

RESEARCH ARTICLE

Assessing meaning violations in Syrian refugees: A mixed-methods cross-cultural adaptation of the Global Meaning Violations Scale–ArabV

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Abstract

Refugees are disproportionately affected by extreme traumatic events that can violate core beliefs and life goals (i.e., global meaning) and cause significant distress. This mixed-methods study used an exploratory sequential design to assess meaning violations in a sample of Syrian refugees living in Portugal. For this purpose, we cross-culturally adapted the Global Meaning Violations Scale (GMVS) for use with Arabic-speaking refugees. In total, 43 war-affected Syrian adults participated in the two-phase study. Participants completed measures of trauma and narrated violations as they filled out the newly adapted GMVS–ArabV. GMVS–ArabV validity evidence based on response processes was investigated through Phase 1 focus groups (FGs; $n = 2$), whereas data from Phase 2 cognitive interviews ($n = 38$) were used to preliminarily explore the measure's internal structure through descriptive statistics as well as culture- and trauma-informed content evidence through thematic analysis. The results suggested highest goal ($M = 3.51$, $SD = 1.46$) and lowest belief ($M = 2.38$, $SD = 1.59$) violations of educational goals and religious beliefs, respectively. Themes related to stressors, item formulation, response scale, and the global meaning construct suggested that (a) beliefs and goals can be differentially violated by different stressors; (b) much like war trauma, including torture, daily stressors can additionally shatter pretrauma global meaning; and (c) refugees reappraise meaning and suffer violations anew throughout their migration journeys. The GMVS–ArabV offers a promising tool for exploring shattered cognitions in refugees and informs evidence-based approaches to trauma recovery and psychological adjustment in postmigration settings (the Arabic abstract and keywords are available in the [Supplementary Materials](#)).

As survivors of forced migration processes, refugees are disproportionately affected by cumulative potentially traumatic events (PTEs) that occur before, during, and following their flight to safety (Porter & Haslam, 2005). Near-death experiences, armed conflict, torture, and repeat losses can violate refugees' assumptions about themselves, the world, and their place in the world (ter Heide, 2017) and cause significant and persistent distress (Bogic et al., 2015). Yet, despite the extreme and cumulative nature of trauma in this population, studies have shown that, much like Western survivors of single-incident PTEs, refugees are also able to make meaning of their past and perceive posttraumatic growth (Chan et al., 2016). However, the mechanisms through which these survivors rebuild shattered cognitive structures are largely understudied, which is problematic given the centrality of meaning-making for posttraumatic recovery (Lim et al., 2015; Park et al., 2016).

When faced with events that are perceived as random, senseless, and terrifying, individuals often respond by trying to assign meaning to those experiences, thereby restoring a sense that the world is safe and just and their lives are purposeful (Brown, 2008; Park et al., 2016). Park's (2010) integrated meaning-making model outlines the process of trauma recovery based on the assumption that perceived discrepancies between the appraised meaning of a PTE (i.e., situational meaning) and one's core beliefs and life goals (i.e., global meaning) cause significant distress and require meaning-making efforts to reduce such discrepancies. Psychological adjustment can, thus, be achieved either by altering the situational appraisal or restoring shattered beliefs and goals.

The empirical work on meaning and meaning-making has long lagged behind the richness of theoretical models, namely due to the challenges of operationalizing such complex and inherently personal and subjective experiences (Park et al., 2017). Although several instruments indirectly address aspects of meaning violations, there is a dearth of psychometrically sound measures for specifically assessing the degree to which survivors' core cognitive structures were either shattered or able to integrate extreme stressors. To understand the impact of trauma exposure on specific cognitions and advance the evidence base on the role shattered beliefs and goals play in posttraumatic distress and psychological adjustment, Park and colleagues (2016) developed the Global Meaning Violations Scale (GMVS). This 13-item scale asks respondents to reflect on how they felt prior to and after an index stressful experience and subsequently report how much that event may have violated their core beliefs and ability to achieve their life goals. Although the GMVS was validated in a sample of American undergraduate students who overwhelmingly reported nonextreme, mostly academic-related stressors, the measure's authors

suggest that it could offer a brief, easy-to-use, easily adaptable, and conceptually sound instrument to advance posttraumatic psychological adjustment research and practice.

War and generalized conflict constitute some of the most severe assaults on meaning and one's sense of continuity and predictability, which can lead survivors to fundamentally revise their previous worldviews (Hussain & Bushan, 2011). Since 2011, the war in Syria has caused the displacement of 13,500,000 civilians both within and outside its borders (United Nations High Commissioner for Refugees, 2021). The associated dynamics of conflict and protracted displacement have negatively and severely impacted the mental health of Syrian refugees, with studies indicating a prevalence of posttraumatic stress disorder as high as 43% in this population along with a high prevalence of both depression and anxiety (Ben Farhat et al., 2018; Cheung Chung et al., 2018). Studies with Syrian and other refugee populations have shown that the perceived shattering of pretrauma worldviews is a precursor to cognitive processing aimed at reappraising shattered cognitions (Chan et al., 2016; Kira et al., 2019; Zbidat et al., 2020) and is expected to occur at different points throughout displacement journeys (Matos et al., 2018). However, little is known about cognitive-specific violations in refugees and how these perceived violations impact posttraumatic psychological adjustment.

