# Validation and Reliability Studies of Instruments: Syria-Arabic Newer Self-Rating Scales for PsyWar Syndrome: QID-2-Ar (Quick Inventory of Depression-Two questions-Arabic), BDI-FS-Ar (Beck Depression Inventory-Fast Screen-Arabic), and MADRS-S-Ar (Montgomery-Asberg Depression Rating Scale Self-assessment-Arabic): Clinical Assessments of Depression and Depressive Symptoms in Syria-War Conditions

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**Submission:** June 14, 2017; **Published:** July 17, 2017

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### Abstract

**Introduction:** Clinical and psychological assessments are an adequate way of diagnosing and planning treatment during Wartime.

**Objective:** The aim was survey the psychometric properties of the Arabic newer self-scales (QID-2-Ar, BDI-FS-Ar and MADRS-S-Ar) in War conditions.

**Methods:** A descriptive cross-sectional study was conducted on 200 students aged 18-36 years, from all disciplines and all years, from university of Damascus and on 100 MS patients aged 18-60 from Damascus Hospital and Ibn Al-Nafees Hospital. Their socio-demographic, socio-economic and personal characteristics have been also identified.

**Results:** Arabic Newer Self-Rating Scales for PsyWar Syndrome have demonstrated the favorable psychometric properties. QID-2-Ar, BDI-FS-Ar and MADRS-S-Ar get a very good sensitivity, internal consistency and construct validity ($p < 0.001$).

**Conclusion:** The present study is the first study in war which confirms the adequate psychometric properties of the newer self-scales Arabic version of the QID-2-Ar, BDI-FS-Ar and MADRS-S-Ar, and shows that these instruments are the useful tools to integrate in War and also in clinical practice and research settings.

**Keywords:** War, refugees, Syria, Arabic Newer Self-Rating Scale, University Students, Multiple Sclerosis

**Abbreviations:** MS: multiple sclerosis; MADRS: Montgomery-Åsberg Depression Rating Scale; PHQ-2: Patient Health Questionnaire; BDF-FS: Beck Depression Inventory-Fast Screen Self-assessment; SD: standard deviations and percent (%); EFA: Exploratory factor analysis; CI: Confidence interval; SMSC: Syrian Multiple Sclerosis Committee

## Introduction

In War conditions, the stressful environment become very dangerous for the physical-mental health and is difficult to treat. Presence of psychological morbidity in multiple sclerosis (MS) patients and students has been documented from all countries across the world. MS patients face challenges related with acceptation and adaptation with their MS. University students

face not only challenges related with independent living, but also academic challenges. These challenges increase in War conditions. This predisposes them to depression, anxiety, stress, lower self-esteem and live dissatisfaction, which are fairly common.

In War in Syria, the Syrian adults are suffering from depressive symptoms; and the mental and psychiatric disorders are one of the most common disorders in war conditions Alsaleh M [1,2], Kubitary [3,10]. Before War, Radwan [4] found that severe depression using BDI-II affects 5.4% of Damascus University students Radwan [4], Kubitary [10]. In War, in 2015-2016, the prevalence of depression (Mild, Moderate, and Severe) evaluated by BDI-FS-Ar was 79.00% in students at Damascus University, and 63.00% in multiple sclerosis (MS) patients in Syria Kubitary [10].

The three most frequently used tools are Beck Depression Inventory (BDI) Beck [6], Hamilton Depression Rating Scale (HDRS) Hamilton [7], and the Montgomery–Åsberg Depression Rating Scale (MADRS) Montgomery [8], Bondolfi et al. [9].

With an increasing number of trials failing Bondolfi et al. [9], and depression which is under-diagnosed, under-detected, or overestimation due to the overlap between depressive symptoms and others symptoms related to physical diseases and war conditions, leading to the risk of delayed or inadequate management Alsaleh [2], Kubitary et al. [10]. These difficulties which associated to make good diagnosis the depression were related with clinician ratings. In addition, self-reports have been criticized as BDI Beck et al. [6], Bondolfi et al. [9].

