THE RELIABILITY OF MALAY VERSION OF LIST OF
THREATENING EXPERIENCES QUESTIONNAIRE:
A STUDY ON A GROUP OF MEDICAL STUDENTS IN MALAYSIA

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Abstract

Objective: The aim of this study is to translate the original English version of List of Threatening Experiences (LTE) into Malay and to test the reliability on a group of medical students. Method: The LTE was translated into Malay and back-translated. The Malay LTE (LTE-M) was then tested on a total of 237 medical students. They were given LTE-M, General Health Questionnaire (GHQ), Beck Depression Inventory (BDI) and English version of LTE. A week later, these students were again given the LTE-M. Results: The parallel and test-retest reliability were satisfactory for 7 out of the 12 event categories (Kappa=0.67-0.88). However 3 event categories were not reported. There was no statistical significant difference in the BDI and GHQ scores between the students with and without threatening experiences. Conclusion: The parallel and test-retest reliability of the LTE-M were acceptable. An association between the threatening experiences and increased disorders was not established.

Keywords: Threatening experiences, reliability, Malay version, life events, students

Introduction

Life events are defined as sudden changes, which may be positive or negative in an individual’s social life which disrupt its normal course. Since the original work of Holme and Rahe, a large amount of research was focus on the concept of stressful life events for the past decades. Life events which represent recent changes in the environment were one of the many social factors which have been found related to psychiatric disorders. Multiple studies show that life events are experienced with a greater than expected frequency prior to the onset of mental disorders. Various long and complex inventories have been developed for research in stressful life events. These comprised of methods by
means of semi-structured interview, structured interview\textsuperscript{10} or checklist based on inventories of life events.\textsuperscript{11,12} For practical and economic constraints oblige research worker, an inventor method with a brief list of significant life events is needed.\textsuperscript{13} The List of Threatening Experiences (LTE) was designed by Brugha and colleagues\textsuperscript{13} to overcome the labor-intense time and expense of more lengthy interview. It is a 12 items instrument measuring common life events that tend to be threatening. Common events that were unlikely to be of etiological importance were omitted in the instrument (for example, promotion at work or a minor financial problem).\textsuperscript{14} The LTE was shown to have good test retest reliability, good agreement with informant information and concurrent validity. It is particularly recommended by the author for the use in psychiatric, psychological and social studies. The aim of this study is to translate the original English version of LTE into Malay version. The reliability and responses to the questionnaire were then tested on a group of medical students.

**Methods**

Approval from the Medical Ethical Committee (MEC), University Malaya Medical Centre, Kuala Lumpur was obtained to conduct the study. Permission from the original author of the instrument was also obtained.

**Stage 1**

The English version of LTE was translated into Malay by two doctors who were bilingual (Malay and English). Another two doctors who were also bilingual and blinded to the original LTE, back-translated the Malay version of LTE. The process was following the back-translation technique.\textsuperscript{16}

**Stage 2**

The translated version (LTE-M) was pilot tested on 20 staff nurses from psychiatric ward, University Malaya Medical Centre. Some items in the translated version needed minor revision and were modified further. The finalized version was also reviewed by three medical officers and a psychiatrist.

**Stage 3**

A group of medical students from Faculty of Medicine, University of Malaya, Kuala Lumpur (Year 1, 4 and 5) were approached for the study. A total of 237 agreed to participate and completed the study. They were given the following questionnaires:

1. The Malay version of LTE (LTE-M)
2. Beck Depression Inventory (BDI)\textsuperscript{17}
3. General Health Questionnaire (GHQ)\textsuperscript{18}

As all the participants were bilingual, they were given the English version of LTE immediately after the initial assessment. One week later, these students were again required to complete the Malay version of LTE (the sequence of the items was shuffled).

**Scoring**

The initial binary scoring is used. A score of 1 indicates if the life event has happened over the past 6 months, and a score of 0 if it has not. The number of events that had happened was then counted. It was scored
on the basis that the more life events a subject had been through, the higher the score and therefore the greater the likelihood of some form of longer term impact on him or her.

**Statistical Analyses**

The results were analyzed using Statistical Package for Social Sciences version 13.0.

**Result**

The medical students ranged from 19 to 25 years old. There were 73 males and 164 females.

*Distribution of the number of Threatening Experiences (TE) reported by the students*

**Figure 1** Frequency of positive responses to the List of Threatening Experiences

![Frequency of Positive Responses to The List of Threatening Experiences](image)

Figure 1 shows the distribution of the frequency of positive responses to the LTE-M. Life event number 10 (You had a major financial crisis) and number 4 (A close family friend or another relative died) were the two commonest events reported by the students, 13.5% and 11.4%. It was followed by life event number 2 (A serious illness, injury, or assault happened to a close relative), 9.3%. Life events number 5 (You had a separation due to marital difficulties), number 8 (You became unemployed or you were seeking work unsuccessfully for more than one month) and number 9 (You were sacked from your job) were not reported by the students.

**Table 1** Distribution of the total number of LTE-M reported by the students.

<table>
<thead>
<tr>
<th>Number of LTE-M reported</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>134</td>
<td>56.5</td>
</tr>
<tr>
<td>1</td>
<td>60</td>
<td>25.3</td>
</tr>
<tr>
<td>2</td>
<td>33</td>
<td>13.9</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>2.5</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>0.8</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>0.8</td>
</tr>
</tbody>
</table>
Table 1 shows the distribution of the total number of life events reported by each student. Majority of the student did not have any recent threatening experiences (TE). A quarter of the subjects have one recent TE. Only 10 students (4.2%) have 3 or more recent TE.