Researchers and clinicians working with forcibly displaced persons have long struggled to access reliable, valid, and culturally appropriate psychological instruments that accurately reflect the scope of refugees' experiences and symptom manifestation (Bogic et al., 2015). Issues of language, diversity of trauma, and cultural and linguist backgrounds, combined with the urgency to provide care and collect data that supports programmatic funding and interventions, often make it impractical for practitioners to use instruments that have been adapted for a specific refugee population (Makhoul et al., 2018). Further, like many other psychological constructs, the meaning-making theoretical framework is informed by Western cultural experiences and construed as an essentially individual process undergone by survivors of single-incident, individual-level PTEs; thus, its applicability to non-Western survivors of multiple, often concurrent, community-affecting PTEs needs to be tested. This is especially important when incorporating standardized self-report instruments into studies with populations for whom these instruments were not originally designed. Calls for methodological consistency and rigor, as well as for the incorporation of qualitative methodology in the cross-cultural adaptation of psychological instruments (De Silva et al., 2020), are rooted in concerns over measurement errors, wrong diagnoses, stigmatization, and pathologizing symptoms and behaviors that may

otherwise be normative and culturally appropriate (Arnetz et al., 2013; Fafous et al., 2017).

Given these concerns and the centrality of meaning violations for psychological adjustment, our primary objective was to conduct a mixed-methods, cross-sectional study with an exploratory sequential design (Fetters et al., 2013) to assess meaning discrepancies in war-affected Syrians. To that end, our secondary objective was to cross-culturally adapt the GMVS for use with Arabic-speaking refugees. Quantitatively, we aimed to assess the validity evidence of the newly adapted GMVS-ArabV and measure violations of core beliefs and goals. Qualitatively, our objective was to explore culture-, language- and trauma-informed violations. Finally, we aimed to use this mixed-methods approach to capture participants' understanding of the GMVS-ArabV items and rating scale as well as their cognitive processing as they accessed perceived violations.

METHOD

Participants

The present study included two independent samples of war-affected Syrian adults (i.e., 18 years of age or older) living in urban communities across Portugal. Participants were required to be (a) an Arabic speaker and (b) living in Portugal for a minimum of 6 months; in Phase 2, participants were additionally required to be (c) able to hold a conversation in English or Portuguese. A total of 45 individuals agreed to participate in the two-phase study. Four women and one man participated in two separate Phase 1 focus groups (FGs) in Lisbon; each FG included two or three participants. The mean participant age was 37.4 years ($SD = 12.2$, range: 29–59 years), and participants had been resettled in Portugal from Egypt ($n = 2$) or relocated from Greece ($n = 3$) after a mean of 27.8 months ($SD = 18.8$) in transit. All participants had traveled with their children and identified as Sunni Muslims, and they reported their highest level of educational attainment as primary school ($n = 1$), middle school ($n = 1$), secondary school ($n = 2$), or an associate degree ($n = 1$). In Phase 2, a total of 21 men and 19 women participated in 40 cognitive interviews conducted across the country. Two men became distressed during their interviews and dropped out of the study. Thus, the final Phase 2 sample consisted of 38 individuals between the ages of 19 and 37 years ($M = 26.9$ years, $SD = 4.8$), 30 of whom (78.9%) were beneficiaries of higher education programs for refugees (i.e., student-refugees), such as the Global Platform for Syrian Students; the remaining eight individuals (21.0%) were relocated refugees ($n = 5$) and spontaneous asylum-seekers ($n = 3$). The highest level of formal educational

attainment was reported as a doctoral degree ($n = 2$), master's degree ($n = 10$), bachelor's degree ($n = 18$), associate's degree ($n = 2$), and high school diploma ($n = 6$). Fourteen participants (36.8%) had arrived in Portugal 11–13 months before the interview, and their overall length of stay in the country was approximately 3 years ($M = 40.2$ months, $SD = 27.3$). Family-inherited religious identity was largely Muslim ($n = 32$), including Sunni ($n = 16$), Alawite ($n = 7$), Ismaili ($n = 2$), and nonspecific ($n = 7$); four participants were Christian, and two were Druze. Four individuals identified as atheists, and one was a self-reported agnostic.

Procedure

This study was part of a larger research project examining posttraumatic meaning-making trajectories in Syrian refugees living in postmigration settings. To address our primary research objectives, we used a combination of qualitative and quantitative methods, which has been deemed appropriate to capture the diversity of mental health issues in refugees (Weine et al., 2014), to access complex cognitive processing without imposing Western norms (Bartholomew & Brown, 2012). The study had two phases of data collection. In Phase 1, FGs were held in October and December 2018 to test meaning constructs, examine the validity evidence of the GMVS-ArabV based on response processes, and capture a range of participant experiences. In Phase 2, cognitive interviews were held across the country between January and May 2019 to preliminarily assess evidence based on internal structure and content, and explore detailed individual accounts of global meaning violations.