Despite this, newer self-scales have gained acceptance, especially, QID-2-Ar (Quick Inventory of Depression-Two questions-Arabic) , Beck Depression Inventory-Fast Screen (BDF-FS) and Montgomery–Åsberg Depression Rating Scale - Self-assessment (MADRS-S). These newer self-scales (patient ratings) are economical in terms of research effort, time and professional expertise required. In War conditions, we therefore need to create a rapid diagnostic tool for depression in the form of a short evaluation scale which will be widely used for its simplicity of execution, multiple assessments needed and limited resources. To our knowledge, these newer self-scales has not yet been validated in Arabic.

**The aim of the current study is examining:** The psychometric properties of the Arabic version of the newer self-scales in War conditions, in particular MADRS-S. With the knowledge of that QID-2-Ar and BDF-FS-Ar which was recently validated in Arabic by Kubitary and Alsaleh [10, 23] in War conditions.

## Methods

**Participants (students and patients):** This descriptive cross-sectional study was conducted on 300 volunteer participants: 200 students from the University of Damascus aged 18 and 36 years, and 100 MS Syrian patients aged 18 and 60 years participated in this study. Participation was voluntary and responses were anonymous.

**Procedure and Ethical Review:** This study was approved by the Mental Health Laboratory from the University of Damascus, and the Syrian Multiple Sclerosis Committee (SMSC) in Damascus Hospital and Ibn Al-Nafees Hospital. Informed consents were obtained from the participants after the aims and objectives of the study have been explained. Human ethics committee approval protocol number was 5174/10/07/2015-ξ. Students and patients completed the QID-2-Ar, BDI-FS-Ar and MADRS-S first. Concerning MS patients, a psychologist was present with patients and available for any question. All the persons who participated in this study have given the informed consent and received no compensation for participation.

**Inclusion and Exclusion Criteria:**"*Shortcomings of self-rated instruments have been acknowledged in psychotic and cognitively impaired patients*" Rush [9, 11], for that, patients with very low educational level who can't read and understand the items and patients with severe neurological incapacity who have cognition difficulties especially in memory and understanding capacity have been excluded.

Concerning students, the study included all Syrian university students in University of Damascus. They were from all disciplines at the University of Damascus and from all years, and graduated. There were no exclusion criteria. For MS patients, male and female patients aged ≥18 years were included in the study. All patients were Syrian. We also have excluded patients without understanding Arabic, or any other conditions making it impossible to understand the study.

## Instrument

**-QID-2-Ar (Quick Inventory of Depression-Two questions-Arabic):** Contains two items and is set up to assess mood status in the last 2 weeks Whooley [12] Spitzer [13] Kubitary and Alsaleh [23] giving a maximum total score of 2 and a minimum of 0. The QID-2-Arcan only provides 3 data points: 0, 1 or 2. The two specific elements on this measure include depressed mood and loss of pleasure (anhedonia). This takes about ±30 seconds. Participants are instructed to rate symptom severity over the last two weeks. The psychometric properties of QID-2-Arare underway to publish by the author in Arabic.

**-BDI-FS-Ar (Beck Depression Inventory-Fast Screen-Arabic)** Kubitary et al. [10] is the self-rating version of the BDI-II, includes 7 of the 21 BDI-II items, rated on a 4-point Likert scale (from 0 to 3); and total score ranges from 0 to 21.Participantsare asked to rate symptom severity over the last two weeks. "*It consists to assess cognitive symptoms of depression*" Kubitary et al. [10].

**-MADRS-S-Ar (Montgomery-Asberg Depression Rating Scale Self-assessment-Arabic)** Svanborg [14] Bondolfi et al. [9] consists of 9 items of self-assessment taken from the 10 items

of the MADRS, rated on a 4-point Likert scale (from 0 to 3); and total score ranges from 0 to 27. Participants are asked to assess the severity of symptoms over the last three days. QID-2-Ar, BDI-FS-Ar, MADRS-S, BDI-II (Beck Depression Inventory-II), DASS-21 (Depression Anxiety Stress Scale-21), RSES (Rosenberg self-esteem scale) and SWLS (Satisfaction with life scale) Kubitary et al. [10] were used in this study. Before completing these questionnaires, participants were asked to read the instruction.

