



PSYCHOLOGICAL DISTRESS DURING IRAN ISRAEL WAR 2025: ADAPTATION AND VALIDATION OF THE DEPRESSION, ANXIETY AND STRESS SCALE (DASS-21) IN IRANIAN YOUNG ADULTS

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Abstract

The study was aimed towards assessing global psychological distress among Iranian young adults during the Iran Israel War 2025. Moreover, the study focused on carrying out a cross-cultural translation and adaptation of the DASS-21 scale in the population. A cross-sectional research design was used through sampling of 350 young adults (200 males and 150 females) from Iran in the age range ($M=23.17$, $SD=6.41$). Data collection was done through google forms that were shared with Iranian young adults via modified chain referral/snowball sampling technique. The time frame during the sampling was done from 13th of June 2025 till 24th June, 2025, the date on which the war was officially concluded. First, translation of the DASS-21 was done using the forward backward translation intervention. Construct validity had been estimated and assessed through exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Cronbach's alpha was used for determination of reliability. Additionally, Fornell and Larcker's approach was utilized for establishing convergent and divergent validity of the DASS-21. The findings showed that the three subscales of DASS-21 i.e. depression, stress and anxiety explained 73.45 % of the total variance. The alpha reliabilities of the subscales along with the convergent and discriminant validity of the scale were also excellent. In conclusion, the DASS-21-Persian version shows a strong diagnostic efficacy for determining the prevalence of post-traumatic stress in young adults affected by the Israel-Iran war during times of conflict in Iran, thus supporting reliability, validity, and cultural relevance of the assessment method as a psychological assessment tool in conflict-affected populations. These findings solidify our argument for the continued use of DASS-21-Persian version in the clinical and war related contexts to identify individuals experiencing psychological distress

INTRODUCTION

Years of regional tensions between Iran and Israel reached a boiling point in early 2025 when hostility changed into a full-scale war (Reuters, 2025). A

number of factors contributed towards the war including geopolitical flashpoints, including cyberattacks, territorial threats, and proxy battles

across the region (BBC, 2025). Experts have estimated the conflict may have greatly affected the populations of both regions. Specifically, for Iran, cities throughout western Iran and central Iran were hit with multiple missile strikes which caused destruction, and injuries, and resulted in deaths to more than 900 civilians (Reuters, 2025).

During the time period of the war from 13th of June, 2025 till 24th of June, 2025, multiple sources have reported how thousands within Iran are internally displaced and a large number of individuals experienced loss of family members (BBC, 2025). In some cases, essential services and infrastructure have been disrupted due to the humanitarian crises.

In view of the above, this study on the psychological impact of the Iran-Israel War 2025 can be categorized within several psychological theories and frameworks. These models help to quantify how exposure (directly and indirectly) to war may inflict trauma upon individual mental health, especially for those cohorts who are particularly vulnerable, such as young adults. First, trauma theory defines war-related trauma as an event that threatens life and/or health (often involving direct exposure to violence, destruction or witnessing brutal violence) (Alexander, 2013; Sutterlin, 2020). While young Iranian population have dealt with the experience and trauma of war directly and proximally (e.g., missile strikes, displacement, loss of loved ones) during almost 11 days of war, most professionals view this level of exposure as a life event that will lead to long-term psychological difficulties internally (e.g., PTSD, anxiety, depression), and externally (e.g., distress) (Khamis, 2015; Shaked-Ashkenazi et al., 2025). Furthermore, explanatory models of trauma related to war identify much broader psychosocial stressors that must be screened among those affected as confirmed by Brea Larios et al. (2022) such as how Iranians may have experienced how the war threatened their social cohesion, physical and psychological wellbeing and overall mental health.

Even if a person is not physically present in war zones, individuals may experience psychological symptoms from seeing violent images on social media, television, or through other online avenues (Chasson et al., 2025). For young adults in Iran, this is particularly relevant because in an ongoing conflict, constant exposure to photographs or videos

of destruction or direct exposure to the suffering of civilians can awaken intense emotional responses characterized by feelings of fear (Timmer et al., 2022), helplessness, and anticipatory anxiety (Holman et al., 2024) no matter how far persons may actually be from the violent event (Touseef et al., 2023).

Moreover, the social disruption theory argues how war caused a disruptive outcome for protective systems of society (Arnold, 2012). Protective services, education, and social networks are sometimes dysfunctional or non-existent during war (Thomas, 2021). For youth in Iran, their social and educational structures are under serious disruption impacting their routine, their networks of support, and capacity to develop a sense of identity and security for themselves (Shorrab, 2024). The inability to locate, gather emotional resources, and prepare for abrupt and swift change can leave individuals with a sense of disorientation and personal disempowerment, contributing in turn to feelings of depression and anxiety (Boley, 2025).

Overall, these theoretical insights represent a unified framework for understanding the psychological effects of the Israel-Iran war on young Iranians. They shape this study's conception of trauma, coping, and mental health and endeavor to create and validate culturally and contextually relevant instruments (e.g., the Persian DASS-21) for measuring emotional distress in populations affected by conflict.