A nonprobabilistic convenience sample was recruited among Syrian refugee and war-affected communities in Portugal. Outreach was done through interpreter-facilitated information sessions in resettlement organizations in Lisbon (Phase 1) and the distribution of Arabic-language study materials through social networks (Phases 1 and 2). Phase 1 recruitment yielded only two small, self-organized FGs, as prospective participants alluded to suspicion of the group setting, citing concerns such as the presence of an interpreter, who would likely be from the same community, and community research fatigue as reasons for not enrolling. Participants were informed of the study purpose and the voluntary nature of their partaking, signed consent forms, and were guaranteed anonymity and confidentiality of their information. Due to the sensitive and potentially retraumatizing content of the material discussed, participants were briefed on normal reactions to the retelling of their stories (ter Heide et al., 2016) and, if needed, offered the possibility of referral

for pro bono psychosocial support. The lead researcher, who is Portuguese-American and has extensive experience in screening for trauma and torture in refugees, conducted all Phase 1 FGs and Phase 2 cognitive interviews, and the study was approved by ISPA—Instituto Universitário Ethics Committee (Ref. D/004/09/2018).

FGs were conducted in the offices of community organizations in Lisbon and assisted by Arabic language interpreters, who were briefed on content, role, and expectations. Participants were given paper versions of the questionnaires to fill out individually. This was followed by a group discussion to investigate culturally informed differences in the constructs of “global meaning” and “meaning violation” as well as participants’ reactions to the questionnaire, namely how they felt while completing it, the appropriateness of the language used, item formulation, scale administration, and item ratings. The group discussions, which each lasted 90-min, were audio-recorded.

In Phase 2, 38 individual interviews were held in the districts of Braga and Oporto ($n = 14$) in the north; Évora ($n = 1$) in the south; and Aveiro, Coimbra, and Lisbon ($n = 17$) in central Portugal. Participants and researchers met in quiet spaces (e.g., university offices), and interviews lasted an average of 90 min each. Due to concerns related to confidentiality and anonymity expressed during Phase 1 recruitment, cognitive interviews were conducted without the presence of an interpreter, in English or Portuguese, per participant preference. Participants were given the opportunity to narrate belief and goal violations (i.e., qualitative assessment) during this phase. All study materials were available in Arabic as well as English and Portuguese to ensure language consistency, and questionnaires were administered as structured interviews. The administration and subsequent discussion of all GMVS-ArabV interviews were audio-recorded.

Measures

Sociodemographic characteristics

All participants completed a questionnaire in Arabic constructed for the purposes of the study to collect sociodemographic information, including gender, formal education, employment or legal status, and sections on flight journey and life in resettlement.

Trauma exposure

The Harvard Trauma Questionnaire (HTQ; Shoeb et al., 2007) is the most consistently used assessment of refugee

trauma and has been validated for use across different refugee populations (Sigvardsdotter et al., 2016). We used Parts 1 and 5 to determine exposure to traumatic events (45 items) and torture history (34 items), respectively, through “yes” or “no” responses. Examples of traumatic events include “witnessing mass execution of civilians” (Item 14) or “being forced to inform on someone placing them at risk of injury or death” (Item 27), and torture was defined as, “while in captivity, you received deliberate physical or systematic infliction of physical and/or mental suffering.” The HTQ provided a baseline for participants to reflect on sources of meaning violation.

Meaning violations

The original GMVS (Park et al., 2016) is used to assess violations related to respondents’ “most stressful experience” across three dimensional subscales: Belief Violation (e.g., “violation of your sense that God is in control”), Intrinsic Goal Violation (e.g., “interference with your ability to accomplish self-acceptance”), and Extrinsic Goal Violation (e.g., “interference with your ability to accomplish educational achievement”). Items are rated on a 5-point ordinal scale ranging from 1 (*not at all*) to 5 (*very much*). Through confirmatory factor analysis, Park and colleagues (2016) found the scale to have an acceptable fit, and Cronbach’s alpha values were determined acceptable for each subscale: Belief Violation, Cronbach’s $\alpha = .72$; Intrinsic Goal Violation, Cronbach’s $\alpha = .66$; Extrinsic Goal Violation, Cronbach’s $\alpha = .61$.

To cross-culturally adapt the GMVS for use with Arabic-speaking refugees, we conducted a rigorous scale translation and adaptation process following International Testing Commission (ITC) guidelines (2018). A multidisciplinary committee of seven experts proficient in Arabic, Arab and Syrian cultures, the content and construct under study, and psychometric properties assessed construct equivalence in the target population, and we used a combination of translation designs to maximize the suitability of the adapted instrument for the target population. Overall, the committee found that (a) the Arabic version of the GMVS (i.e., GMVS-ArabV) was appropriate for use with the population, contained simple language addressing feelings rather than potentially stigmatizing mental health issues, and did not include any “absurd” or meaningless items; (b) the introductory question should be modified to encompass the complexity of refugee trauma by setting the stem of items to refer to “the events that led you to leave your country” versus the original wording, “your most stressful experience”; and (c) there was a need to monitor for potential response bias associated with using an ordinal scale with Arab populations. Detailed

committee findings are described elsewhere (Matos et al., 2020). Following initial adaptation, the GMVS-ArabV (see [Supplementary Materials](#)) was deemed ready to be tested for content and internal structure.