**QID-2-Ar, BDI-FS-Ar and MADRS-S-Ar translation:** The transcultural translation and validation procedure of psychometric tools has been respected Vallerand [22] DeVellis [15]. The translation from English and French to Arabic was performed by a trilingual psychologist, other bilingual psychologist and other persons. Translations were discussed and adjustments were made until consensus was reached. The Arabic version of the QID-2-Ar, BDI-FS-Ar and MADRS-S-Ar is available from the first author and Corresponding author. In addition, we ensured the logical validity (content validity) of the QID-2-Ar, BDI-FS-Ar and MADRS-S-Ar. This approach is recommended because it improves the content validity of the scale DeVellis [15] Chouk [16]. We tested these three scales on 5 persons (Syrians and Moroccan) of different ages to verify the quality of these three questionnaires and the understanding of

the items (pretesting qualitative) in Arabic world.

**Statistical analyses:** The psychometric properties studied are the reliability of the tool, which includes the construct validity, criterion validity, internal consistency and factorial validity. Firstly, Mean (M) and standard deviation (SD) for all data were calculated. Secondly, internal consistency was tested with Cronbach's alpha. Thirdly, dimensionality of MADRS-S-Ar was evaluated with principal component analysis (exploratory factor analysis (EFA)) and confirmatory factor analysis (CFA). Construct validity of QID-2-Ar, BDI-FS-Ar and MADRS-S-Ar was assessed with Pearson's correlation coefficients. Finally, the diagnostic values were calculated: sensitivity, specificity, prevalence, positive and negative predictive values. Values of sensitivity, specificity and predictivity are considered low between 0.00 and 0.29, moderate between 0.30 and 0.69, and high between 0.70 and 1.00 Pina [17]. Data analysis was carried out using software R (programming language). The significant level was set at $p < 0.05$.

## Results

**Preliminary Analysis:** Descriptive Statistics and Characteristics of the Sample: We conducted a first phase of descriptive analysis whose results are presented in Table 1. The

**Table 1:** Analysis Descriptive Statistics for the two Groups: Characteristics of the Samples.

| Variable | 200 Students | | 100 patients with MS | |
|---|---|---|---|---|
| | M | SD | M | SD |
| Age | 23.55 | 6.42 | 33.77 | 10.91 |
| Sex-n (%) | | | | |
| Men | 57 (28.5%) | | 29 (29%) | |
| Women | 143 (71.5%) | | 71 (71%) | |
| QID-2-Ar | 1.32 | 0.76 | 1.21 | 0.76 |
| Depression-BDI-FS-Ar | 7.26 | 4.6 | 4.95 | 4.29 |
| Depression-MADRS-S-Ar | 7.97 | 4.49 | 5.82 | 4.76 |
| Depression-BDI-II | 20.75 | 10.65 | 14.7 | 9.1 |
| Depression-DASS-21 | 7.91 | 4.33 | 7.16 | 5.29 |
| Anxiety-DASS-21 | 7.34 | 4.15 | 8.67 | 5.76 |
| Stress-DASS-21 | 9.85 | 4.49 | 10.76 | 6.14 |
| Self-esteem (RSES) | 18.86 | 4.97 | 21.22 | 5.89 |
| Satisfaction with life (SWLS) | 18.34 | 6.13 | 22.34 | 8.02 |
| Place of residence | Urban and semi- Urban: 52.5%; Rural and semi-rural: 47.5% | | Urban and semi- Urban:62%; Rural and semi-rural:38% | |
| Economic situation | Poor: 8%; Moderate: 72%; Good: 20%. | | Poor: 18%; Moderate: 67%; Good: 15%. | |
| Currently lives (Living arrangement) | Alone: 11%; With parents: 54.5%; With family: 10%; with friends: 18.5%; Others: 6%. | | Alone: 4%; With parents: 23%; With family: 56%; With friends: 2%; Others: 15%. | |
| Difficulty to wake up in the morning | no:50%; yes:50% | | no:70%; yes:30% | |
| Quality of sleep | very good:6.5%; good:16.5%; moderate:43.5%; poor:16.5%; very poor:17% | | very good:3%; good: 17%; moderate: 35%; poor:33%; very poor: 12% | |
| Fear for examinations | no: 52.5%; yes: 47.5 | | / | / |