One meta-analysis argued that the mental health crisis in war times is a global public health issue and the evidence indicates a strong link between the tendency of people to employ avoidant coping strategies and levels of depression in war affected groups, including combat veterans, and has found links to culture-based coping mechanisms, which emphasizes the need for transcultural studies of mental health to study the psychological impacts of war (Panagioti et al., 2012). The long-term impact of armed conflict can involve, in addition to psychiatric disturbances, factors such as social dysfunction, poverty, deterioration of physical health and lower quality of life can all result from war due to which timely diagnoses and screening interventions are imperative (Amsalem et al., 2025).

Significance of Screening Tools

The Depression Anxiety and Stress Scales (DASS) is a widely used screening tool to assess symptoms of depression, anxiety and stress in both community and clinical settings (Lovibond & Lovibond, 1995). The DASS consists of three subscales: (1) the Depression Subscale, which assesses hopelessness, worthlessness, and decreased positive affects; (2) the Anxiety Subscale, which measures autonomic arousal, musculoskeletal symptoms, situational anxiety, and the subjective experience of anxious arousal; and (3) the Stress Subscale, which evaluates tension, agitation, and other negative affects. The DASS can be administered in two formats: (1) a complete 42-item scale, and (2) a brief version of 21 items (DASS-21); both measures assess the same domains.

A great deal of research has shown the usefulness and reliability of DASS-21 in various clinical and community contexts in English-speaking countries such as Australia, the USA, Canada, and England (Zanon et al., 2021). Moreover, the DASS has been translated and utilized in another languages, notably Chinese, Malay, Italian, and Spanish (Cao et al., 2023). Both original and translated versions have generally demonstrated a reasonable internal consistency with wise use of the scale, as Cronbach's alpha for each were reported above 0.70 (Ali et al., 2021). The instrument further demonstrates reasonable concurrent validity, as studies have found moderate correlations between the DASS and other established measures of normal and abnormal mood, such as the Beck Anxiety and Depression Inventories, the Positive and Negative Affect Scale, and the Symptom Checklist-90-R (Lannattone et al., 2024). However, to the best of our knowledge, limited research has been done on the DASS-21 validation within a war related context in Iran and most probably, around the world, particularly in relevance to how young adults may have experienced the stressful psychological impact of the Iran-Israel War.

Aims and Objectives

During times of war, there is need for having a culturally adapted, linguistically accurate, and psychometrically rigorous instruments such as DASS-21 that can reliably detect those presenting with

symptoms of depression, anxiety, and stress, particularly in the context of ongoing conflict. Even if the DASS-21 can be put to use globally, we need to evaluate it for comprehensibility, cultural relevance, and psychometric properties among young adults in Iran who are experiencing war-related stressors. Therefore, the current study was aimed towards the translation and cross cultural adaptation of the DASS-21 for Persian speakers and to evaluate the psychometric properties it, including internal reliability, construct validity through factor analysis, and both convergent and discriminant validity among Iranian young adults in the Iran-Israel War 2025. In establishing these properties, this study further aimed to identify how the DASS-21 measures psychological distress among populations engaged in conflict-affected circumstances in Iran and how it can be beneficial in providing essential clinical assessment and research capacity in this area of need. More specifically, the study aimed to complete an appropriate and rigorous cross-cultural translation of the DASS-21 into the Persian language using forward-backward procedure and then examine the adequacy of its psychometric properties of the DASS-21.

Purpose of the Study

The core purpose of the study was to assess the levels of psychological distress among Iranian young adults during the Iran Israel War 2025 and to translate the DASS-21 and validate it in this population. Validating the DASS-21 in Persian language and examining symptoms of depression, anxiety, and stress during the course of Iran Israel conflict provided evidence for continued use of the instrument in responding to and documenting the mental health vulnerabilities of the Iranian young adult population at the height of challenges in their context. Due to the potentially detrimental effects of war and conflict, especially as young adults may be more directly or indirectly involved with the war, reliable and valid measures such as DASS-21 are necessary for assessing and capturing mental health vulnerabilities in these culturally specific contexts. Moreover, the study focused on identifying how young adults cope with the stresses associated with war and whether or how that influences psychological distress was also explored in the study.

Overall, this study provides support for the use of the DASS-21-Persian version as a valid and reliable identification of psychological distress in clinical and war-based environments, providing information and resources to clinicians, researchers, and policy makers, to develop and provide targeted interventions and services addressing the mental health needs of those affected by the ongoing war.

Method

Settings and Participants

A cross sectional research design was used through sampling of 350 young adults (200 males and 150 females) from Iran in the age range 18 to 26 years of age ($M=23.17$, $SD=6.41$). Data collection was done through google forms that were shared with Iranian young adults via modified chain referral/snowball sampling technique. The time frame during the sampling was done from 13th of June 2025 till 24th June, 2025, the date on which the war was officially concluded. Furthermore, the sample size for the study was selected in accordance with the findings of similar psychometric validation studies done in varying research contexts (Roberts et al., 2019).

