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Validation of the Arabic Version of the Brunel Mood Scale (BRUMS-AR) for Use with Football Players in Ramadan

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A B S T R A C T

Objective: We aimed to test the psychometric properties of the Arabic Brunel Mood Scale (BRUMS-AR) among football players during Ramadan.

Methods and Materials: 528 participants (aged 18 to 45, with 505 men (96%) and 23 women (4%), categorized in 45% amateurs, 28% semi-professionals, and 27% professionals), completed the BRUMS-AR during Ramadan Month, through an online questionnaire (Google Forms), which included the Arabic version of the BRUMS scale (BRUMS-AR) and demographic questions on age, gender, and sporting experience.

Findings: The internal consistency test of the six subscales showed good Cronbach's alpha and McDonald's Omega values, which exceeded adequacy levels for all factors of the BRUMS-AR respectively anger (0.882; 0.884), confusion (0.866; 0.872), depression (0.928; 0.859), fatigue (0.929; 0.893), tension (0.824; 0.825), and vigor (0.909; 0.911). The correlation test Hare positively intercorrelated, however, this factors were negatively correlated with the positive factor (Vigor). The measurement model of the BRUMS-AR was also tested using Confirmatory factor analysis (CFA). Our results showed congruence between the BRUMS-AR and the original model of the BRUMS with overall model fit indices CFI (0.93), TLI (0.92), RMSEA (0.07), and SRMR (0.04).

Conclusion: Our findings affirm the factorial validity and internal consistency of the BRUMS-AR, indicating that it is an appropriate instrument for application within Arabic football players.

Keywords: *BRUMS, BRUMS Arabic version, Ramadan-football players, Arabic validity*

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1. Introduction

Mood is a temporary dispositional state that lasts from several minutes to several hours and can significantly impact cognitive and physical performance (1, 2). Over time, psychological research has developed various tools to measure these states, including the Positive and Negative Affect Schedule (PANAS), which evaluates positive and negative affect dimensions (3); the Mood Disorder Questionnaire (MDQ), which identifies symptoms of bipolar disorder (4); and the Profile of Mood States (POMS), which is designed specifically to assess athletes' mental health (5). Among these tools, the Brunel Mood Scale (BRUMS) stands out for its specificity and extensive validation. Initially, developed for adolescents (6), the BRUMS was later validated for adults (7).

The BRUMS evaluates mood states across six key dimensions: tension, depression, anger, vigor, fatigue, and confusion. Renowned for its versatility, the BRUMS has been applied in diverse contexts, including clinical psychology (8) sport (9-12), education (13, 14), and workplace settings (15). In the field of sports, it has proven particularly valuable for assessing athletes' emotional states and their influence on performance (16, 17). Additionally, specific subscales, such as those measuring fatigue and vigor, serve as subjective indicators of mental fatigue (18, 19).

The BRUMS has undergone cultural and linguistic validation in more than 17 languages, such as Spanish, Greek, Turkish, Malay, Bengala, and Arabic (20-25), confirming its strong psychometric properties. Despite this extensive validation, research addressing specific cultural and sporting contexts, such as Arabic-speaking athletes during Ramadan, remains limited. The Ramadan period presents unique challenges for athletes, particularly in balancing fatigue, emotional regulation, and physical performance, all while observing fasting and managing the demands of training and competition.

This study aims to validate the Arabic version of the BRUMS (BRUMS-AR) among Tunisian footballers during Ramadan. The objective is to assess the scale's psychometric properties and evaluate its suitability in a context where athletes must navigate the interplay between religious practices and performance demands. This research contributes to a broader effort to better understand the interactions between psychological well-being, religious commitment, and athletic performance in culturally specific settings.

2. Methods and Materials

2.1 Study Design and Participants

The translation, adaptation, and validation of the BRUMS-AR scale followed the International Testing Commission (ITC) guidelines (26), which provide a rigorous methodological framework to ensure the conceptual equivalence and cultural relevance of measurement instruments across diverse contexts. This structured process included multiple stages, such as direct translation, back-translation, expert evaluation by bilingual specialists, and pilot testing with the target population. These steps were carefully designed to maintain the integrity of the original constructs while tailoring the instrument to align with local linguistic and cultural nuances. By adhering to this systematic approach, the study ensured that the BRUMS-AR scale produces reliable and scientifically valid results for assessing emotional states within the studied context.