Data analysis

Quantitative data

We used descriptive statistics to summarize data on the demographic and trauma exposure characteristics of the full sample. Analyses of the statistical and psychometric properties of the GMVS-ArabV were performed using Phase 2 ($n = 38$) data. Descriptive statistics were calculated for individual items and subscales. Because the sample was small and did not meet the requirements to test factor structure, Pearson's correlation coefficients (r) were calculated between items as well as between the original GMVS dimensions. Item sensitivity was explored through skewness and kurtosis, with absolute skewness values greater than 3 and absolute kurtosis values greater than 7 indicating a severe violation of the assumption of normality (Marôco, 2021). No missing data were imputed. Quantitative data analysis was conducted using R (R Core Team, 2021), and an alpha level of .05 was considered statistically significant. The descriptive statistics were obtained using the *skimr* package (McNamara et al., 2021).

Qualitative data

Phase 1 and Phase 2 audio recordings were transcribed, and participants' names were removed and coded. The data were managed and analyzed in two stages using MAXQDA software (VERBI Software, 2019). At the end of Phase 1, FG transcripts were reviewed for comments on instrument clarity and/or appropriateness and used to preliminarily assess face validity and inform minor adjustments to the GMVS-ArabV prior to subsequent testing in Phase 2 (ITC, 2018). At the end of Phase 2, FG and cognitive interview transcripts were combined and analyzed as one dataset using a bottom-up approach to thematic analysis (Braun & Clarke, 2006). The analysis focused on issues of language, item formats, the rating scale, and the appropriateness of the instrument to the cultural and traumatic experiences of participants. The first author conducted a first in-depth reading of all transcripts and created the initial coding, which was then reviewed and discussed with the third author. The first and third authors, who are trained in thematic analysis, subsequently coded the transcripts using the thematic map, and themes and codes were iteratively discussed until a final map was reached. The findings

from this thematic analysis subsequently informed GMVS-ArabV item responses and were merged narratively.

RESULTS

Quantitative results

PTE exposure

The 43 participants comprising the full sample endorsed a total of 552 potentially meaning-defying events ($M = 12.6$, $SD = 7.3$), as assessed using HTQ Part 1. The most common events included witnessing the "shelling, burning, or razing of residential areas or fields" and being "confined to home because of chaos and violence outside" ($n = 35$, 81.4%); the "murder or violent death of a friend" ($n = 30$, 69.8%); and "serious physical injury of family member or friend from combat situation or landmine" ($n = 28$, 65.1%). Six men also disclosed being tortured and reported an additional 76 torture events ($M = 12.7$, $SD = 8.4$) in HTQ Part 5, including forced positions ($n = 6$), blunt-force trauma ($n = 4$), electrocutions ($n = 2$), and sexual abuse or rape ($n = 5$).

GMVS-ArabV validity evidence based on internal structure

The full range of the 5-point ordinal scale was used for all 13 items, and all items presented absolute skewness values smaller than 1 and absolute kurtosis values smaller or equal to 1.5, thereby indicating no severe univariate normality violations. There were statistically significant correlations between the original scale's proposed goal dimensions (i.e., violations of intrinsic and extrinsic goals), $r = .443$, $p < .001$, but no correlations emerged between belief violations and intrinsic goal violations, $r = .276$, $p = .094$, or extrinsic goal violations, $r = .281$, $p = .087$. Mean item scores ranged from 2.13 ($SD = 1.40$) for Item 8 (i.e., physical health) to 3.51 ($SD = 1.48$) for Item 10 (i.e., educational achievement). Pearson's interitem correlations and item distributional properties are reported in detail in Tables 1 and 2.

Qualitative results

GMVS-ArabV validity evidence based on response processes

The concept of holding beliefs and goals that give people a sense of purpose (i.e., global meaning) and the ability

TABLE 1 Interitem Pearson correlations for the Global Meaning Violations Scale–ArabV

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Fair and just world	–	.30	.18	–.03	.02	–.11	–.04	–.17	.24	.21	–.07	–.03	.19
2. Other forces in control		–	.29	.22	.31	.13	.14	–.11	–.06	.35*	.06	–.02	.10
3. God in control			–	.16	.04	.14	.34*	–.10	.06	.37*	.21	.02	.02
4. Self in control				–	.33*	.28	.39*	.17	.31	.05	.32	.06	.12
5. World good & safe					–	.23	.17	–.01	.14	.14	.17	–.01	.08
6. Social support						–	.67**	.19	.39*	.23	.41**	.15	.20
7. Self-acceptance							–	.34*	.34*	.27	.54**	.24	.19
8. Physical health								–	.28	.04	.13	.03	–.20
9. Inner peace									–	.11	.16	.10	.11
10. Education										–	.42**	.30	.28
11. Career											–	.30	.06
12. Creativity												–	.32*
13. Intimacy													–

Note: $n = 38$.