A sample size of 350 participants is sufficient for validating psychiatric scales, as noted by Anthoine et al. (2014), particularly providing we consider the number of latent variables as well as the expected effect sizes we wished to examine in this study. Generally, the greater the sample size for confirmatory factor analysis (CFA), the better; however, we also acknowledge that there are limits to studying in conflict-affected settings. We tried to work around these limits through the employment of robust statistical techniques including bootstrapping using which contributed towards making our results more consistent and interpretable. Bootstrapping does not only improve standard errors and confidence intervals, but it also adds flexibility to the analysis without over-generalizing (Jiang et al., 2024). In addition to previous justification, Bujang et al. (2024) noted that a sample size of 5 to 10 subjects per item is traditionally viewed as large enough for exploratory factor analysis (EFA). Since DASS-21 has 21 items, this approach suggested that a sample ranging from approximately 100 to 200 subjects would be reasonable for establishing the translation and validation of the scale. In addition, Hair et al.

(2019) and Kline (2023) also note that, in validation studies with CFA, 200 subjects is often viewed as the practical lower bound. Therefore, the sample size of 350 Iranian young adults was justified.

Instruments

In this translation and validation study, we employed the Depression Anxiety Stress Scale-21 items (DASS-21) to measure psychological distress in young Iranian adults during the Iran Israel War. The DASS-21 is a self-report instrument created by Lovibond and Lovibond (1995) that has three measures for psychological distress: Depression, Anxiety, and Stress. It consists of 21 items, with seven items for each subscale. For each item, respondents indicated the degree to which they experienced the symptom in the previous week, using a 4-point Likert-type scale: 0 ("Did not apply to me at all"), 1 ("Applied to me to some degree, or some of the time"), 2 ("Applied to me to a considerable degree, or a good part of the time"), or 3 ("Applied to me very much, or most of the time"). Each subscale was calculated by summing the total scores of the relevant items.

The Depression subscale has items about low mood, lack of interest and hopelessness. The Anxiety subscale has items concerning physiological arousal, panic, and symptoms with regard to fear (Lovibond & Lovibond, 1995). The Stress subscale contained items related to tension, irritability, and being unable to relax. The DASS-21 is used widely in both clinical and non-clinical settings mainly due to its brevity, strong psychometric soundness and multidimensionality.

Procedure

The research received ethical approval from the University Ethics Review Board in accordance with the Declaration of Helsinki. Keeping in view the sensitive nature of the Iran Israel conflict, the study carefully considered ethical obligations in consideration of the prewar and postwar realities of participants. Participants provided informed consent on an easy-to-read, clear consent form written in Persian, that described the goals of the research, the voluntary nature of participation, the ability to withdraw from the study at a later point in time, and

the maintenance of confidential and anonymous data (where possible).

This research involved a forward-backward translation of the DASS-21 (for assessment of depression, anxiety, and stress) into Farsi (Persian) using a structured forward-backward translation approach to ensure fidelity to the original text and cultural appropriateness. To ensure faithfulness and relevance of the instrument, we were required ensure that the tool was reliable and valid to provide confidence when using the DASS-21 to assess psychological distress in a context involving young adults living through the conflict in Iran.

In the second phase of this study, the newly translated Persian version of the DASS-21 was administered via online survey to a sample of Iranian young adults who were living in areas that were directly or indirectly affected by the 2025 Israel-Iran war, which included those living in the wider region of Iran accessible via internet access. Data collection took place online using a multiple-choice questionnaire on Google Forms as security, internet outages, and safety concerns made in-person data collection increasingly untenable. Each participant started the survey by completing a sociodemographic form related to their age, gender, education level, socioeconomic background, and whether they lived in urban or rural areas. This form was followed with a digital informed consent statement in Persian which participants had to agree to before continuing on to the DASS-21. In order to assess the face validity and to ensure that the translated items were appropriate and culturally relevant for Iranian people, a pilot test was conducted as a convenience sample with 30 Iranians. The participants completed the Persian version of the DASS-21 and provided their feedback on any items they deemed unclear or difficult to comprehend. The participants provided a positive feedback with no suggestions for amendments thus indicating the appropriateness of the scale for the current context.

Keeping in view the potential for emotional effects, the researchers apprised the participants with information regarding free online support services, including contact information for volunteer psychologists and counselors available for use by participants. The researchers completed data collection remotely and were available via email for

any participant questions or concerns. Most importantly, using an online survey provided an opportunity for participants to respond in their own time and comfort, which was respectful, appropriate, and ethical in light of ongoing conflict during wartime, and also given the sensitive nature of psychological self-report.

Data Analysis

In order to evaluate the factor structure of the Persian-translated DASS-21 among Iranian young adults living through the Iran Israel War, Confirmatory Factor Analysis (CFA) was conducted. Preliminary data screening took place using SPSS 24.0, and CFA was performed on AMOS 21. The intent was to test whether data from respondents who were surveyed within the actual war timeline fit the existing three-factor structure of the DASS-21 (Depression, Anxiety, and Stress).

