RESEARCH PAPER

Evaluation of an Urdu version of the Impact of Event Scale – Revised

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In the aftermath of the major earthquake that hit Pakistan in 2005, there appeared to be a paucity of psychometric tools validated in Urdu. It was decided to translate the Impact of Event Scale – Revised (IES-R) so as to obtain an internationally validated and recognised psychometric tool for use in research into post-traumatic stress disorder. The resulting Urdu and English versions of the IES-R were compared for linguistic, conceptual and scale equivalence. The Urdu version of the IES-R (UIES-R) can be used for clinical, psychological trauma populations in Pakistan with evidence of good reliability and satisfactory validity. In trauma research in Pakistan the UIES-R will be an extremely useful psychometric tool.

On 8 October 2005 a devastating earthquake measuring 7.6 on the Richter scale struck northern Pakistan. In response to this natural disaster, in March 2007 a research project was launched at Ayub Medical College, Abbottabad, the city closest to the epicentre of the earthquake. In undertaking the research, it was important to utilise psychometric instruments that would enable an effective comparison to be made between psychological trauma populations in Pakistan and elsewhere, including higher-income countries.

The Impact of Event Scale – Revised (IES-R) is probably the most widely used self-report measure in the field of traumatic stress (Weiss & Marmar, 1997). The purpose of the research was to generate and to then validate an Urdu version of the IES-R (the UIES-R). Many of the scales used in cross-cultural research have been developed in high-income countries and later translated from English. Whether, and to what extent, the translated instruments perform the same function across cultures has often been debated (Cheung, 2004) but few quantitative studies have tackled the issue. Mumford *et al* (1991) advocated the use of a multi-stage method of evaluating translations, and they reported satisfactory results with an Urdu version of the Hospital Anxiety and Depression Scale. Riaz & Reza (1998) reported the development of an Urdu version of the General Health Questionnaire (GHQ-28) utilising a similar method.

Method

Translation

The IES-R scale was professionally translated from English into Urdu by an internationally recognised translation service. This became the first version of the UIES-R. The second stage was to embark upon an independent back-translation of the UIES-R, as recommended by the World Health Organization (Power *et al*, 1999). In light of this back-translation, slight changes were made, thus creating version 2 of the UIES-R. The third stage involved the back-translation of version 2. This became the final version of the UIES-R, used for the purpose of the evaluation study.

Evaluation

Following a similar method adopted by Mumford *et al* (1991), the equivalence of the Urdu and English versions of the IES-R was evaluated in terms of their linguistic, conceptual and scale equivalence. Linguistic equivalence, or the extent to which the translation is a literal one, was determined by administering both language versions of the questionnaire to a sample of bilingual people and calculating the mean difference scores (Urdu minus English) for each item; the expectation is that the mean score on each UIES-R item would not be statistically different to the corresponding English item score. Conceptual equivalence, or the extent to which the translation captures the meaning of the original, was determined by calculating correlation coefficients between each item and its corresponding subscale score, the expectation being that the items would correlate similarly for the Urdu and English versions. Scale equivalence, or the extent to which the Urdu and English versions of the IES-R identify the same individuals as high scorers, was determined by classifying each participant as having a high or a low score on the two versions of the questionnaire and calculating the concordance rate.

Reliability analyses were based on a comparison of the alpha coefficients for the original and translated versions of the IES-R.

Convergent validity was assessed by correlations between scores on each of the instrument's three subscales and the total score, for both the Urdu and English versions.

Study sample

Recruitment for the evaluation took place at the Medical School in Abbottabad, and involved 118 participants, who were all trainee doctors (an opportunity sample). Ethical approval was granted through Ayub Medical College, Abbottabad. Participation was entirely voluntary. No initial mental health screening took place for any of the participants. The only inclusion criterion was that participants were fluent in both Urdu and English.

The trainee doctors were given details of when and where data collection was scheduled to take place. After an initial explanation regarding the purpose and nature of the research, each participant was randomised in such a way that half the sample completed the Urdu version of the IES-R first, then the English version, while the other half completed the two versions in the reverse order.

