Validation study for the Japanese version of the Informant Questionnaire on Cognitive Decline on the Elderly (IQCODE-J)

Mizoguchi M 1, Yakuishii Y 1, Kosugi M 1, Eriuchi M 1, Sakamoto M 2, Horikawa E 3, Hara H 1

1 Division of Neurology, Department of Internal Medicine, Saga University Faculty of Medicine, Saga, Japan
2 Division of Medical Education, Research & Education Center for Comprehensive Community Medicine, Saga University Faculty of Medicine, Saga, Japan
3 Division of Physical and Behavioural Support System, Research & Education Center for Comprehensive Community Medicine, Saga University Faculty of Medicine, Saga, Japan

Background
The Informant Questionnaire on Cognitive Decline on the Elderly (IQCODE-J) is a tool for evaluating dementia from the informant’s standpoint, and one of the widely-used cognitive screening tests. But little is known about Japanese validated cut-off for the IQCODE-J.

Objectives
To create the Japanese version of IQCODE and find the optimal cut-off point for diagnosis of dementia.

Method

Inclusion and exclusion criteria

Inclusion criteria
- Referred to our memory clinic between Oct 2015 and Jan 2017.
- Voluntary provision of written informed consent.
- If patient severely demented, informed consent was obtained from his/her family.

Exclusion criteria
- With incomplete data for the analysis. (Incomplete the IQCODE-J, CDR Scoring)

Statistical analysis

180 subjects

- Mean age: 75.7 ± 5.7 years old
- Sex: 111 females (61.7%)
- CDR 0: Normal
- CDR 0.5: Very Mild Dementia
- CDR ≥ 1: Mild to severe Dementia

Multinomial logistic regression analysis (CDR 0 vs Ref)
- ANCOVA (Post-hoc test with Bonferroni methods: CDR 0 vs Ref)
- ROC curve for estimate the optimal cut-off point

Univariate analysis

<table>
<thead>
<tr>
<th>IQCODE J</th>
<th>CDR 0</th>
<th>CDR 0.5</th>
<th>CDR ≥ 1</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>4.7</td>
<td>4.2</td>
<td>8.3</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>95% CI</td>
<td>(4.15)</td>
<td>(3.51)</td>
<td>(6.21)</td>
<td></td>
</tr>
</tbody>
</table>

Multinomial logistic regression analysis (CDR 0 vs Ref)

<table>
<thead>
<tr>
<th>Odds Ratio (95% CI) per 1 point increase of IQCODE</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDR 0 vs Ref</td>
<td></td>
</tr>
<tr>
<td>CDR 0.5 vs CDR 0</td>
<td>1.043</td>
</tr>
<tr>
<td>CDR ≥ 1 vs CDR 0</td>
<td>1.197</td>
</tr>
</tbody>
</table>

ROC curve for estimate the optimal cut-off point

Set the cut-off of IQCODE-J to 97/98; sensitivity 86%, specificity 69%

Conclusion
This study offered the optimal cut-off point of IQCODE-J as 97 (corresponding to mean score of 3.7), consistent with the previous studies, suggesting the validity for our IQCODE-J.

References
2. Hara H et al., "The Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE) as a screening tool for dementia using medical history and physical examination,"
5. Hara H et al., "Screening for dementia in the elderly version of Japanese Questionnaire on Cognitive Decline in the Elderly (IQCODE-J)".