* $p < .05$; ** $p < .01$.

of war-related PTEs to disrupt those beliefs (i.e., meaning violation) fit FG participants' understanding of the world and their lives. Regarding the GMVS-ArabV, participants found (a) the language simple and easy to understand; (b) the introductory question, aggregating PTEs instead of requiring respondents to elect their most distressing event, to be attuned to the complexity of their experiences; and (c) the need to characterize points 2–4 of the 5-point ordinal scale, rather than just points 1 and 5, per the English language original. The latter subsequently led to the characterization of points 2–4 as “slightly [قليلًا]”, “moderately [متوسط]”, and “a lot [كثيرًا]”, respectively. With respect to GMVS-ArabV administration, all but one FG participant requested assistance from the interpreter or moderator for either item clarification (e.g., wanting to know who “other forces” were or which type of “social support and community” was being invoked) and/or showed a need to reflect aloud on their own processes while completing the scale. This evidenced that, although the language and item formulation were straightforward, the level of abstraction invoked proved complex for participants to engage with on their own. Thus the study's research committee decided to move forward with the adapted scale in Phase 2 and determined the need to have it be researcher- rather than self-administered. GMVS administration included guidelines to validate participants' own interpretation of certain aspects of meaning as well as to help ground those struggling with the level of abstraction invoked. The latter was often achieved by steering the participant back to baseline (e.g., “Did you feel that the world was fair before the war? Do you feel it is fair now? Did it change? How much did it change?”) or by ask-

ing them to think back on their own experience to avoid sharing general impressions. Table 3 includes a summary of the GMVS-ArabV cross-cultural adaptation and testing process.

Validity evidence based on content and suitability for the target population

The baseline for meaning violations was set by the GMVS-ArabV introductory question. As participants reflected aloud on their item responses, we identified eight themes pertaining to: potentially meaning-defying stressors (Theme 1: different stressors violate different meaning cognitions); scale items (Theme 2: requests for item clarification, Theme 3: “absurd” item); response scale (Theme 4: measure of strength instead of violation, Theme 5: unclear direction of change); and the operationalization of the global meaning violation construct (Theme 6: hierarchy of needs and meaning systems, Theme 7: difficult questions, Theme 8: evolving beliefs and goals). Themes are described in detail below.

Potentially meaning-defying stressors. “I feel that what happened in Syria changed the image of the world to me.” This statement by a 32-year-old female participant testified to the usefulness of anchoring a pre- and post-trauma framework on the war as the point of discontinuity in Syrians' lives. In addition to altering worldviews, the war also violated overall goals, articulated as “dreams” by a 36-year-old participant who explained that he had had dreams to “build [his] own house, get married, make a family, improve [his] position at work,” but when the

TABLE 2 Item distributional properties for the Global Meaning Violations Scale-ArabV

Item	n_{missing}	M	SD	Min.	P_{25}	Mdn	P_{75}	Max.	Histogram	SEM	CV	Mode	Skew	Kurtosis
Item 1	0	2.92	1.48	1	1.00	3.0	4.00	5		0.24	0.51	4	-0.18	-1.50
Item 2	0	3.47	1.54	1	2.25	4.0	5.00	5		0.25	0.44	5	-0.66	-1.10
Item 3	1	2.38	1.59	1	1.00	2.0	4.00	5		0.26	0.67	1	0.73	-1.13
Item 4	0	3.16	1.37	1	2.00	3.0	4.00	5		0.22	0.43	3	-0.03	-1.17
Item 5	0	3.08	1.22	1	2.00	3.0	4.00	5		0.20	0.40	3	-0.16	-0.70
Item 6	0	3.42	1.43	1	2.00	3.5	5.00	5		0.23	0.42	5	-0.29	-1.33
Item 7	0	3.16	1.48	1	2.00	3.0	4.75	5		0.24	0.47	5	-0.13	-1.38
Item 8	0	2.13	1.40	1	1.00	1.5	3.00	5		0.23	0.66	1	0.98	-0.42
Item 9	0	2.92	1.12	1	2.00	3.0	4.00	5		0.18	0.38	3	0.04	-0.67
Item 10	1	3.51	1.48	1	2.00	4.0	5.00	5		0.24	0.42	5	-0.62	-1.07
Item 11	0	3.24	1.48	1	2.00	3.0	5.00	5		0.24	0.46	5	-0.23	-1.29
Item 12	0	3.11	1.47	1	2.00	3.0	4.00	5		0.24	0.47	4	-0.20	-1.37
Item 13	0	2.92	1.51	1	1.25	3.0	4.00	5		0.25	0.52	1	0.04	-1.45

Note: n = 38. Min. = minimum; P_{25} = 25th percentile; P_{75} = 75th percentile; Max. = maximum; SEM = standard error of the mean; CV = coefficient of variation.

TABLE 3 Global Meaning Violations Scale (GMVS)–ArabV cross-cultural adaptation following International Testing Commission 2018 guidelines

Procedure	Results
Adaptation	
Secure GMVS authors' permission	Authorization granted in November 2017
Identify and assemble a committee of experts	Seven-member committee based in Portugal, Jordan, Germany, and United States
Assess <i>meaning</i> construct in the target population	Existing construct in the Arabic language literature: <i>al-maa'na</i> (meaning)
Minimize cultural and linguistic differences irrelevant for questionnaire application	Study protocol stresses that participation in the study or content of responses has no impact on legal status, housing, or other living conditions
Consider linguistic, psychological, and cultural differences	Refugee trauma-informed reference to “events that led you to leave your country” as baseline stressor
Ensure appropriate translation designs and procedures	Combination of forward/backward and double translation/reconciliation
Validity evidence based on response processes–FGs^a	
Evidence of test instructions and item content with similar meaning	Qualitative findings: Language and item formulation straightforward and appropriate
Validity evidence based on internal structure–Cognitive interviews (n = 38)	
Evidence supporting norms and validity of the adapted version	Acceptable distribution of all items Strongest interitem correlations between Items 6 and 7; Items 6 and 11; Items 11 and 7; and Items 11 and 10 Statistically significant interdimensional correlations between violations of intrinsic and extrinsic goals Unable to test factor structure due to sample size
Reliability	Not assessed due to sample size
Appropriate design and data analysis procedures when linking score scales	Unable to equate scores across the two language versions due to sample size
Validity evidence based on test content – Total sample (n = 43)	
Suitability of item formats, rating scales, modes of administration, and other procedures	Qualitative findings: different stressors violate different aspects of meaning, items needing additional clarification and/or were “absurd”, ordinal scale used as measure of strength rather than violation, direction of change, hierarchy of needs and meaning systems, difficult questions, still-evolving beliefs and goals

Note: FGs = focus groups.

