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The measurement of culture shock

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Abstract This paper describes the development and evaluation of a new questionnaire to measure culture shock. The population was young British volunteers working in a variety of cultural settings overseas ($N = 380$). Core culture shock items were derived from a consensus statement from the literature on culture shock. Additional items were obtained from an analysis of reports by previous volunteers. Internal consistency of items, as determined by correlation coefficients and factor analysis, was satisfactory; this also lends some empirical support to the concept of culture shock. External criterion validity was established by reference to the country of destination and correlation with a measure of cultural distance. A 12-item questionnaire to measure culture shock is offered for further use and evaluation.

Introduction

When people find themselves in an unfamiliar cultural environment for the first time, they frequently suffer some degree of emotional disturbance. Where the move is rapid, and into a culture far removed from their own, significant difficulties in coping can be expected. A person can be overwhelmed by the 'otherness' of the other culture and by the amount of new experience that has to be assimilated.

The term 'culture shock' was first used by an anthropologist, Kalervo Oberg, in a short descriptive article based on his personal observations of expatriate Americans (Oberg 1960). He likened culture shock to an occupational disease of people who have been suddenly transplanted abroad. Some people make a good recovery and rapidly adjust to the new environment; in others, the condition can become chronic and debilitating.

Following Oberg, other researchers have attempted to redefine and extend his original description of culture shock. From studies of American Peace Corps volunteers, Guthrie (1975) prefers the term 'culture fatigue'. Smalley (1963) has focussed on difficulties in communication as 'language shock', and Byrnes (1966) on the concept of 'role shock'. Bock (1970) regards culture shock as an anxiety reaction to being unable to understand, control or predict other people's behaviour.

In a comprehensive review of these different meanings, Taft (1977) has identified six distinct aspects of culture shock:

1. Strain due to the effort required to make necessary psychological adaptations
2. A sense of loss and feelings of deprivation in regard to friends, status, profession and possessions
3. Being rejected by and/or rejecting members of the new culture
4. Confusion in role, role expectations, values, feelings and self-identity
5. Surprise, anxiety, even disgust and indignation after becoming aware of cultural differences
6. Feelings of impotence due to not being able to cope with the new environment.

This summary of the concept of culture shock has been endorsed by Furnham and Bochner (1986) and would seem to be the best available consensus statement.

It is 35 years since Oberg first coined the term culture shock. However, in spite of many descriptive papers, nobody has attempted to measure the phenomenon or even to validate the concept empirically. This is unfortunate, because there are many assertions in the descriptive literature that need to be investigated scientifically. What are the risk factors for culture shock? How long do people remain in a period of shock? Does everyone who moves to another culture suffer culture shock to some degree, and experience it as unpleasant and stressful, or are there some people who experience only enjoyment and exhilaration?

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Aim of the study

The measurement of culture shock was a key element in a study of young British volunteers during the first few weeks living in their new environment abroad (Mumford 1997). The purpose of the main study was to investigate the factors and circumstances that exacerbate culture shock in British volunteers; also to identify any who might not be coping well in the new culture, with possible risk to their mental health and a breakdown of their placement.

The volunteers' placements were arranged by GAP Activity Projects in 27 different countries worldwide. GAP is an educational charity that offers overseas voluntary work opportunities to school leavers in their gap year between school and further education or training. This paper describes the development of the culture shock questionnaire and an assessment of its internal consistency and its criterion validity when applied to young British volunteers working abroad.

Methods

Development of the culture shock questionnaire

The core items of the questionnaire were derived directly from the six aspects of culture shock as delineated by Taft (1977), redrafted in the form of questions. The third aspect (rejection *by* and/or *of* members of the new culture) was split into two separate questions. Responses to each question were constructed in a three-choice format.

In order to tap any additional domains of culture shock, a study was made of several hundred written reports by previous GAP volunteers, based on their experience and emotional reactions to working abroad. Many wrote of their feelings of anxiety and awkwardness in social interactions with people in the new culture, and occasionally of feelings of mistrust and frustration. Six further questions were drafted to reflect this range of experience of the volunteers, under the general heading of 'interpersonal stress'.