The study was approved by the Ethics Committee of Farhat Hached University Hospital (Reference Number 02--2023). The participants were fully informed about the voluntary nature of their involvement and the confidentiality of their responses. Written consent was obtained from all participants, ensuring anonymity and adherence to ethical guidelines. Data collection took place between 1 and 30 April 2023, during the month of Ramadan, through an online questionnaire (Google Forms), which included the Arabic version of the BRUMS scale (BRUMS-AR) and demographic questions on age, gender, sporting experience and last training session time day (Morning, early afternoon, before iftar, after iftar . 575 Arabic Football players participated in this study on which 528 their training session was on afternoon time before iftar and 47 trained at night only participants responses whose trained on afternoon before Iftar was retained for this study

The study sample consisted of 528 Tunisian Muslim athletes aged 18- 45, with 505 men (96%) and 23 women (4%). Among the participants, 45% were amateurs, 28% were semiprofessionals, and 27% were professionals. This sample size fulfills the minimum requirements for factor analysis, which recommends 10 to 15 participants per variable (27), aligns with the threshold of 500 participants, and is deemed ‘very good’ for psychometric analyses (28). The low representation of women in the sample reflects the broader underrepresentation of women in football in Tunisia, which is largely influenced by sociocultural factors and limited opportunities in the sport (29). These challenges

underscore the need for further studies to address gender disparities and expand the generalizability of findings.

2.2 Measures

The Brunel Mood Scale (BRUMS), which consists of 24 items, is a psychological tool designed to assess and quantify an individual's mood states (6, 7). This scale provides a comprehensive framework for understanding emotional well-being by measuring five negative mood dimensions, including tension, depression, anger, fatigue, confusion and vigor, as a positive mood. The items were rated on a 5-point scale ranging from “not at all” (0) to “extremely” (4).

Translation and cultural adaptation: The cultural adaptation process was conducted through multiple stages to ensure both conceptual fidelity and contextual appropriateness. Initially, two bilingual experts independently translated the scale, carefully tailoring the terminology to the Arabic cultural context while maintaining the integrity of the original meaning. Any translation discrepancies were resolved through consensus, resulting in a unified version. A third bilingual expert, who was blinded to the original version, subsequently performed a back-translation to verify the semantic consistency of the translated items.

To further validate the content, the scale was tested with 10 native Arabic-speaking participants, who evaluated the clarity of the items on a 4-point Likert scale (1 = "not clear," 4 = "very clear"). Items with a content validity index (CVI) less than 0.80 were refined to improve their linguistic and cultural alignment. This meticulous process ensured that the BRUMS-AR was appropriately adapted for the target population while preserving its psychometric robustness.

2.3 Data Analysis

Statistical analyses were conducted via Jamovi software (Version 2.5). Descriptive statistics, including means (M), standard deviations (SD), skewness, and kurtosis, were calculated for each item of the BRUMS-AR scale to explore their distribution and central tendencies. Internal reliability was evaluated via Cronbach's alpha and McDonald's omega coefficients, with the following thresholds applied: acceptable (≥ 0.70), good (≥ 0.80), and excellent (0.90-0.95) (30). The inter-item correlations were assessed through the Pearson correlation coefficient matrix to estimate the relationships between factors.

The scale was validated through confirmatory factor analysis (CFA) via the maximum likelihood estimation method. The Confirmatory Factor Analysis (CFA) determines the degree to which the variables align appropriately with the underlying construct they are designed to evaluate (27). Model fit was evaluated via several indices: The non-normal Tucker–Lewis index (TLI) (31) and the comparative fit index (CFI) (32) were employed in our analysis, both of which account for the size of the sample. As noted by Hu & Bentler (1999), TLI and CFI values equal to or exceeding 0.9 signify an acceptable model fit, while values reaching or surpassing 0.95 indicate a good model fit (33). Furthermore, we evaluated the root mean square error of approximation (RMSEA) (34), which mitigates the propensity of chi-square statistics to dismiss models when sample sizes are large. An RMSEA value of 0.05 or less is indicative of a good fit, whereas values equal to or below 0.08 suggest an acceptable fit (35). Lastly, we analyzed the average of the standardized residuals through the root mean square residual (SRMR). SRMR values range from 0 to 1.0, with models considered well-fitting if values are below 0.05 (36, 37), and values of 0.08 or less implying an acceptable model (33).

