Development and Validation of the Observation Checklist Assessing the Hygiene and Sanitation of the Food Preparation Areas in Preschools

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Abstract

A validated checklist for assessing the hygiene and sanitation of food preparation areas in the preschools is needed to ensure food safety for the preschool children. The objective of this study aimed to validate a newly developed observation checklist assessing the hygiene and sanitation of food preparation areas in preschools.

The study was carried out in Kota Bharu Kelantan and was conducted in four stages: preparation of observation checklist from the existing literature; validation of checklist content by six expert panels (measuring the item-level content validity index (I-CVI), and scale-level content validity index (S-CVI)); face validation of checklist by ten expert panels (measuring the item-level face validity index (I-FVI) and scale-level face validity index (S-FVI)); and reliability analysis in assessing the inter correlation-coefficient (ICC). The reliability analysis was performed on two preschools by four assessors.

The initial draft of the checklist contained three domains and 57 items: building and facility (10 subdomains and 40 items); process control (4 subdomains and 13 items); and food handlers (one subdomain and 7 items). The I-CVI were 0.97, 1.00 and 1.00, and S-CVI were 1.0, 1.0 and 1.0 for building and facility, process control, and food handler, respectively. The I-FVI showed 0.99 for building and facility, 1.00 for process control, and 1.00 for food handler. The intraclass correlation coefficients (ICC) of these 3 domains were 0.848 (95%CI 0.772, 0.904) as shown in Table 1, indicating a good reliability (values between 0.75 and 0.9) [1]. The final validated checklist consisted of 3 domains and 57 items.

Table 1: Results of ICC calculation in SPSS using mean-rating, absolute agreement, 2-way mixed-effects model for the building and facility, process control and food handler

<table>
<thead>
<tr>
<th>Intraclass Correlation</th>
<th>95% Confidence Interval</th>
<th>F Test with True Value 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Measures</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.772</td>
<td>0.904</td>
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<tr>
<td></td>
<td>0.848</td>
<td>6.906</td>
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<td>0.000</td>
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</tbody>
</table>

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The newly developed observation checklist is a valid and reliable tool to assess the hygiene and sanitation of food preparation areas in preschools.

**Keywords**
Checklist, Food preparation area, Hygiene, Preschools, Sanitation, Validation

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**References**