^aTwo FGs, one of which had two participants and one of which had three participants.

war started, he realized “none of this [he] could reach.” However, as participants went through each item on the scale, it was apparent that different stressors had the ability to violate different meaning cognitions (Theme 1), with some refugees being able to identify a specific event or type of event that had shattered specific cognitive structures. For example, one 19-year-old student-refugee shared how wartime daily stressors progressively disrupted her perception of being in control of her life, noting that, “in Syria, every hour something happened. No electricity, no water... everything was always changing. Now [in Portugal], I have more control.” Others, like a 23-year-old man, could identify the precise event that triggered questions about his beliefs in justice and God’s benevolence: “When

the Jordanian pilot was captured by ISIS and videos of him being burned alive were distributed, at that moment I began questioning if God was fair, if the world was fair.”

GMVS items. Despite the simplicity of the language and item formulation, participants often requested item clarification (Theme 2) stemming from two subthemes: (a) the timeline of disruption (e.g., “in my country or in Portugal?”), where some respondents were able to identify repeated violations and reappraisals at different points in their journeys, and (b) items being too abstract and open to interpretation, particularly for Item 2 regarding “other forces,” with participants inquiring if that meant “divine forces,” “forces of politics and finance,” “the regime,” or even their Portuguese host organization.

Occasionally, participants identified “absurd” items (Theme 3) within their belief system. In this respect, questions about religious beliefs (Item 3) were expectedly problematic for respondents who identified as atheist or agnostic, with one 24-year-old female student-refugee promptly stating, “No, God is not [in control].” When asked if she believed before the war that God was in control, she responded “No, absolutely not. Because He doesn’t exist! [laughter].” Another more extreme reaction came from two female FG participants, who felt unable to complete the Belief Violations subscale and discern separate beliefs due to the centrality of God to their global meaning system, with one woman declaring, “All the questions [Items 1–5] have the same answer. They are just asked differently.”

Response scale. The process of reflecting on changes to one’s global meaning required participants to assess their current beliefs and goals, which often suggested that the ordinal scale was readily used as a measure of strength instead of violation (Theme 4). Some participants made requests for clarification (e.g., “Does ‘1’ mean that the world is not fair?”), whereas others indicated a number on the scale as a measure of their current belief only to then be gently redirected by the interviewer. When asked about his religious beliefs being violated, one young man replied, “No, not at all. Put a 1.” When asked to clarify whether he was stating that this belief had not changed or if he meant that God was not in control, he replied, “No, [God] is not in control at all. Well, before I thought that [God] was in control, but now I don’t. So maybe I should put a 5.”

On occasion, the response scale felt insufficient to reflect the extent of participants’ experiences. In addition to measuring the violation, some participants wanted to define the direction of change (Theme 5), with one respondent stating, “It’s the opposite! I gain more [community and social support] skills!” and another, a graduate of a doctoral program, going as far as adding “+” and “-” to his answers to indicate a positive or negative change, noting, “Hmm...I feel that the world is less safe. Should I add a minus in this case?”

Global meaning violation. Three themes attested to the difficulty of operationalizing meaning-related constructs and provided insight into both the potential challenges of self-administration as well as respondents’ thought processes. Having fled a war and being in the process of adjusting to life in resettlement, respondents articulated a hierarchy of needs and meaning systems (Theme 6), which helped justify why some did not feel ready to reflect on the deeper changes that the war had inflicted on their cognitive structures. Faced with the questionnaire, a 32-year-old graduate student-refugee explained that his strategy to survive was to avoid “thinking about the things [he] could not control,” whereas another described the need to organize his life—and shattered beliefs—in “boxes,”

which was where he, a former practicing Catholic, also kept the belief in God until it could be reappraised:

Sometimes the boxes fall from the shelf on your head and suddenly you have to deal with it! I try to put [the box] back on the shelf for another time. Sometimes I feel like, “OK, now I can’t do anything. I have to rest, I have to relax until these thoughts go away. Then I can function.” I mean, it’s not healthy but what can I do?

Overall, GMVS-ArabV items were paradoxically simply worded and hard to evoke. The scale asked “difficult” questions (Theme 7) that elicited complex reflections that participants had often not yet entertained (e.g., “Hmm... is the world fair? I never thought about it”) or were not allowed to entertain (e.g., “It is not up for us to question [whether God is in control]”).