3. Results

The analysis followed two key stages: initially, a descriptive analysis was conducted to explore the characteristics of the BRUMS-AR scale items, providing insights into their distribution and central tendencies. Subsequently, psychometric validation was performed to evaluate the factor structure and reliability of the scale. This section begins by presenting the descriptive findings, laying the groundwork for the subsequent validation analyses.

Descriptive statistics and distribution characteristics

Descriptive statistics, including the mean, standard deviation, skewness, and kurtosis, for the BRUMS-AR scale items are presented in Table 1.

Table 1. Descriptive statistics of the BRUMS-AR items

N°	Items	Mean	SD	Skewness	Kurtosis
1	Panicky	0.58	0.89	1.25	0.54
2	Anxious	0.58	0.82	1.30	1.31
3	Worried	0.54	0.91	1.71	2.48

4	Nervous	0.58	0.91	1.63	2.35
5	Annoyed	0.63	0.91	1.52	2.06
6	Bitter	0.69	1.01	1.37	1.06
7	Angry	0.59	0.91	1.50	1.72
8	Badtempered	0.69	0.97	1.36	1.25
9	Depressed	0.45	0.85	1.95	3.34
10	Downhearted	0.41	0.83	2.19	4.65
11	Unhappy	0.51	0.91	1.79	2.72
12	Miserable	0.36	0.82	2.43	5.64
13	Wornout	0.91	0.99	1.07	0.77
14	Exhausted	1.01	1.03	0.95	0.40
15	Sleepy	1.06	1.14	0.89	-0.10
16	Tired	1.12	1.04	0.83	0.17
17	Lively	2.02	0.99	-0.13	-0.05
18	Energetic	2.04	1.05	-0.12	-0.19
19	Active	2.10	1.03	-0.18	-0.16
20	Alert	2.41	1.03	-0.31	-0.28
21	Confused	0.88	1.04	1.10	0.61
22	Muddled	0.70	0.99	1.35	1.13
23	Mixedup	0.80	1.01	1.08	0.32
24	Uncertain	0.77	1.13	1.39	0.99

SD: Standard division

Reliability analysis

The detailed reliability coefficients for each subscale are summarized in Table 2 below. Internal consistency for the BRUMS-AR subscales was evaluated via Cronbach's alpha (α) and McDonald's omega (ω) coefficients. All the subscales demonstrated strong reliability, with Cronbach's alpha values consistently exceeding 0.70. Notably, the Depression and Vigor subscales achieved alpha values above 0.90, indicating excellent reliability. The remaining subscales, Tension, Anger, Fatigue, and Confusion reported alpha coefficients above 0.80, reflecting good internal consistency. Similarly, McDonald's omega values surpassed 0.85 across all the subscales, further validating the reliability of the scale. These findings confirm that the BRUMS-AR subscales provide consistent and reliable measures for assessing the emotional dimensions captured by the scale.

Table 2. Reliability of the BRUMS-AR subscales

	Cronbach's α	McDonald's ω
Tension	0.850	0.854
Anger	0.882	0.884
Depression	0.928	0,929
Fatigue	0.889	0.893
Vigor	0.909	0.91
Confusion	0.866	0.872

Covariance of BRUMS-AR factors

The analysis of covariance between the BRUMS-AR factors (table3), conducted via Pearson correlations, revealed significant positive relationships among the five negative factors of the BRUMS-AR scale (tension, depression, anger, fatigue, and confusion), with correlation coefficients ranging from 0.56--0.81 ($p < 0.001$). These findings demonstrate a strong association between negative emotional states. In contrast, the Vigor subscale exhibited negative correlations with these factors, with coefficients ranging from -0.24 to -0.56 ($p < 0.001$), indicating an inverse relationship between positive and negative emotions. This pattern underscores the divergent structure of the emotional dimensions captured by the scale.

The covariance results align with the theoretical model of the BRUMS-AR. Negative emotions are highly interconnected, reflecting their tendency to co-occur in intense emotional states. Conversely, Vigor, which represents positive emotional states, stands in clear opposition to the negative dimensions, emphasizing a distinct and inverse emotional dynamic. These findings validate the conceptual framework underlying the BRUMS-AR and highlight its effectiveness in distinguishing between positive and negative emotional states.