Results

Linguistic equivalence

Table 1 shows the mean differences (Urdu minus English) for each of the 22 items of the IES-R, the subscale scores and total score. Paired-sample

Table 1

Mean differences (Urdu minus English) for each of the 22 items of the Impact of Event Scale – Revised, the subscale scores and total score

Item	Mean (s.d.) score in Urdu	Mean (s.d.) score in English	Mean (s.d.) of differences	P
Avoidance subscale				
5	1.98 (1.468)	1.88 (1.483)	0.10 (0.854)	0.253
7	1.28 (1.590)	1.26 (1.482)	0.02 (0.995)	0.846
8	1.80 (1.509)	1.90 (1.467)	–0.10 (0.849)	0.253
11	1.95 (1.576)	1.99 (1.546)	–0.04 (0.792)	0.625
12	1.03 (1.161)	1.06 (1.180)	–0.03 (0.733)	0.693
13	0.92 (1.238)	1.02 (1.271)	–0.10 (0.687)	0.158
17	2.10 (1.546)	2.00 (1.535)	0.10 (1.110)	0.343
22	1.74 (1.494)	1.81 (1.415)	–0.07 (0.654)	0.240
Subscore	1.61 (0.952)	1.62 (0.933)	–0.01 (0.360)	0.748
Intrusion subscale				
1	1.68 (1.398)	1.59 (1.344)	0.08 (0.649)	0.181
2	0.77 (1.098)	0.84 (1.105)	–0.07 (0.442)	0.127
3	1.59 (1.492)	1.62 (1.457)	–0.03 (0.660)	0.657
6	1.42 (1.421)	1.40 (1.412)	0.03 (0.822)	0.724
9	2.17 (1.495)	2.21 (1.530)	–0.05 (0.757)	0.525
14	0.83 (1.089)	0.94 (1.061)	–0.10 (0.842)	0.212
16	1.47 (1.423)	1.48 (1.320)	–0.01 (0.795)	0.903
20	1.11 (1.430)	1.11 (1.389)	0.00 (0.801)	1.000
Subscore	1.38 (0.860)	1.40 (0.830)	–0.01 (0.302)	0.671
Hyperarousal subscale				
4	1.28 (1.431)	1.14 (1.332)	0.13 (0.789)	0.085
10	1.83 (1.626)	1.79 (1.585)	0.04 (0.919)	0.672
15	0.92 (1.348)	1.06 (1.440)	–0.14 (0.768)	0.075
18	1.00 (1.242)	1.18 (1.337)	–0.18 (0.871)	0.036*
19	0.68 (1.156)	0.86 (1.297)	–0.18 (0.731)	0.013*
21	1.80 (1.489)	1.76 (1.471)	0.04 (0.767)	0.614
Subscore	1.24 (0.953)	1.31 (0.966)	–0.07 (0.442)	0.101
Total	31.00 (17.753)	31.23 (17.950)	–0.23 (5.530)	0.666

Table 2

Internal consistency data for the Urdu and English versions of the Impact of Event Scale – Revised

	Urdu version	English version
Avoidance subscale	0.812	0.805
Intrusion subscale	0.787	0.778
Hyperarousal subscale	0.777	0.776
Total score	0.916	0.912

t-tests showed that statistically significant differences ($P < 0.05$) were found with two items (18 and 19), with English scores higher than the Urdu scores. There were no statistically significant differences in the three subscale scores, or in the total score.

Conceptual equivalence

All correlation coefficients reached a high level of statistical significance ($P < 0.001$). The ranges of the item–subscale correlation coefficients for the Urdu (0.39–0.85) and English (0.37–0.84) versions of the IES-R were comparable. For 17 of 22 items, the difference between the pair of correlation coefficients was 0.05 or less, and no differences exceeded 0.1.

Scale equivalence

The Pearson's correlation coefficients were high (0.89–0.95) and highly statistically significant ($P < 0.001$) when comparing the English and Urdu versions of the three subscales of the IES-R and the total scores.

Reliability

Table 2 shows the internal consistency data for each of the subscales of the Urdu and English versions of the IES-R, in addition to that of the instrument as a whole. The magnitude of the alpha coefficients was of the same order for both versions of the questionnaire and indicated acceptable levels of internal consistency.