Finally, as survivors of refugee trauma, participants also perceived the evolving and unresolved nature of meaning discrepancies, which made it hard to quantify violations. Theme 8, which captured evolving beliefs and goals, included two subthemes: (a) unresolved discrepancies (e.g., “Do I feel that the world is still safe and fair? Yes, I do. Did it change? Slightly. Because sometimes it goes back and forth, but it still goes back to being good”) and (b) the perception that beliefs and goals evolve with time and context. For example, regarding Item 8 on goals related to self-acceptance, a 25-year-old, recently arrived student-refugee commented, “My ability to accept myself [It changed] very much. Extremely! It’s better now. It was really good before the war, and during the war it was really bad, but now I feel that I accept myself again.”

DISCUSSION

The present study employed an exploratory sequential mixed-methods design to assess postwar meaning violations in Arabic-speaking Syrian refugees using a cross-culturally adapted version of the GMVS (Park et al., 2016). Participants were Syrian adults living in urban communities across Portugal, for whom the war constituted a baseline for disruptions of previous assumptions of predictability, continuity, and controllability that informed their prewar global meaning structures. Participants additionally endorsed exposure to multiple extreme PTEs and stressors, including torture ($n = 6$ men), that violated specific cognitive structures. In our sample, which was largely composed of student-refugees, the results from descriptive analyses indicated highest perceived violations

of goals related to educational aspirations and to community and social support, and highest belief violations related to assumptions about controllability by other, outside forces. Qualitative results suggested that, although the GMVS-ArabV language and item formulation were straightforward and appropriate and helped facilitate access to perceived violations, the operationalization of such a complex and inherently subjective construct remains a significant challenge. Given the linguistic, cultural, and traumatic differences between the original and target populations, rather than aiming to produce an instrument equivalent to its original, with predictive validity, the GMVS-ArabV allowed us to preliminarily explore posttraumatic violations of specific cognitions and advance the evidence-based understanding of meaning violations through a brief, conceptually sound psychometric tool.

This study had two major strengths. The first pertains to its contribution to the literature on the cross-cultural adaptation of psychological instruments given our detailed report of the GMVS adaptation and testing processes according to the most recent international guidelines (ITC, 2018). Prior to adapting a Western-developed instrument for use with Middle Eastern populations, through a committee of Syrian mental health scholars and other experts, we assessed the applicability of the theoretical meaning-making model and its related constructs to the target population. The study used a sequential design, where Phase 1 FGs were aimed at preliminarily testing the GMVS-ArabV for the comprehensibility of test instructions, item content, and language, and informing data collection during Phase 2 individual interviews (Lambert & Loiselle, 2008). Despite the small number and size of the FGs, the Phase 1 results provided exploratory information on the scale application, and narratives on response processes were subsequently integrated into the overall dataset used to qualitatively explore the measure's content.

GMVS-ArabV validity evidence based on internal structure was assessed in Phase 2. The results are preliminary and should be interpreted with caution due to the size and specificities of the sample. The scale showed acceptable distributional properties with no extreme bias in participants' responses, which researchers should control for when using ordinal scales with Arab populations (Baron-Epel et al., 2010). The lack of bias may be explained by the sample's relative youth and high level of formal education (Baron-Epel et al., 2010) as well as the method of administration. In some cases, participants revisited initial extreme responses (e.g., "nothing is fair"), either spontaneously or following probing by the researcher to clarify whether the participant was quantifying the strength or violation of belief or goal, thus suggesting layered and evolving cognitive structures. Because most

respondents were student-refugees whose career and educational paths were interrupted or severely disrupted by the war, it was not surprising that strongest interitem correlations were found between violations of career aspirations and of goals related to self-acceptance, education, and social support, respectively, as well as between violations of goals related to self-acceptance and community and social support. The high association between the latter two items was expected given the importance of the collective to Syrian identity (Smeeke et al., 2017) and the negative impact of the war on community ties (Matos et al., 2021). The highest belief violations were found for Items 2 and 4, which assessed issues of control by "other forces" and perceived internal control (i.e., self in control). Given the uncertainty and losses associated with the refugee experience, this finding was not surprising and suggests that the cognitive structures related to life's predictability and controllability may require significant repairs to reduce distress. The fact that the belief that God is in control (Item 3) showed the lowest violations is consistent with the literature on religious meaning-making and the ability of religious beliefs to remain stable and, if sufficiently flexible, withstand extreme trauma (Park, 2005; Tuval-Mashiach & Dekel, 2014). Considering the centrality of religion to Syrian individual and community identity (Hassan et al., 2016), future studies should investigate the content of religious meaning structures and violations of experienced spirituality to better capture meaning-making processes in these communities. Due to the study's small sample size, we were not able to test the factor structure of the GMVS-ArabV, which future studies should explore with larger independent samples of the same population.