Table 3. BRUMS-AR Factor Covariances

	Tension	Anger	Depression	Fatigue	Vigor	Confusion
Tension	-					
Anger	0.81***					
Depression	0.76***	0.74***				
Fatigue	0.63***	0.67***	0.56***			
Vigor	-0.30***	-0.36***	-0.24***	-0.56***		
Confusion	0.69***	0.70***	0.72	0.57***	-0.25***	-

***=p<0.001

Confirmatory factor analysis

Table 4 below presents the standardized factor loadings for the six factors of the BRUMS-AR scale, offering a detailed view of the relationships between the items and their latent dimensions. CFA was conducted to evaluate the structural validity of the scale. The findings reveal that 23 out of 24 items exhibit factor loadings exceeding 0.70, demonstrating strong associations between the items and their respective factors. These results underscore the adequacy of the items in capturing the intended emotional dimensions. The overall model fit indices; CFI (0.93), TLI (0.92), RMSEA (0.07), and SRMR (0.04) meet established thresholds for a good fit, aligning with the criteria set by Hu and Bentler (1999) and further validating the robustness of the BRUMS-AR model (33). The standardized factor loadings presented in Table 4 emphasize the robust relationships between the items and their latent dimensions, reinforcing the validity of the BRUMS-AR scale. These results confirm the scale's reliability and effectiveness in evaluating the emotional states of participants.

Table 4. Standardized factor loadings of the six factors of the BRUMS-AR Scale

Factor	Items	Standardized factor loadings
Tension	Panicky	0.54
	Anxious	0.61
	Worried	0.75
	Nervous	0.78
Anger	Annoyed	0.71
	Bitter	0.82
	Angry	0.74
	Badtempered	0.80
Depression	Depressed	0.76
	Downhearted	0.75
	Unhappy	0.76
	Miserable	0.71
Fatigue	Wornout	0.81
	Exhausted	0.88
	Sleepy	0.84
	Tired	0.91
Vigor	Lively	0.80
	Energetic	0.97
	Active	0.94
	Alert	0.77
Confusion	Confused	0.86
	Muddled	0.89
	Mixed-up	0.78
	Uncertain	0.75

4. Discussion and Conclusion

This study aimed to validate the Arabic version of the Brunel Mood Scale (BRUMS-AR) to assess the emotional states of Tunisian football players, particularly in a specific sporting context such as Ramadan. The results confirm that this version retains the six-dimensional factor structure: anger, confusion, depression, fatigue, tension, and vigor. Confirmatory factor analysis revealed a strong match between the items and their latent dimensions, whereas the internal consistency of the subscales, assessed by Cronbach's alpha and McDonald's omega coefficients, was excellent, exceeding acceptable standards for psychometric tools.

These results are in line with previous validations carried out in various cultural contexts. For example, in Tunisia, Sahli et al. (2023) validated an Arabic version of the BRUMS (ARAMS) among 681 physical education university students, and the psychometric testing revealed good reliability and a good fit to the theoretical model (23). Similarly, Vlachopoulos et al. (2023) validated the Greek version with active and inactive adults, revealing high adjustment indices and confirming the relevance of the six-factor model (25). In Lithuania, Terry et al. (2022) obtained similar results by validating a Lithuanian version with 746 participants, demonstrating a robust factor structure and good reliability, with variations in mood scores influenced by factors such as gender and sporting context (38). In Malaysia, Lan et al. (2012) reported that the BRUMS scale showed good factorial validity and strong internal consistency when it was administered to athletes participating in the Malaysian Games (22).

The correlations between the negative factors of the BRUMS-AR scale reveal a strong interconnection, confirming that these emotions tend to coexist in intense emotional states. This interrelationship is consistent with the results of Květon et al. (2020), who observed a similarity in the validation of the Czech version of the BRUMS, showing acceptable indices for a six-factor model while indicating difficulty in distinguishing the depression and tension factors in some cases (39). In a complementary manner, Rohlfs et al. (2006) reported in their Brazilian study that the theoretical dimensions of emotional states manifested themselves robustly, even when applied in a variety of sporting contexts, thus confirming a high degree of consistency in the negative subscales (16).