A pilot study was conducted among 15 volunteers whose placements were in Indonesia or Pakistan. The volunteers were asked to comment on the questions themselves, whether they were clear and easily comprehensible. The pilot study also allowed the logistics of the method of administration to be tested.

Administration of the questionnaire

Each GAP volunteer took abroad with them a sealed envelope with a set of questionnaires inside. Instructions printed on the outside of the envelope asked them to open it exactly 3 weeks after arrival at their placement abroad. It also contained another envelope addressed to GAP headquarters in Reading (UK), for returning the questionnaires immediately by post.

The set of questionnaires included the culture shock questionnaire and a new self-report version of the Cultural Distance Index (CDI) (Babiker et al. 1980; Mumford and Babiker 1997). The CDI was developed during a study of overseas students in Edinburgh, to meet the need for an overall measure of cultural distance; it includes items on climate, dress, language, food, religion and social norms. The set of questionnaires also included a series of mostly factual questions about arrangements on arrival in the country, their work placement, living circumstances, health and well-being, and relationships with other GAP volunteers.

Data analysis

On receipt at GAP House, the responses to the questionnaires were entered into a computer database for analysis. The internal consistency of the culture shock items and the interpersonal stress items was assessed from the correlation matrix, by factor analysis and by Cronbach's α . External criterion validity was established calculating mean scores on the culture shock questions by country of destination, and then by correlating these scores with mean scores on the CDI. The Statistical Package for the Social Sciences (SPSS for Windows; Norusis 1993) was used for data analysis.

Results

Pilot study

After analysing the frequency of responses, the wording of culture shock question 3 was reversed, from 'Do you feel generally rejected by the local people in the new culture?' to 'Do you feel generally *accepted* by the local people...'. Two of the interpersonal stress questions were abbreviated (2 and 4).

Administration of the questionnaire

Questionnaires in sealed envelopes were given to 44 volunteers before they left Britain to work abroad on GAP projects. All were aged between 17 and 19; 36% were male and 64% female. Their destinations ranged from South and East Asia, Australasia, North and South America, to western and eastern Europe. A total of 380 completed questionnaires were returned to GAP headquarters, a response rate of 79%.

Culture shock items

The correlation matrix for the seven 'core' culture shock items is given in Table 1. The great majority of the correlation coefficients between the items were in the range 0.2–0.5 (all highly significant: $P < 0.001$). The remaining coefficients ($\rho < 0.2$) related to question 3 (Do you feel generally accepted by the local people in the new culture?).

A factor analysis was performed on the seven items. The scree plot strongly suggested a single-factor solution. The first factor had an eigenvalue of 2.84 and accounted for 40.7% of the variance; one further factor had an eigenvalue just greater than 1.0. A two-factor solution was attempted using varimax rotation, but was not meaningful. A single-factor principal component analysis resulted in a factor matrix with coefficients in the range 0.60–0.74, with the exception of 0.36 for item 3.

A reliability analysis on the seven 'core' culture shock items yielded Cronbach's α of 0.75. The corrected item total correlations lay in the range 0.4–0.6, except for 0.36 with item 3. If each of the seven questions is scored 2 or 0 (according to decreasing severity) a culture shock score in the range 0–14 can be obtained for each respondent.

Table 1 Correlation matrix for 'core' culture shock items

1. Strain to adapt						
2. Homesick	0.3905 ***					
3. Feel accepted	0.2053 ***	0.0367 NS				
4. Wish to escape	0.3834 ***	0.4044 ***	0.1716 **			
5. Confused about identity	0.3957 ***	0.2822 ***	0.2402 ***	0.4094 ***		
6. Shocked or disgusted	0.3235 ***	0.2018 ***	0.2425 ***	0.2808 ***	0.2976 ***	
7. Feel helpless	0.4010 ***	0.2664 ***	0.0938 NS	0.2995 ***	0.3611 ***	0.4400 ***
	1.	2.	3.	4.	5.	6.