<table>
<thead>
<tr>
<th>Life events category</th>
<th>% of reporting</th>
<th>Parallel reliability</th>
<th>Test-retest reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>You yourself suffered a serious illness, injury, or an assault</td>
<td>0.8</td>
<td>0.84</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>A serious illness, injury, or assault happened to a close relative</td>
<td>9.3</td>
<td>0.22</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Your parent, child, or spouse died</td>
<td>0.4</td>
<td>0.67</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>A close family friend or another relative (aunt, cousin, grandparents) died</td>
<td>11.4</td>
<td>0.88</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>You had a separation due to marital difficulties</td>
<td>0</td>
<td>-</td>
<td>NA</td>
</tr>
<tr>
<td>You broke off a steady relationship</td>
<td>8</td>
<td>0.92</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>You had a serious problem with a close friend, neighbour, or relative</td>
<td>6.3</td>
<td>0.79</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>You became unemployed or you were seeking work unsuccessfully for more than one month</td>
<td>0</td>
<td>-</td>
<td>NA</td>
</tr>
<tr>
<td>You were sacked from your job</td>
<td>0</td>
<td>-</td>
<td>NA</td>
</tr>
<tr>
<td>You had a major financial crisis</td>
<td>13.5</td>
<td>0.86</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>You had problems with the police and a court appearance</td>
<td>0.8</td>
<td>0.18</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Something you valued was lost or stolen</td>
<td>8.8</td>
<td>0.88</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

NA = not applicable
Parallel reliability

Table 2 shows the result of the parallel reliability for each item in the LTE-M with the original LTE as reported by the students. Item 2 and 11 were found to be unreliable (Kappa < 0.40, p < 0.01). As a rule of thumb, the reliability for item 3 and 7 were substantial (Kappa = 0.60-0.79, p < 0.01). The parallel reliability of other items were outstanding (Kappa > 0.8, p<0.01).19

Test-retest reliability

Table 2 also provides information regarding the test-retest reliability for each item in the LTE-M as reported by the students after one week interval. Item 2 and 11 were found to be unreliable (Kappa < 0.40, p < 0.01). The test-retest reliability for item 7 and 12 were outstanding (Kappa > 0.8, p<0.01). The rest were substantially reliable (Kappa = 0.60-0.79, p < 0.01). 20

### Table 3

Comparison the BDI and GHQ scores between students with (2 or more) and without (1 or none) recent threatening experience(s) using Independent t test

<table>
<thead>
<tr>
<th>Recently threatening experience(s)</th>
<th>BDI Score</th>
<th>GHQ score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>Yes</td>
<td>7.91</td>
<td>6.06</td>
</tr>
<tr>
<td>No</td>
<td>7.30</td>
<td>5.28</td>
</tr>
<tr>
<td>Differences</td>
<td>0.61</td>
<td>0.74</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 shows the comparison of BDI and GHQ scores between the students with and without threatening experiences in the past 6 months. There was no significant different between the two groups.

Discussion

The choice of the 12 events in the original LTE designed by Brugha and colleagues was based on a study on 310 samples from the general population and 74 psychiatric out patients with affective disorders. Life events which occurred rarely were excluded from the LTE.13 However, 3 out of the 12 event categories were not reported by the students in this study. This could be explained by the relatively homogenous characteristic of the study group. The subjects in this study were still studying, young and highly educated. As a result, events categories with regard to marital separation and job issues would be irrelevant to them.

Generally, the LTE-M was fairly acceptable to this study group. Excluding items number 5, 8 and 9 which were not reported, the parallel and test-retest reliability for item number 2 and 11 were poor. For the other items, the reliability was satisfactory. It was emphasized by the original author that the results of any reliability of the instrument may depend on the particular characteristics of the population under study. It was advised to re-evaluate the reliability of the questionnaire when used in the other population.15

As suggested by the author, it is useful to consider the association of life events with increased risk of disorders in the research of
an inventory. As a result, the researchers in this study attempted to determine the association of depressive symptoms and other psychiatric symptoms with threatening experiences by the students. The result shows that there was no significant difference between the score of BDI and GHQ between those with and without threatening experiences. The result was limited by the small number of samples who had recent threatening experiences especially for 2 or more events. Furthermore, the extent of the threat for each event category was not assessed in this study.

As a conclusion, the parallel and test-retest reliability of the LTE-M are acceptable. However 3 events in the LTE-M were not reported by the study group. An association between the threatening experiences and increased disorders was not established in the study. Improvement in the study design and population with diverse characteristics are required for the future research in the validation of the LTE-M.

Limitations

Life events are highly related to the individual’s living environment and social background. The lack of diversity of the characteristics in the study group limited the study on the event categories in the LTE chosen by the original authors.

The LTE-I (the interview version) which developed by the original author was not used in this study. It consists of detailed probing questions for each of the LTE categories, for use in a semi-structured interview. The LTE-I may help in the administration of the LTE.

The binary scoring for the LTE was used in this study. The severity of the threat of the events was not taken into consideration. Rating of the threat by using the Likert scale (i.e. mild, moderate and marked) may help in the study of the impact of the threatening experiences and its association with increased disorders.

Acknowledgement

We would like to thank the students who participate in this study and Dr Sapini Yaacob from Department of Psychological Medicine, University Malaya Medical Centre for her assistance. We are also very grateful to Professor Brugha his generous permissions and support for using his instruments, namely the LTE.

References


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