It is pertinent to note that because DASS-21 items are rated on a 4-point Likert scale (which are treated as ordinal), the study used the Weighted Least Squares Mean and Variance adjusted (WLSMV) estimator because it considers the non-continuous nature of the response variables. Use of WLSMV is preferable for ordinal items, as it improves estimates of parameters and fit statistics versus regular maximum likelihood (ML) methods, while not requiring normal distribution assumptions (Liang & Yang, 2014; Park, 2023). WLSMV works well with smaller sample sizes and in contexts where researchers are working with non-normality as is usually seen in studies being conducted in conflict zones (Zhang, 2024). Model fit indices were evaluated using the indicates such as Comparative Fit Index (CFI), the Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMR), and the WLSMV chi-square result and associated p-value.

Assessment of Convergent and Discriminant Validity

In order to evaluate the convergent validity and discriminant validity of the translated Persian DASS-21, we computed two psychometric indices, Average Variance Extracted (AVE) and Maximum Shared Variance (MSV) (Rasoolimanesh, 2022). The AVE measures the average amount of item variance

captured by the underlying construct indicating convergent validity as this shows the latent construct explains at least 50% of the variance in the indicators to support the conclusion that the construct is being measured (Cheung et al., 2024). Conversely, the MSV is the maximum shared variance between any two constructs in the model. This represents discriminant validity because it establishes that every construct must share more variance with its own indicators than with each other with the general rule that AVE must be greater than MSV. In the current study, this essentially amounted to calculating the AVE for each of the subscales, Depression, Anxiety, Stress and determining that each was indeed greater than 0.50. In the next step, we calculated the MSV for each construct, ensuring that it also was less than the corresponding AVE on the basis we ensured that each subscale had a unique variance.

Reliability Analysis

We assessed the reliability of the DASS-21 translated in Persian by looking at internal and construct reliability. Internal reliability was assessed using Cronbach's alpha, a widely recognized way to assess the extent to which the scale items are measuring the same underlying constructs (Kline, 2023).

Analysis of CFA Structures

Confirmatory Factor Analysis (CFA) done through AMOS 21 confirmed the a priori three-factor model of the Persian-translated DASS-21. Since the scale values used in this study are ordinal (4-point Likert scale), the WLSMV estimator was used for robust

parameter estimates and due to its utility in improving standard errors on non-normal data. All of the fit statistics for the three-factor model fit the data well (e.g., CFI \geq 0.90, RMSEA \leq 0.06, SRMR \leq 0.05.) In comparison, a competing one-factor model assessing global psychological distress scores showed a poor overall fit compared to the competing three-factor model. Chi-square difference tests for nested models indicated that the three-factor model structure fits statistically better in comparison to the one factor model thus providing the expected differences for Depression, Anxiety, and Stress subscales.

Results

In accordance with the findings, the mean scores on the depression subscale was $M=8.57$, $SD=3.44$, for the anxiety subscale ($M=10.19$, $SD=2.32$) and for the stress subscale it was $M=10.12$, $SD=3.43$. The Kolmogorov-Smirnov test was conducted to assess the distribution of scores across the three subscales and revealed no significant deviation from normality. Skewness and kurtosis values were found to lie within the acceptable range, with skewness < 1 and kurtosis < 1 , aligning with the guidelines proposed by Demir et al. (2022). Furthermore, data screening procedures were undertaken to examine the presence of missing responses and identify any univariate outliers. The dataset was found to be complete, with no missing values or significant outliers. These characteristics supported the adequacy of the data for conducting confirmatory factor analysis and further psychometric evaluation of the translated DASS-21.

Table 1

Psychometric Properties of the Translated DASS-21

Scale	M	SD	Range	Cronbach's α
Depression Subscale	8.57	3.44	5-19	.88
Anxiety Subscale	10.12	3.43	7-18	.85
Stress Subscale	10.19	2.32	8-20	.90
Global Distress	28.88	9.19	12-60	.91

Note. N=350

In Table 1, mean, standard deviation, score range, and Cronbach's alpha coefficient were computed. All subscales of the DASS-21 had acceptable levels of reliability as depicted above.

Analysis of the One and Three Factor Structures of DASS-21

Confirmatory factor analysis was first performed to test the One factor model in accordance. While the DASS-21 was originally designed to measure yjree

interrelated, but distinct dimensions of psychological distress (Depression, Anxiety, and Stress). However, increasing empirical evidence indicates that it is conceivable to have a unidimensional (one-factor) model reflecting a global or general psychological distress (Zanon et al., 2021; Lovibond & Lovibond,

1995). In view of these findings, the one factor model was first tested for the purpose of theoretical coherence and to assess whether the one factor model offers better structural validity in the present cross-cultural war related context of Iran.