Spearman coefficients, two-tailed significance:
*** $P < 0.001$; ** $P < 0.01$; * $P < 0.05$

Table 2 Correlation matrix for 'interpersonal stress' items

1. Anxious and awkward				
2. Make sense of gestures	0.1725 **			
3. Uncomfortable if people stare	0.2268 ***	0.2050 ***		
4. Feel as if being cheated	0.1205 *	0.2057 ***	0.1900 ***	
5. Effort to be polite to hosts	0.1939 ***	0.1283 *	0.1453 **	0.1927 ***
	1.	2.	3.	4.

Spearman coefficients, two-tailed significance:
*** $P < 0.001$; ** $P < 0.01$; * $P < 0.05$

Interpersonal stress items

The correlation matrix for the six 'interpersonal stress' items is given in Table 2. The majority of the correlation coefficients between the items lay in the range 0.12–0.3 (all significant at least at the level $P < 0.02$). Two low correlation coefficients ($\rho < 0.1$: non-significant) related to question 6: 'Do you get angry and frustrated at delays on the local buses or trains?'

A factor analysis was performed on the six items. The scree plot suggested a single-factor solution. The first factor had an eigenvalue of 1.84 and accounted for 30.6% of the variance; one further factor had an eigenvalue just greater than 1.0. A two-factor solution was attempted using varimax rotation, but was not meaningful. A single-factor principal components analysis resulted in a factor matrix with coefficients in the range 0.55–0.62, with the exception of 0.42 for question 6.

A reliability analysis on the six items yielded Cronbach's α of 0.53. The corrected item-total correlations lay in the range 0.27–0.34, except for 0.21 with item 6 (Do you get angry and frustrated at delays on the local buses or trains?). Item 6 also had the highest rate of missing data (10.5%); volunteers' comments in the margins of the questionnaire indicated that the question was frequently not applicable to their situation. Item 6 was therefore omitted from further data analysis. Cronbach's α for the five remaining items was 0.52.

Combined culture shock and interpersonal stress items

The five interpersonal stress items were individually correlated with the culture shock score, yielding correlation coefficients in the range 0.20–0.43, all highly significant ($P < 0.001$).

A factor analysis was performed on the 12 items together. The scree plot once again suggested a single-factor solution. The first factor had an eigenvalue of 3.71 and accounted for 31.0% of the variance; two further factors had eigenvalues just greater than 1.0. Two- and three-factor solutions were attempted using varimax rotation, but did not result in meaningful clusters of items. A single-factor principal components analysis resulted in a factor matrix with coefficients in the range 0.43–0.70, with the exception of 0.36 for interpersonal stress item 2 (When talking to people, can you make sense of their gestures or facial expressions?).

A reliability analysis on the 12 items (7 core culture shock items and 5 interpersonal stress items) yielded Cronbach's α of 0.79. The corrected item-total correlations lay in the range 0.27–0.58. If each of the 12 items is scored 2, 1 or 0 (according to decreasing severity) an overall culture shock score in the range 0–24 can be obtained for each respondent.

External criterion validity

Volunteers were grouped according to country of destination, or, where numbers were small, into geograph-

ical regions (e.g. South America, eastern Europe). Mean scores on the core culture shock items, on the interpersonal stress items, and on the combined 12-item questionnaire were calculated (Table 3). Generally, volunteers working in non-western countries had the highest scores on all three measures. The position of France is anomalous, probably owing to particularly demanding GAP placements, for example living in religious communities with homeless people on the fringes of provincial towns.

As an additional external criterion, mean scores on the CDI were calculated for each group of volunteers, by country or region. These are plotted against mean scores on the 12-item culture shock questionnaire in Fig. 1; the

correlation coefficient between them was 0.60. The correlation coefficient between the CDI and the seven core culture shock items was 0.50, and between the CDI and the interpersonal stress items was 0.58. All were highly significant ($P < 0.001$).