In contrast, vigor, which represents positive emotional states, systematically opposes the negative dimensions, with negative correlations ranging from moderate to strong depending on the subscale. These results highlight not only the convergent and divergent validity of the scale but also the effectiveness of the factorial model in capturing this inverse emotional dynamic. Although several studies have identified congruence with the theoretical model with a good to excellent fit index, other prior investigations have indicated a superior alignment of the measurement model with their datasets when they employ a reduced set of items or factors.

De Almeida et al. (2018) verified the psychometric properties of the BRUMS among 308 basketball referees and 83 table officials (40). The study concluded that the BRUMS-AB scale, adapted for Brazilian basketball referees, demonstrated good psychometric properties, indicating its validity and reliability for assessing mood states in this specific context. The scale effectively identified four emotional states relevant to refereeing, including fatigue, vigor, emotional instability (depression-anger), and preoccupation (tension-confusion).

In addition, the Brunel Mood Scale-Chinese (41) demonstrated factorial validity with a 23-item six-factor model after one item was removed. The study confirmed the internal consistency reliability and measurement invariance across four samples, supporting its psychometric soundness and indicating that the BRUMS-C effectively measures mood dimensions despite item reduction, making it suitable for use with Chinese adolescents and adults. Furthermore, Bagherpour et al. (2013) evaluated the factorial validity of the Iranian version of the Brunel Mood Scale among 131 Iranian young female Taekwondo athletes by testing three different models, namely, a 1-factor model, a 2-factor model, and a 6-factor model, ultimately finding that the 2-factor model provided the best fit and good internal consistency with the positive mood subscale and the negative mood subscale, suggesting that it is a suitable model for measuring mood states among participants (42). Finally, Terry et al. (2012) adapted the BRUMS to the Farsi language through 405 Iranian university students. This study demonstrated acceptable psychometric properties after 10 items were removed (43).

The confirmatory factor analysis supported a 14-item, six-factor model with a fit index that exceeded the threshold of good fit in all the cases (athlete, non-athlete and multi-sample).

This divergence of results can be due to several reasons. First, the sample size necessary to conduct the factorial validity.

Tueller et al. (2017) reported that sample size significantly affects the scale validity of the Positive and Negative Syndrome Scale (PANSS) and Brief Psychiatric Rating Scale (BPRS), particularly when incorrectly assuming normality in item distributions (44). Smaller sample sizes led to biases in model fit and factor structure, resulting in less reliable conclusions about the validity of the scales. For example, Rouquette et al. (2011) suggested that sample size significantly affects the validity of psychiatric scales (45).

A minimum of 300 subjects is generally acceptable for revealing the factor structure, with larger samples needed when the number of factors is high or when exploratory factor analysis (EFA) is used. Additionally, smaller sample sizes do not suffice for short scales, contradicting the ratio of subjects to variables (N/p ratio) rule. The precision of Cronbach's alpha coefficient also improves with larger sample sizes, ensuring more accurate and stable factor solutions

In addition, Anthoine et al. (2014) confirmed that sample size significantly impacts scale validity in psychometric validation studies (46). A larger sample size enhances the robustness of measurement properties, such as content, construct, and criterion validity. Sample size determination for psychometric validation studies is rarely justified a priori. This emphasizes the lack of clear scientifically sound recommendations on this topic. Existing methods to determine the sample size needed to assess the various measurement properties of interest should be made more easily available. An adequate sample size is crucial for reliable assessments and the generalizability of the findings in participant-reported outcome measures. Sample size justification in a study is crucial for explaining how the collected data provide valuable information based on the researcher's inferential goals. Lakens., 2022 emphasized the importance of justifying sample sizes in research design by discussing various approaches, such as performing a priori power analysis and planning for desired accuracy, to ensure that the collected data provide valuable information aligned with the researchers' inferential goals (47). Second, the translation, adaptation, and validation of instruments or scales for cross-cultural research is a complex process that requires careful consideration of linguistic, cultural, and psychometric factors. This process ensures that the instruments are not only linguistically accurate but also culturally relevant and psychometrically valid for the target population.

After identifying and analyzing 42 guidelines on translation, adaptation, and cross-cultural validation within healthcare sciences, Cruchinho et al. (2024) proposed an eight-step guideline for novice researchers, including forward translation, translation synthesis, back translation, harmonization, pretesting, field testing, psychometric validation, and analysis of psychometric properties (48). In conclusion, a sufficiently large sample size ensures that the results are statistically significant and generalizable, allowing researchers to draw reliable conclusions about the studied population. Furthermore, effective translation of scales is crucial for maintaining the integrity and meaning of the constructs being measured across different languages and cultural contexts. This dual focus on an appropriate sample size and accurate translation not only enhances the validity and reliability of the scale but also fosters inclusivity and applicability in diverse settings. Ultimately, carefully considering these factors is essential for advancing research quality and ensuring that findings are relevant and actionable across various populations.