The second major strength of this study was its use of qualitative data to access processes of self-reflection triggered by the GMVS-ArabV. Taking a mixed-methods approach to cross-cultural adaptation is an often-overlooked strategy, but it represents an important methodology when working with severely traumatized and repeatedly disempowered populations (De Silva et al., 2020). We derived five key findings from the qualitative data. First, rather than a standalone self-administered instrument, our findings indicated that the GMVS-ArabV should be used as part of a set of tools available to researchers and clinicians to explore meaning violations through a structured interview. Participants often exhibited an inability to promptly access violations and instead rated present appraisals, which then required a guided, step-by-step exercise to reflect on prewar appraisals and, subsequently, assess the extent of change. A revised version of the scale may need to include a three-part question for each item to assess the strength of pre- and posttrauma meanings followed by the extent of the discrepancy to ensure that respondents rate the intended

construct. A second key finding pertains to the fact that different stressors can shatter different meaning structures, which may explain the overall low associations between individual items on the GMVS-ArabV. Previous evidence has suggested that meaning systems may be differentially impacted by the type of stressor experienced (Cheung Chung et al., 2018), and this idea should continue to be investigated, including through psychometrically sound instruments. Additionally, the need expressed by a small number of participants in our sample to clarify the direction (i.e., positive or negative) of changes in their own cognitions, (i.e., meanings made) suggests the need for better examination into how the process of reappraising these cognitions may promote or hinder psychological adjustment.

Third, much like extreme traumatic events, wartime and resettlement daily stressors also were shown to be capable of violating previously held beliefs and goals. This finding has two important implications for research and practice. Although postmigration stressors are almost exclusively considered sources of anxiety- and depression-related distress and premigration trauma is a source of PTSD (Miller & Rasmussen, 2010), the ability of the former to shatter cognitions and lead to trauma-like symptoms needs to be investigated. Secondly, predisplacement daily stressors have been insufficiently documented as potential sources of long-term distress in refugee populations (Miller & Rasmussen, 2017), with preference given to screening for and focusing on brutal predisplacement PTEs. Wartime stressors should also be integrated into clinical practice as potential sources of meaning violations, and clinicians should be prepared to accommodate these narratives and guide adaptive reappraisals.

Fourth, as survivors of the refugee experience are subjected to compounded PTEs throughout lengthy migration journeys, it is possible that a prewar/postwar framework for meaning violations, although conceptually appropriate, may be insufficient to capture the complexity of violations and reappraisal trajectories. The fact that some respondents were able to reflect on meaning reappraisal journeys since the onset of the war in Syria and others narrated still-evolving beliefs indicates that meaning-making is a process as much as an outcome (Steger & Park, 2012), and refugees make meaning throughout their journey to safety (Matos et al., 2018).

Our last key finding pertains to the survival aspect of the refugee experience. As individuals accustomed to prioritizing needs to survive (Silove, 2013), it was not surprising that some participants articulated layered sets of beliefs and goals. Although these individuals navigate stressors related to life in resettlement and concerns over the ongoing war and the associated suffering of family and community (Matos et al., 2022), they may not feel able or

ready to engage in trauma-focused treatment or in the type of cognitive processing required to reflect on meaning violations, instead focusing on other basic, more tangible needs. The distress that such an exercise may trigger requires researchers and clinicians to respect soft refusals, recognize the protective function of silence, and empower refugees to be in control of their own narratives (De Haene et al., 2010).

There are several challenges to conducting research with severely traumatized, hard-to-reach populations, such as refugees, that limit the interpretation of the present findings. The Syrian community in Portugal is small, recently arrived, and reported research fatigue, which hindered recruitment efforts. The present sample was small and largely composed of student-refugees. Although this is a limitation derived from nonrandom sampling, it provided important insight into the experiences of a segment of the refugee population that is largely understudied. Both trauma exposure and meaning violations were self-reported, which may lead to recall bias, and because the study was cross-sectional and did not assess violations over time, it is possible that accounts were influenced by recent events rather than representing an accurate depiction of participant experiences. Although all study instruments were available in participants' native Arabic, oral communication during cognitive interviews was in English or Portuguese, which may have impacted respondents' ability to adequately explain cognitive processes. However, the fact that no interpreter was present during individual interviews eased participants' concerns about remaining anonymous in the community and may have allowed them to share deeply personal accounts with the researcher that may not have been disclosed otherwise. In our relatively young sample, participants' prewar worldviews pertained to pre-2011 functioning, 8 years before the interview, as they entered their teenage years or early adulthood, which sometimes made it difficult to discern whether changes in core beliefs and goals were due to the war or part of normal development into adulthood.

This study provides evidence supporting the content validity of the GMVS-ArabV, with adjustments required to accommodate refugees' complex paths to trauma recovery, as well as the need for larger, longitudinal studies to adequately assess construct and predictive validity for distress and psychological adjustment. Although the GMVS-ArabV does not provide answers to all questions regarding the nature of meaning violations in survivors of refugee trauma, it does offer a culturally appropriate tool that could be useful for clinicians to gather information at intake; adapt interventions to specific client needs; assess treatment progress through repeat measurements of cognitive-specific discrepancies; and, eventually, guide meaning-making efforts that lead to adaptive integration of past

and present experiences. The fact that some participants were able to identify pre- and postdisplacement daily stressors as potential sources of meaning violations further advances the field's understanding of sources of psychological distress and should inform refugees' trauma recovery and healing in resettlement. Host countries should invest in promoting trauma-informed psychosocial interventions that are informed by the need to restore meaning systems, including finding new purpose(s) in life, as a condition for successful psychological adjustment and adaptive long-term integration.

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OPEN PRACTICES STATEMENT

Neither of the studies reported in this article was formally preregistered. Neither the data nor the materials have been made available on a permanent third-party archive; requests for the data or materials can be sent via email to the lead author at lmatos@ispa.pt.

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