| Educational satisfaction | no: 18.5; undecided: 22; yes: 59.5 | / | / |
|---|---|---|---|
| Time since diagnosis of MS | / | One month - 9 years. M: 4.35±3.63 | |
| Number (N) | Students: 200 | MS patients: 100 | |

demographic and clinical characteristics of students and MS patients are described using mean (M), standard deviations (SD) and percent (%).

**Applicability:** The award period for the QID-2-Ar is ±30 seconds, for the BDI-FS-Ar is ±2 minutes and for the MADRS-S-Ar is ±3 minutes. The purpose of the questionnaires is very well understood by students and patients: they quickly accommodate the procurement guidelines and there was no problem understanding the items.

**Internal Consistency and Reliability of BDI-FS-Ar and MADRS-S-Ar:** For the BDI-FS-Ar, internal consistency has been demonstrated with Alpha=0.765 [95% CI: 0.710-0.809] for Students and Alpha=0.871 for MS patients Kubitary et al. [10]. For the MADRS-S-Ar, reliability was very good (Table 2).

**Table 2:** Internal Consistency Reliability of MADRS-S-Ar for students and MS patients in war conditions.

| MADRS-S-Ar | Students | MS patients |
|---|---|---|
| Cronbach's Alpha | 0.769 [95% CI: 0.708-0.814] | 0.870 [95% CI: 0.840-0.893] |
| Split-Half (odd-even) Correlation | 0.672 | 0.825 |
| Spearman-Brown | 0.804 | 0.904 |

**Dimensionality:** For the BDI-FS-Ar, exploratory factor analysis (EFA) indicated only one factor Kubitary et al. [10]. The EFA of the MADRS-S-Ar (with Kaiser-Meyer-Olkin test 0.85, and Bartlett's test p < 0.001) indicated that there are two factors (eigenvalue 3.66 (40.62%), 1.37 (15.18%), with loadings on the two factors >0.30 for the 9 items.The fit indices of confirmatory factor analysis (CFA) have showed that the two-factor model

(Figure 1) provided a satisfactory fit to the data, χ2 (degree of freedom [df] = 26) = 101.40, p < 0.0001, χ2/df= 3.89, RMSEA = 0.09 (90% confidence interval [CI] [0.07, 0.11]), SRMR = 0.06, AGFI = 0.87, and GFI = 0.93. Cronbach's alpha is 0.81 [95% CI: 0.78 0.84] for the total score, and 0.77; 0.72 for the two scores, respectively (factor 1 and factor 2). Internal consistency reliability of the 9-item MADRS-S-Ar is very satisfactory. Factor 1 (F1) includes items 1, 5, 6, 7, and 9, and corresponds to the cognitive component of depression and was named «depression cognitive.» Factor 2 (F2) includes items 2, 3, 4, and 8, and corresponds to the loss of pleasure component of depression and was named «anhedonia». All saturations are important > 0.30.
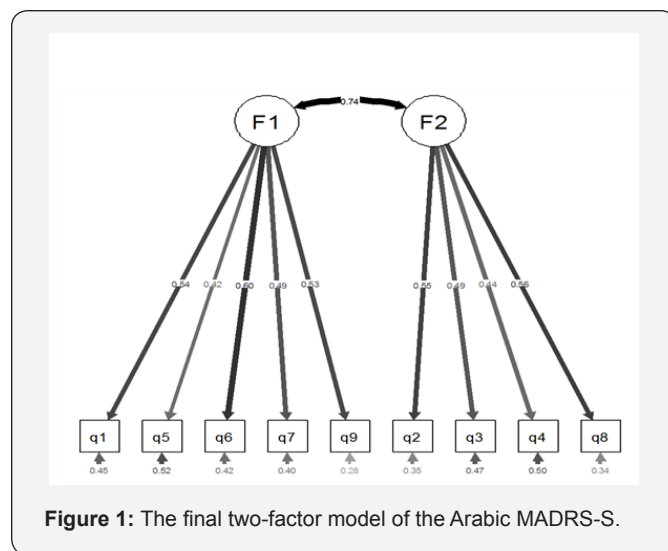