These methodological and contextual differences highlighted in previous research demonstrate the importance of adapting psychometric tools to the specific characteristics of each population. Although the six-factor model is generally robust, it remains influenced by the cultural specificities and characteristics of the groups studied. The validation of the BRUMS-AR confirms its ability to measure emotional states and opens prospects for examining in greater depth the cultural and contextual nuances that influence the perception and expression of emotions in a variety of sporting contexts. However, the present study acknowledges specific limitations and strengths. On one hand the strengths of this study include a robust sample size which was determined in advance based on power analysis to achieve statistically significant results while maintaining practical feasibility. In addition, the translation procedures implemented for this study and content validity assessed facilitated accurate data collection. This meticulous approach not only enhanced the reliability of the data collected but also ensured that the participants fully understood the questions posed, thereby improving the study's overall validity. Nevertheless, several aspects warrant further investigation. Given that the questionnaire was administered during Ramadan, a more granular analysis could explore responses on the basis of the time of day (morning, afternoon, evening) and the phases of Ramadan (beginning, middle, end) to better capture the emotional fluctuations associated with the unique rhythms and

challenges of this period. Such distinctions could provide valuable insights into the evolving emotional dynamics driven by accumulated fatigue or the gradual adaptation of athletes to fasting.

On the other hand, the sample being restricted to Tunisian football players highlights the need to extend the study to other Arabic-speaking populations and diverse sports disciplines to broaden the applicability of the BRUMS-AR. Additionally, the underrepresentation of women in the sample presents a notable limitation, as it constrains the generalizability of the findings to a more diverse demographic.

Further investigation into the interactions between emotional dimensions and the cultural and temporal dynamics of Ramadan could significantly increase the utility of the BRUMS-AR. Such research would also ensure its applicability and the generalization of its findings to a broader array of sporting and cultural contexts.

This study validated the Arabic version of the BRUMS, demonstrating its reliability and validity in assessing the emotional states of Tunisian football players during Ramadan. The strong internal consistency of the subscales and the robustness of the six-dimensional factor model highlight the relevance of this tool in contexts where cultural and religious factors play a significant role in shaping athletes' emotional experiences.

Authors' Contributions

Aymen yacoubi: Designed the study, developed the theoretical framework, carried out data collection, performed data analysis, interpreted the data, and drafted the manuscript.

Dr. Chedlia Fitouri: Designed the study, reviewed and edited the methodology, carried out data collection, interpreted the data, and co-wrote the manuscript, reviewed and approved the final version.

Dr. Haithem Jahrami: Designed the study, performed data analysis, interpreted the data and contributed to manuscript revisions.

Pr. Imed Laatiri: Designed the study, administered the project, interpreted the data, reviewed & edited the manuscript, and validated the final version.

Pr. Karim Chamari: Designed the study, interpreted the data, critically revised the manuscript, and approved the final version.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (Farhat Hached University Hospital,Tunisia) and with the Helsinki Declaration of 1975, as revised in 2000 (5). Informed consent was obtained from all patients for being included in the study.

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Appendix

BRUMS' English version	BRUMS' Arabic version (BRUMS-AR)
Tension	التوتر
Panicky	مذعور
Anxious	قلق
Worried	مضطرب البال
Nervous	عصبي
Anger	الغضب
Annoyed	منزعج
Bitter	مغتاظ
Angry	غاضب
Bad tempered	سيء المزاج
Depression	الإكتآب
Depressed	مكتئب
Downhearted	حزين
Unhappy	غير سعيد
Miserable	بائس
Fatigue	التعب
Worn out	منهك القوى
Exhausted	مرهق
Sleepy	نعسان
Tired	تعبان
Vigor	النشاط
Lively	حيوي
Energetic	مليء بالطاقة
Active	نشط
Alert	متأهب
Confusion	الارتباك
Confused	مشوش الذهن
Mixed up	مضطرب البال
Muddled	مختلط الأحاسيس
Uncertain	كل شيء غامض بداخلي