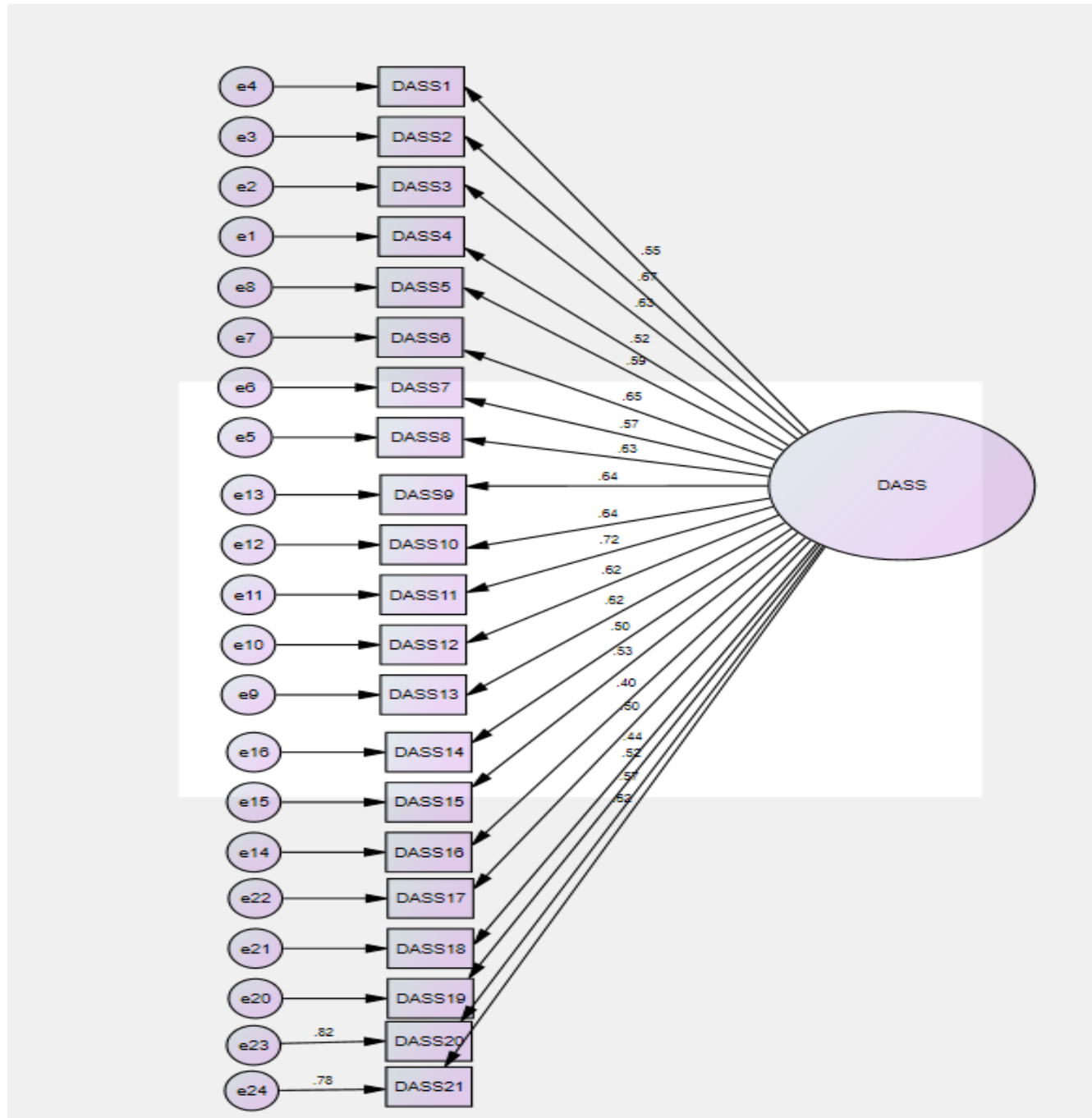


Figure 1
Factor Structure of the One Factor Iranian DASS-21

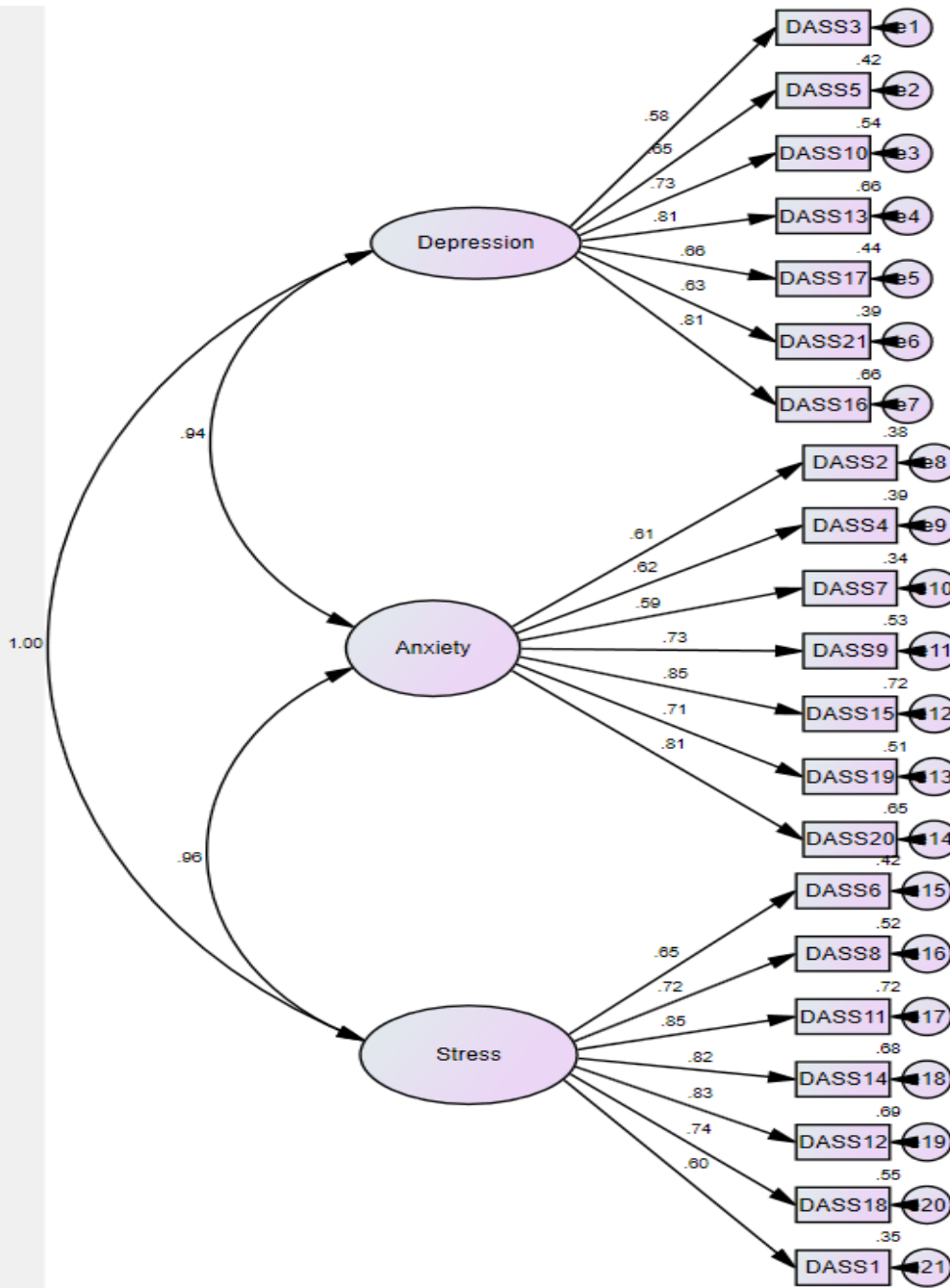


Figure 2
Factor structure of the three factor model of the Iranian DASS-21

Table 2
Discriminant validity comparing AVE and MSV

Scale	AVE	MSV	Depression	Anxiety	Stress
1. Depression	.73	.32	.82		
2. Anxiety	.74	.33	.66	.72	
3. Stress	.81	.37	.64	.62	.79

Note. N=350

Table 2 provides the results of the convergent and discriminant validity analyses for the three DASS-21 subscales. The Average Variance Extracted (AVE) values were 0.73 for Depression, 0.74 for Anxiety, and 0.81 for Stress all indicating strong convergent validity as each value exceeds the accepted benchmark of 0.50. The Maximum Shared Variance (MSV) values for Depression (0.32), Anxiety (0.33),

and Stress (0.37) indicated adequate discriminant validities as they are less than the AVE values. Furthermore, the criteria for convergent validities was met for each subscale i.e. Composite Reliability (CR) was > 0.70, CR>AVE and AVE>0.50. Collectively, the evidence provides strong support for the convergent and discriminant validity of the DASS-21 subscales.

Table 3

Model fit indices of the Iranian DASS-21

Model	χ^2	df	TLI	CFI	RMSEA
One Factor Model	1437.27	173	.92	.88	.08