Convergent validity

Spearman rank order correlations were calculated between each of the three subscales and the total scores for the Urdu and English versions. All correlation coefficients reached statistical significance ($P \leq 0.002$). The ranges of the coefficients for the Urdu (–0.31 to –0.53) and English (–0.29 to –0.62) versions of the IES-R were comparable. For the majority of the comparisons, the difference between the pairs of correlation coefficients was 0.05 or less, and in no case did this difference exceed 0.1.

Discussion

The results of the present study are consistent with previous findings with regard to the IES-R and suggest that this Urdu translation of the IES-R compares favourably with the original English version.

The IES-R is not a specific diagnostic measure for post-traumatic stress disorder (PTSD). This is because it is extremely difficult to assess criterion A for the DSM-IV diagnosis: that the person experienced or witnessed a traumatic event that involved actual or threatened death or serious injury, and the person's response involved intense fear or helplessness. What was extremely significant about the sample population used for this study is that all the medical students were either directly from the earthquake zone or were certainly indirectly affected by the earthquake. The inclusion of the hyperarousal element within the IES-R does better synchronise with the DSM-IV PTSD criterion and therefore better encapsulates the psychological impact of traumatic events. However, there is always the need to explore further the cultural idiosyncrasies of psychological trauma. More empirical and clinical work is needed in this area. What makes the results of the present research so significant is that the UIES-R was evaluated with a distinct trauma population. However, a justifiable limitation of the research was not being able to clarify more specifically the research participants' experiences of criterion A. Being able to have done so would have greatly enhanced the contextual findings and enabled a more idiosyncratic, subjective interpretation of the Pakistan earthquake of 2005. This may to some degree affect the degrees of variance of the measures, which in turn may relate to the independence of the subscales. However, the number of research participants involved potentially limits this.

In conclusion, the Urdu version of the IES-R can be used for clinical populations in Pakistan with evidence of good reliability and satisfactory validity. In research in Pakistan the UIES-R will be an extremely useful tool. Its validation will enable researchers to compare Pakistani psychological trauma research data with existing data in the international academic literature. Bhui *et al* (2000) have suggested that even within a broad ethnic group, expressions of distress may vary between different subgroups and may change as a result of acculturation. Much more research is therefore needed on the use of the UIES-R within the various Pakistani subcultures.

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NEWS AND NOTES

Contributions to the 'News and notes' column should be sent to ip@rcpsych.ac.uk

UK Division of the Hellenic Psychiatric Association

The Hellenic Psychiatric Association (http://www.psych.gr) has established a UK Division. The officers are:

- Chair, G. Ikkos
- Honorary Secretary, D. Paschos
- Academic Secretary, E. Palazidou
- Trainee Lead, N. Christodoulou.

Membership of the UK Division is open to all specialists and trainees in psychiatry registered in the UK and interested in Hellenic psychiatry, irrespective of ethnic origin.

The UK Division has held meetings on mental health services in the UK and Greece: 'Perspective on Service Development' and 'Development, Innovation, and Governance'. The programme of forthcoming academic activities includes 'Focus on Bipolar Disorder' (confirmed speakers to include Professor Craddock, Cardiff University) and 'Psychiatry and Emotion: Neuroscience, History and Culture' (jointly with the Royal Society of Medicine, confirmed speakers to include Professor Chaniotis, Institute of Advanced Studies, Princeton University, and co-organiser, and Professor Randolph Nesse, University of Michigan). It has been proposed to hold study tours in Greece and Cyprus and other centres of Hellenic medicine.

For more information email gikkos@hotmail.com or drpaschos@hotmail.com

BIPA 'train the trainer' programme

The British Indian Psychiatric Association (BIPA), a diaspora network of psychiatrists of Indian origin is currently involved in an International Health Link Project, led by the chair of BIPA, Dr Subodh Dave.

India has only 0.4 psychiatrists per 100 000 population, compared with 14 per 100 000 in the UK. While there are no short-term solutions to increasing capacity in psychiatry, improving medical students' ability to recognise and manage psychiatric illnesses offers a sustainable solution in the long term. Recognising the local focus on didactic teaching and a minimal summative assessment, the joint UK–India faculty felt a critical need for a psychiatric curriculum focused on skills, outcomes and attitudes.

The Association's five-strong faculty designed and delivered a 4-day 'train the trainer' programme to a core faculty, Mumbai (India) in January 2012 and is due to follow this up with post-course online mentoring and support. The