**Figure 1:** The final two-factor model of the Arabic MADRS-S.

**Table 3:** Inter-correlations between scales scores in Students.

| Questionnaires | Q1 | Q2 | QID-2-Ar | BDI-II | BDI-FS-Ar | MADRS-S-Ar | D-DASS | A-DASS | S-DASS | SWLS | RSES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Q1 | 1.00 | 0.31 | 0.82 | 0.20 | 0.13* | 0.27 | 0.30 | 0.12* | 0.22 | -0.21 | -0.20 |
| Q2 | | 1.00 | 0.79 | 0.20 | 0.19* | 0.30 | 0.31 | 0.22 | 0.31 | -0.34 | -0.15* |
| PHQ-2--Ar | | | 1.00 | 0.25 | 0.20 | 0.35 | 0.38 | 0.21 | 0.33 | -0.34 | -0.21 |
| BDI-II | | | | 1.00 | 0.91 | 0.18* | 0.16* | 0.17* | 0.22 | -0.15 | -0.08§ |
| BDI-FS-Ar | | | | | 1.00 | 0.14* | 0.19* | 0.17* | 0.20 | -0.14 | -0.07§ |
| MADRS-S--Ar | | | | | | 1.00 | 0.52 | 0.41 | 0.50 | -0.43 | -0.41 |
| D-DASS | | | | | | | 1.00 | 0.54 | 0.59 | -0.44 | -0.43 |
| A-DASS | | | | | | | | 1.00 | 0.62 | -0.25 | -0.33 |
| S-DASS | | | | | | | | | 1.00 | -0.36 | -0.30 |
| SWLS | | | | | | | | | | 1.00 | 0.38 |
| RSES | | | | | | | | | | | 1.00 |

**Note:** without* p <0.001; p <0.05*; NS§. Q: question. D: depression. A: Anxiety.

**Construct Validity (Convergent and Divergent Validity):** Relations between QID-2-Ar, BDI-FS-Ar, MADRS-S-Ar, and BDI-II, D- DASS, A- DASS and S-DASS (convergent validity) and between QID-2-Ar, BDI-FS-Ar, MADRS-S-Ar, and SWLS and RSES (divergent

validity) were tested using Pearson's correlation coefficients. Tables 3 & 4 show the inter-correlations between depression scores, anxiety, stress, satisfaction with life and self-esteem. QID-2-Ar and its items (Q1 and Q2), BDI-FS-Ar and MADRS-S-Ar is significantly correlated with depression scores ($p < 0.05$),

anxiety ($p < 0.05$) and stress ($p < 0.001$), and significantly and negatively with the score of satisfaction with life ($p < 0.001$) and self-esteem ($p < 0.05$), except for the BDI in Students and except for the Q1 of QID-2-Ar with anxiety and stress in MS patients. These correlations confirm the convergent and divergent validity