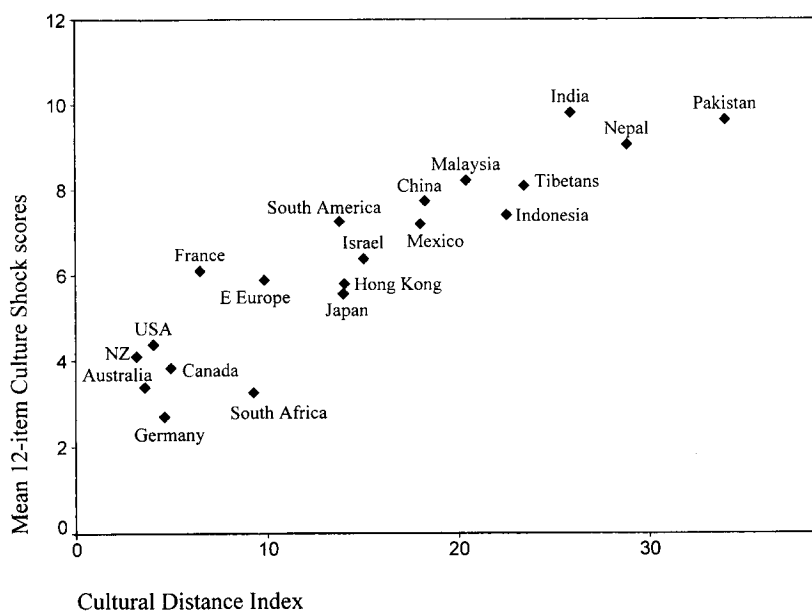
Discussion

This first attempt to measure 'culture shock' involves various methodological difficulties. In order to develop a rating scale in psychiatry or psychology, the first requirement is an agreed, common understanding of what is to be measured (Thompson 1989). Hamilton (19

Table 3 Culture shock scores by country

	No. of GAP volunteers	Mean 'core' culture shock score	Mean interpersonal stress score	Mean 12-item culture shock score
India	47	5.87	3.83	9.80
Pakistan	8	5.25	4.38	9.63
Nepal	21	5.76	3.29	9.05
Malaysia	28	5.29	2.93	8.21
Tibetans in India	13	4.54	3.54	8.08
China	13	4.91	2.69	7.73
Indonesia	15	4.53	2.87	7.40
South America	16	4.50	2.82	7.25
Mexico	16	4.94	2.25	7.19
Israel	8	3.11	3.00	6.38
France	11	4.60	1.45	6.10
Eastern Europe	42	3.50	2.38	5.88
Hong Kong	10	3.90	1.90	5.80
Japan	18	3.83	1.72	5.56
USA	13	3.31	1.08	4.38
New Zealand	20	3.00	1.30	4.10
Canada	20	3.11	0.70	3.83
Australia	39	2.10	1.36	3.38
South Africa	4	2.00	1.25	3.25
Germany	10	1.80	0.90	2.70

Fig. 1 Culture shock scores by cultural distance



argued that it was only possible to construct a scale 'when the phenomena to be studied have been completely defined in nature and range'. However, it may be impossible to define the extent and boundaries of a phenomenon until we have more firm data, collected in a systematic way. The issue risks becoming circular: measurement requires understanding, understanding requires measurement.

'Culture shock' is not an established psychiatric disorder with its own agreed diagnostic criteria. What started as a catchy, almost colloquial term, has developed into a rich intuitive concept with an extensive descriptive literature. The starting point for this attempt to measure culture shock was therefore the best available consensus statement of the boundaries of the concept, given by Taft (1977). The core items in this culture shock questionnaire are derived directly from this statement.

Most commentators agree that 'culture shock' refers to a normal human response to an alien cultural environment, which can be disabling in some individuals. In an attempt to broaden the domain of enquiry, the experience of a group of 'normal' culture travellers was tapped and further questions were devised to reflect this. For purpose of analysis, these additional items ('interpersonal stress') were treated separately from the 'core' culture shock items.