Three Factor Model (uncorrelated)	455.72**	176	.95	.93	.05
Three Factor Model (correlated)	12214.14	175	.78	.83	.12
Hierarchical Model	13144.34	185	.73	.78	.18

Note. N = 350

Table 3 reports the model fit indices for four alternative factor structures of the DASS-21. The Three Factor Model with uncorrelated factors had the best overall fit with a CFI .93, TLI .95, and RMSEA .05 all indicating good model fit. The One Factor Model had a poor fit with a higher chi-square ($\chi^2= 1437.27$, $df= 173$), lower CFI (.88) and TLI (.92) as well as increased RMSEA (.08) suggesting that a single general distress factor could oversimplify the structure of the scale. The Three-Factor Model with correlated factors was also not supported as seen in

the very high chi-square ($\chi^2= 12214.14$, $df= 175$), low CFI (.83) and TLI (.78), and unacceptably high RMSEA (.12). The Hierarchical Model was also poorly fitting with the highest chi-square ($\chi^2= 13144.34$, $df= 185$), lowest CFI (.78) and TLI (.73), and a very high RMSEA (.18) which are all outside of acceptable thresholds. Overall, these results provide support for the Three-Factor Model with uncorrelated factors offering the best fit and most theoretically appropriate structure for the DASS-21.