**Table 4:** Inter-correlations between scales scores in MS patients.

| Questionnairs | Q1 | Q2 | QID-2-Ar | BDI-FS-Ar | MADRS-S-Ar | BDI-II | D-DASS | A-DASS | S-DASS | SWLS | RSES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Q1 | 1.00 | 0.22* | 0.80 | 0.44 | 0.49 | 0.40 | 0.57 | 0.05§ | 0.09§ | -0.44 | -0.29 |
| Q2 | | 1.00 | 0.76 | 0.44 | 0.37 | 0.42 | 0.49 | 0.38 | 0.37 | -0.34 | -0.39 |
| PHQ-2-Ar | | | 1.00 | 0.56 | 0.55 | 0.52 | 0.68 | 0.27** | 0.29 | -0.50 | -0.43 |
| BDI-FS-Ar | | | | 1.00 | 0.71 | 0.89 | 0.67 | 0.27** | 0.46 | -0.57 | -0.52 |
| MADRS-S-Ar | | | | | 1.00 | 0.76 | 0.71 | 0.35 | 0.52 | -0.54 | -0.48 |
| BDI-II | | | | | | 1.00 | 0.71 | 0.43 | 0.51 | -0.55 | -0.56 |
| D-DASS | | | | | | | 1.00 | 0.47 | 0.53 | -0.46 | -0.66 |
| A-DASS | | | | | | | | 1.00 | 0.77 | -0.21* | -0.33 |
| S-DASS | | | | | | | | | 1.00 | -0.30 | -0.42 |
| SWLS | | | | | | | | | | 1.00 | 0.24* |
| RSES | | | | | | | | | | | 1.00 |

**Note:** without* p <0.001; p <0.01**; p <0.05*; NS§.Q: question. D: depression. A: Anxiety.

of QID-2-Ar, BDI-FS-Ar and MADRS-S-Ar. So, the QID-2-Ar, BDI-FS-Ar and MADRS-S-Ar have good construct validity (convergent and divergent validity).

**Characteristics of Screening and Diagnostic Tests:** Analysis of the Sensitivity and Specificity of the QID-2-Ar, BDI-FS-Ar and MADRS-S-Ar with reference test (BDI-II): Characteristics of screening (QID-2-Ar) and diagnostic (BDI-FS-

**Table 5:** Characteristics of Screening and Diagnostic Tests by Group.

| Screening Test compared with BDI-II (Gold Standard) | QID-2-Ar≥1 (screening test) | QID-2-Ar=2 | QID-2-Ar: Q1 (depressive mood) | QID-2-Ar: Q2 (anhedonia) |
|---|---|---|---|---|
| Sensitivity %- MS Patients | 76.25 | 85.37 | 78.85 | 79.71 |
| Sensitivity %- Students | 77.44 | 82 | 81.15 | 77.62 |
| Specificity %- MS Patients | 75.00 | 47.46 | 47.92 | 64.52 |
| Specificity %- Students | 44.44 | 35 | 38.46 | 36.84 |
| prevalence %- MS Patients | 80 | 41 | 52 | 69 |
| prevalence %- Students | 82 | 50 | 61 | 72 |
| Groups | For Students | | For MS Patients | |
| Diagnostic Tests compared with BDI-II (Gold Standard) | BDI-FS-Ar≥4 & BDI-II | MADRS-S-Ar≥13 & BDI-II | BDI-FS-Ar≥4 & BDI-II | MADRS-S-Ar≥13 & BDI-II |
| Sensitivity %- | 88.61 | 75 | 74.60 | 91.67 |
| Specificity %- | 88.10 | 27 | 91.89 | 55.68 |
| positive predictive values % | 96.55 | 14.29 | 94.00 | 22 |
| negative predictive values % | 67.27 | 86.79 | 68.00 | 98 |
| prevalence % | 79.00 | 15 | 63.00 | 13 |

Traditional cut-off has been used for BDI-FS-Ar≥4; for MADRS-S-Ar≥13 [2,10,19,23].

Ar and MADRS-S-Ar) tests compared with BDI-II show in Table 5. In our research, the sensitivity and specificity show that QID-2-Ar (screening test) and BDI-FS-Ar and MADRS-S-Ar (diagnostic test) are highly reliable.