The results of the analysis of the 'core' culture shock questions in this study do lend weight to the concept of culture shock as described in previous literature. The 7 core items were closely inter-correlated. Factor analysis suggested that they are best represented mathematically as a single dimension: the seven items belong together in a single cluster. The item concerned with feeling rejected by members of the alien culture has proved slightly problematic, and the present wording (Do you feel generally accepted by the local people in the new culture?) might be improved upon in the future.

The six additional 'interpersonal stress' items, derived from the reports of previous GAP volunteers, generally showed satisfactory correlations with each other and with scores on the core culture shock items. One item (Do you get angry and frustrated at delays on the local buses or trains?) was eliminated because of limited applicability and poorer correlational indices. Factor analysis of the remaining 5 items together with the 7 core items failed to uncover any separate dimensions in the data, suggesting that all 12 items are measuring the same underlying construct.

The notion of validity in relation to a new rating scale always presents difficulties. There is no gold standard against which to test this new culture shock questionnaire, or to decide whether the shorter (7-item) or longer (12-item) form is to be preferred. With 'culture shock' we are, in any case, dealing with a theoretical concept rather than a discrete entity in the physical world, and there may be more than one legitimate way of constructing the phenomenon.

The content validity and face validity of this culture shock questionnaire can be assessed by the reader, par-

ticularly if they have experienced for themselves the 'shock' of encountering a new and alien culture for the first time. The external criterion of validity used here was the country of destination. The mean scores on the new scale, country by country, seem to correspond with expectations. The more 'exotic' the culture for these young British volunteers, the greater their mean culture shock scores. The use of the CDI provides a quantitative measure to supplement a subjective assessment of the quality of these different cultures.

The 12-item version of the culture shock questionnaire achieved a higher correlation with the CDI than either the 7 'core' items or the interpersonal stress items on their own. The 12-item version also produced the highest value of Cronbach's α (0.79), although this may be due solely to the larger number of items (Norusis 1993). These results would suggest that the 12-item version of this culture shock questionnaire is to be preferred, but further evaluation of all three versions in different populations is required before coming to a definitive conclusion. It will also be important to investigate whether culture shock is experienced in the same way by non-western visitors to Britain.

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Appendix

Culture shock questionnaire

A. 'Core' culture shock items

1. Do you feel strain from the effort to adapt to a new culture?
 - Most of the time
 - Occasionally
 - Not at all
2. Have you been missing your family and friends back home?
 - Most of the time
 - Occasionally
 - Not at all
3. Do you feel generally accepted by the local people in the new culture?
 - No
 - Not sure
 - Yes
4. Do you ever wish to escape from your new environment altogether?
 - Most of the time
 - Occasionally
 - Not at all
5. Do you ever feel confused about your role or identity in the new culture?
 - Most of the time
 - Occasionally
 - Not at all
6. Have you found things in your new environment shocking or disgusting?
 - Many things
 - A few things
 - None

7. Do you ever feel helpless or powerless when trying to cope with the new culture?
 - Most of the time
 - Occasionally
 - Not at all

B. Interpersonal stress items

1. Do you feel anxious or awkward when meeting local people?
 - Most of the time
 - Occasionally
 - Not at all
2. When talking to people, can you make sense of their gestures: facial expressions?
 - Not at all
 - Occasionally
 - Most of the time
3. Do you feel uncomfortable if people stare at you when you are out?
 - Very uncomfortable
 - Slightly uncomfortable
 - Not at all
4. When you go out shopping, do you feel as though people might be trying to cheat you?
 - Most of the time
 - Occasionally
 - Not at all
5. Are you finding it an effort to be polite to your hosts?
 - Most of the time
 - Occasionally
 - Not at all

Scoring: First response = 2, second response = 1, third response = 0

If the combined 12-item version is used, it is recommended to terminate the items from sections A and B.