Table 4

Factor Loadings, Item-total correlation of the Iranian DASS-21

DASS-21	DASS-21: Factor Loadings			R
	Depression	Anxiety	Stress	
Item 3	.97			.85
Item 5	.83			.73
Item 10	.57			.48
Item 13	.65			.66
Item 16	.62			.82
Item 17	.71			.78
Item 21	.68			.69
Item 2		.78		.71
Item 4		.74		.75
Item 7		.72		.63
Item 9		.82		.84
Item 15		.67		.71

Item 19	.63		.83
Item 20	.69		.82
Item 1		.55	.83
Item 6		.71	.82
Item 8		.73	.79
Item 11		.81	.81
Item 12		.78	.83
Item 14		.69	.78
Item 18		.85	.82

Note. N=350

It was found all factor loadings are meeting the standard criteria of CFA i.e. factor loading > .40. Furthermore, item-total correlations of each item are also competed, and they are up to the cut-off standard i.e. .30, and above (Lorenzo-Sava & Ferrando., 2021).

Table 5
Gender Differences on the Subscales of DASS-21

Variables	Male (n=145)		Female (n=105)		95% CI t(248)	p
	M	SD	M	SD		
Depression	8.42	3.38	8.69	3.49	0.61	.081
Anxiety	10.05	3.36	10.19	3.50	0.29	.093
Stress	10.11	2.28	10.26	2.35	0.50	.088

Note. CI=confidence interval, LL=lower limit, UL=upper limit.

The aforementioned results showed that males and females did not differ significantly in terms of their scores on the subscales of DASS-21.

Discussion

The current study aimed to translate and validate the DASS-21 among young adults in Iran in the context of the Iran-Israel War (2025). It was further aimed to test the fit of the established three-factor structure of the DASS-21 and to examine its convergent validity and discriminant validity in this "war" context. The results provided a wide range of insights into the feasibility of the three factor structure in comparison to the one factor structure in assessing mental health issues in Iranian young adults in wartime contexts.

Reliabilities and Three Factor Model Fits

The subscales of DASS-21 showed excellent reliabilities as shown in Table 1. Confirmatory factor analysis (CFA) demonstrated a good fit for the three factor uncorrelated structure in comparison to the one factor and hierarchical models. For the three factor uncorrelated model, the resulting indices well

within the thresholds established previously (Hu & Bentler, 1999; Kazmi et al., 2024; McNeish & Wolf, 2023), specifically demonstrating that the DASS-21 measures three distinct subdimensions thus reinforces the DASS-21's validity in the context of trauma-related emotional conditions in conflict-affected populations. The results of this study also corroborate previous research that provides some evidence for the cross-cultural robustness of the DASS-21 structure in populations affected by war. The findings are consistent with the assertions of Abuejheisheh et al. (2024) and Khan et al. (2021) who studied the suitability of DASS-21 in young adults in the ongoing Palestinian war. Moreover, Chudzicka-Czupala et al. (2023) found the three-factor structure to be appropriate to examine mental health difficulties in the general population in Ukraine during the ongoing Russo-Ukrainian War. The results of aforementioned studies which were similar to results of the current with Iranian young adults showed that despite the widespread instability and trauma, the DASS-21 was able to differentiate between depression, anxiety, and stress symptoms.

The degree of convergence across the war-affected nations is suggestive of the DASS-21's sensitivity and adaptability towards assessing mental health issues with excellent psychometric integrity during times of war (Ali et al., 2022). Moreover, the similar findings in Iranian, Palestinian, and Ukrainian contexts suggest that during prolonged, shared trauma, people from different cultures may show similar patterns of psychological distress, making standardized tools like the DASS-21 both practical and reliable for use across war-affected countries and for health related emergencies as identified by (Kazmi et al., 2022).

Analysis of Factor Loadings and Item Validity

In the present study, all standardized factor loadings were above the the cutoff of .40 thus indicating that every item considered in the current study psychometrically contributed to its latent construct (Zanon et al., 2021). This also shows that the items aligned well with the latent factors of depression, anxiety, and stress; meaning that the constructs of the DASS-21 were captured correctly by the translated DASS-21 items. Additionally, all item-total correlations were above the suggested threshold of .30 (Makara-Studzińska et al., 2022) showing that that the individual item scores correlated with the total scores of each subscale.

Overall, these psychometric indicators confirmed the relevance and suitability of the translated DASS-21 items within related contexts. These findings also suggest that the translated items meet the requirement of representing the specific emotional and psychological states of depression, anxiety, and stress, despite the overarching and obviously complex stressors imposed on Iranian young adults during the Iran Israel conflict. Furthermore, these findings imply that the instrument maintains its theoretical integrity, accuracy and practical relevance in capturing psychological distress in populations exposed to wartime trauma.

