders by replacing the subtypes with characteristics that assess the symptoms and thus

providing more details that offer a dimensional value to an approach of classification by category (Keeley & Gaebel, 2018 [12]), (Gaebel *et al.*, 2012 [13]), (American Psychiatric Association, 2013).

For bipolar I disorder, a substantial agreement between Tunisian clinicians has been found. Our results, comparable to those of Japan ( $\kappa = 0.77$ ), corresponds to global estimates for this disorder (Reed *et al.*, 2018). This substantial result on the inter-rater reliability for this category of disorder is in favor of the usefulness of this new classification. This agreement between the evaluators reinforces the standardized and generalized character of the ICD-11 and the ease of its application by practitioners.

However, when comparing with the results found for schizophrenia, the inter-rater reliability was lower for bipolar disorder. This could be explained by the fact that bipolar disorders are the psychiatric manifestations most affected by cultural factors. In fact, culture not only influences the presentation of the patient but also the perception of symptoms by the psychiatrist (Biswas *et al.*, 2016 [14]).

For schizoaffective disorder, our estimates were in favor of a moderate agreement ( $\kappa = 0.59$ ). Our results were in line with those of India ( $\kappa = 0.59$ ) and the Russian Federation ( $\kappa = 0.45$ ) despite the fact that these countries are vastly different culturally and socially from Tunis (Reed *et al.*, 2018 [4]).

The overall inter-rater reliability for schizoaffective disorder was lower than the global estimates ( $\kappa = 0.66$ ) (Reed *et al.*, 2018 [4]). In fact, the schizoaffective disorder had the lowest inter-rater reliability between clinicians estimate among the three diagnoses studied in protocol 1 in our study, in comparison with schizophrenia and bipolar 1 disorder. Different reasons could explain this finding. There is some difficulty in categorizing schizoaffective disorder, given the concomitant presence of psychotic and thymic symptoms during the same episode. The differences in the inter-rater reliability could be also due to the heterogeneity of clinical presentation of schizoaffective disorder that makes it more difficult to categorize the disorder. Indeed, inter-rater reliability may not be obtained, and this has been demonstrated in previous epidemiological data reporting overall variation in the diagnosis and clinical representation of mental disorders (Alarcón, 2009 [15]), (Kirmayer, 2001 [16]), (McGrath *et al.*, 2004 [17]).

In addition, the diagnosis of schizoaffective disorder is established according to the ICD-11 in the presence of the criteria for defining schizophrenia, which are accompanied by mood symptoms meeting the criteria of a moderate or severe depressive episode, a manic episode or a mixed episode and the total duration required would be four weeks, including both mood and schizophrenic symptoms. Therefore, the evaluation of the inter-rater reliability on the longitudinal character in addition to the transversal approach is difficult (Keeley & Gaebel, 2018 [12]).

## Limitations

Although the current study contributed significantly to the literature by examining Arab psychiatrists' and psychologists views about the classification of mental disorders, the current findings should be interpreted with caution considering the following limitations: First, the representativeness of the results is questionable given that study site only concerns the north regions of the country. Thus the expression of symptoms may vary between regions.

Second, since the schizoaffective disorder diagnosis was made less often, which may be inherent to the size of the sample. We suggest that higher reliability for this disorder might be reached in larger samples sizes.

## Conclusion

There is sufficient clinical consistency of the recently adopted ICD-11 guidelines for schizophrenia and other primary psychotic disorders and for bipolar disorders among clinicians based in Tunisia. The results of the Tunisian field study of the International Classification of Diseases in its 11th revision for these disorders were consistent with those reported by the international sample thus supporting the utility of the ICD-11 for clinicians in Tunis.

## Conflicts of intérêt

none.

## References

1. World Health Organization. *WHO releases new International Classification of Diseases (ICD 11)*. 2018 Available from: [http://www.who.int/news-room/detail/18-06-2018-who-releases-new-international-classification-of-diseases-\(icd-11\)](http://www.who.int/news-room/detail/18-06-2018-who-releases-new-international-classification-of-diseases-(icd-11)).
2. *World Health Assembly Update, 25 May 2019*. Retrieved from <https://www.who.int/news/item/25-05-2019-world-health-assembly-update>.
3. Choudry A, Farooq S. Psychosis and related disorders in international classification of Disease-11 and their relationship to diagnostic and statistical Manual-5 and international classification of Disease-10. *Indian Journal of Social Psychiatry* 2018; 34(5): 11.
4. Reed GM, Keeley JW, Rebello TJ, First MB, Gureje O, Ayuso-Mateos JL, et al. Clinical utility of ICD-11 diagnostic guidelines for high-burden mental disorders: results from mental health settings in 13 countries. *World Psychiatry* 2018; 17(3): 306-15.
5. Clark L, Cuthbert B, Lewis-Fernández R, Narrow W, Reed G. Three Approaches to Understanding and Classifying Mental Disorder: ICD-11, DSM-5 and the National Institute of Mental Health's Research Domain Criteria (RDoC). *Psychological Science in the Public Interest* 2017; 18(2): 72-145.
6. Okasha A, Dawla AS. Reliability of ICD-10 research criteria: an Arab perspective. *Acta Psychiatrica Scandinavica* 1992; 86(6): 484-8.
7. Okasha A. New directions in classification of mental disorders: an Arab perspective. *Instruction to authors* 2011; 22(2): 89-94.
8. Khoury B, Ramadan Z. The use of psychiatric classification systems in the arab region. *Psynopsis Canada's Psychology Magazine* 2019; 41(2): 15-7.
9. Keeley JW, Reed GM, Roberts MC, Evans SC, Medina-Mora ME, Robles R, et al. Developing a science of clinical utility in diagnostic classification systems field study strategies for ICD-11 mental and behavioral disorders. *Am Psychol* 2016; 71: 3-16.
10. Sharan P, Keeley J. Cultural perspectives related to international classification of Diseases-11. *Indian Journal of Social Psychiatry* 2018; 34(5): 1.
11. Luciano M, Sampogna G, Del Vecchio V, Giallonardo V, Palumbo C, Pocaì B, et al. The Italian ICD-11 field trial: clinical utility of diagnostic guidelines for schizophrenia and related disorders. *Int J Ment Health Syst* 2020; 14(4). <https://doi.org/10.1186/s13033-020-0338-z>.
12. Keeley JW, Gaebel W. Symptom rating scales for schizophrenia and other primary psychotic disorders in ICD-11. *Epidemiol Psychiatr Sci* 2018; 27(3): 219-24.
13. Gaebel W, Zielasek J, Cleveland HR. Classifying psychosis—challenges and opportunities. *Int Rev Psychiatry* 2012; 24(6): 538-48.
14. Biswas J, Gangadhar BN, Keshavan M. Cross cultural variations in psychiatrists' perception of mental illness: a tool for teaching culture in psychiatry. *Asian J Psychiatr* 2016; 23: 1-7.
15. Alarcón RD. Culture, cultural factors and psychiatric diagnosis: review and projections. *World psychiatry* 2009; 8(3): 131.
16. Kirmayer LJ. Cultural variations in the clinical presentation of depression and anxiety: implications for diagnosis and treatment. *J Clinical Psychiatry* 2001; 62: 22-30.
17. McGrath J, Saha S, Welham J, El Saadi O, MacCauley C, Chant D. A systematic review of the incidence of schizophrenia: the distribution of rates and the influence of sex, urbanicity, migrant status and methodology. *BMC Medicine* 2004; 2(1): 1-22.