## Discussion

"*Self-reports might also be valuable if symptoms are to be measured on a daily basis, e.g. for the assessment of early antidepressant effect Lenderking On the other hand, the systematic use of a self-report questionnaire (the 9- item Patient Health Questionnaire, PHQ-9) was considered feasible in psychiatric practice, even when resources are limited. It was deemed helpful for supporting clinical decisions and of therapeutic value, by involving patients in assessment procedures Duffy* " Bondolfi et al. [9].

The main objective of this present research was to analyze the psychometric properties and validate the usefulness of the screening (QID-2-Ar) and diagnostic (BDI-FS-Ar and MADRS-S-Ar) tests of the mental health (depression) of Syrians during WartimeDepression is one of the most common psychological problems in this Wartime.

The present study demonstrates that the Arabic version of the QID-2-Ar, the BDI-FS-Ar and the MADRS-S-Ar have adequate psychometric characteristics to allow its use during Wartime.

The objective of this study was demonstrated. Internal consistency was very good for the BDI-FS-Ar and the MADRS-S-Ar. Construct validity of the QID-2-Ar, BDI-FS-Ar and MADRS-S-Ar was supported by correlation coefficients ($p < 0.01$ to $p < 0.001$). For convergent and divergent validity, the multiple correlations between depression scores and intensity of anxiety, stress, satisfaction with life, and self-esteem are significant ($p < 0.01$). QID-2-Ar, BDI-FS-Ar and MADRS-S-Ar are strongly correlated with the BDI-II. Thus, the correlation between the QID-2-Ar, BDI-FS-Ar and MADRS-S-Ar and other scales measuring depression (BDI-II and DASS), tells us that there is a significant link between the three measures ($p < 0.001$).Favourable psychometric properties of the QID-2-Ar, BDI-FS-Ar and MADRS-S-Ar tend to confirm that they might be valid scales in War to evaluate the depression and symptom severity.

According to the results of characteristics of screening and diagnostic tests, the QID-2-Ar, BDI-FS-Ar and MADRS-S-Ar are a sensitive and specific test to measure depression compared with the BDI-II (the reference standard). QID-2-Ar, BDI-FS-Ar and MADRS-S-Ar have a structure validity external very satisfactory.

An exploratory factor analysis has identified only one factor of BDI-FS-Ar and two factors of MADRS-S-Ar. In this study, the coefficients are greater than | 0.30 |and very satisfactory. The fit indices of CFA confirm the two-factor model of MADRS-S-Ar.

In terms of applicability, the execution time takes less time (± 5 minutes for these two scales: QID-2-Ar, BDI-FS-Ar and MADRS-S-Ar) than other tools (15 minutes for the BDI-II and 10 minutes for the depression anxiety stress scales -21). So, these three scales are not a burden for peoples, patients or personnel to assess but are very easy.

QID-2-Ar(screening test), BDI-FS-Ar and MADRS-S-Ar (diagnostic tests) could allow to reduce time, effort and costs, both in research settings and in clinical practice, particularly in difficult conditions such as War conditions where resources are limited and multiple evaluations are needed.

## Conclusion

The purpose of this research was to present a validated Arabic version of the QID-2, the BDI-FS and MADRS-S adapted to the population in War conditions. The psychometric properties of the QID-2-Ar, the BDI-FS-Ar and the MADRS-S-Ar (reliability, accuracy and validity) are very satisfactory. The results of this study suggest that theQID-2-Ar, the BDI-FS-Ar and the MADRS-S-Ar is an assessment tool for peoples and be useful for the evaluation of subjects with depressive disorders during wartime. The psychometric properties, simplicity and easy to use these tools make them a promising screening and diagnosis tool for depression in peoples in War. This study provides strong evidence on the reliability of this quick questionnaire screening and diagnosis of depression.

Finally, given the prevalence of depression in the population and the impact on individual and social levels of this disease, objective tools for measuring this depression are important for therapeutic management and optimum clinical monitoring. So, this is the first study that confirms the internal and external validity of these three questionnaires and attests to its relevance in population with War conditions.

**Disclosure of interest:** The authors declare that they have no competing interest.

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