Analysis of Convergent and Discriminant Validities

The current study also showed excellent convergent validity (see table no. 2) for all three DASS-21 subscales, with the Average Variance Extracted (AVE) being .69 for Depression, .71 for Anxiety, and .80 for Stress, all above the minimum .50 guideline for construct validity (Fornell & Larcker, 1981). All

Composite Reliability (CR) values were above .70 and exceeded their AVE values, providing added support for internal consistency and reliability for each subscale. All psychometric properties yielded evidence for the reliability and validity of the translated version of DASS-21 as a collective representation of variance in three latent constructs. Moreover, the results provided considerable evidence for discriminant validity as shown in Table No. 2. For each subscale, the square root of the AVE was greater than registration inter-construct correlations, and Maximum Shared Variance (MSV) was less than the AVE all of this evidence supports that the subscales for depression, anxiety, and stress indicated empirical distinction and uniqueness are an important consideration with psychological assessment in the context of war trauma. These findings thus highlight the need for accurate measurement of mental health disruptions in the face of complex or overlapping symptoms not uncommon in populations exposed to sudden or longer term periods of conflict (Krupelnytska & Morozova-Larina 2025). Furthermore, studies from Soegaard et al. (2021) and Taha and Sijbrandij (2021) described use of psychometrically valid measures with specific "clusters" of symptoms, which highlight separate symptoms during shared traumatic experiences of war thus providing support for the convergent and discriminant validity for our translated DASS-21.

Limitations and Suggestions

There are a number of limitations associated with the study. One limitation is that the data was collected from 350 Iranian young adults during the ongoing Iran-Israel war. Although this provides valuable data about trauma symptoms within high-stress contexts, this context may have minimized the generalizability of the findings to other residents of Iran. The specific psychological and environmental stressors of this sample may not necessarily reflect the way early exposure to trauma and subsequent psychological consequences manifest in other populations and contexts. Thus, future studies should investigate the validity and reliability of the Persian DASS-21 on more clinically heterogeneous populations such as refugees, internally displaced populations, and community samples more broadly

outside active conflict zones. Second, the sample had an unequal gender distribution with 145 males and 105 females, which may limit the power to detect subtle gender differences in symptom presentation or scale performance. More balanced gender representation in future studies would strengthen conclusions about measurement invariance and potential gender-specific patterns of psychological distress.

Furthermore, the cross-sectional design of the study also restricts the ability to infer the DASS-21's sensitivity to symptom change over time. Longitudinal studies may be done to explore the scale's ability to capture variations in depression, anxiety, and stress, particularly in relation to treatment, or changing psychosocial situations. This may help to strengthen the DASS-21's position as a reliable instrument for clinical and humanitarian assessment of treatment outcomes and recovery. This would also facilitate the wider use of the DASS-21 for mental health assessment and screening in Iran, and other similar cultural contexts involving conflict and trauma.

Implications

The present study highlights several critical implications within the domains of the ongoing Iran-Israel conflict. First, the psychometric validation of the Persian version of DASS-21 for young people who experienced wartime stress confirms its possible use in measuring depression, anxiety, and stress symptoms in high-risk and conflict-affected populations. This culturally appropriate and psychometrically sound scale may be used by mental health practitioners, humanitarian agencies, and policy-makers for assessing and understanding the psychological distress following the Iran Israel war. Moreover, the translated version of DASS-21 may be beneficial in assessing ongoing experiences of war-related stressors that may continue to impact the Iranian population during coming months.

In addition, the findings demonstrate the significance of incorporating psychological screening during war related emergencies. The symptoms measured by DASS-21, especially depression, anxiety, and stress, can substantially impair daily functioning of individuals and thus contribute to worsening the humanitarian crisis seen in war related contexts.

Thus, it is important to identify individuals who may be at a higher risk of experiencing war related distress and trauma.

At a broader level, this research adds to the developing global debate concerning the development of tools for measuring the various facets of mental health during wartime. The adequate cultural adaptation and validation of the DASS-21 in Persian illustrates its cross-cultural applicability and grounds its use with other trauma-affected Persian speaking populations. Therefore, the findings of the present study may contribute to the development of more standardized assessment instruments through collaboration among researchers.

Conclusion

In view of the above, the current study validated the Persian version of the DASS-21 among Iranian young adults during the ongoing Iran-Israel conflict, providing strong evidence for its three-factor structure, excellent model fit indices, and high levels of convergent and discriminant validity. All standardized factor loadings exceeded .40 and item-total correlations surpassed .30, confirming the translated items' psychometric adequacy even in wartime conditions. The absence of significant gender differences suggests a shared psychological impact of conflict across male and female participants. Additionally, DASS-21 showed robust psychometric performance in a wartime context which attests to its continued use as a valid screening and monitoring measure for the assessment of mental health in conflict-affected populations. With reliable identification of patterns of symptoms, the DASS-21 supports timely mental health screening and the allocation of limited therapeutic resources to populations exposed to war.

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