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Validation Findings of CAT-LC Scale in Evaluating Factors Affecting Clinical Competency Attainment and Teaching Learning Changes during the COVID-19 Pandemic

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Abstract

The COVID-19 pandemic has posed challenges and resulted in disruptions in clinical teaching and learning. A tool named Competency Attainment Teaching-Learning Changes (CAT-LC) Scale was recently designed to evaluate the perceived clinical competency attainment and changes in the teaching and learning methods in postgraduate orthodontic training in Malaysia amid the COVID-19 pandemic. The CAT-LC Scale consisted of 65 carefully designed items, which were grouped into 7 domains. Its primary objective was to quantitatively evaluate the impact of the pandemic on the modifications in teaching and learning practices and their effects on residents' perceived level of clinical competency. Each item was rated using a 4-point relevancy score. A content validation (CV) was conducted with assessments by six orthodontic experts. The items achieved an Item-Content

Validity Index (I-CVI) of at least 0.83, exceeding the minimum CVI requirement of 0.80. Subsequently, face validation was performed with 10 respondents to assess the acceptance and comprehension of the items from the perspective of prospective respondents. The Item-Face Validity Index (I-FVI) for all items surpassed the minimum FVI threshold of 0.80. The Cronbach's alpha values obtained for all domains in the pilot study ranged from 0.600 to 1.000. Based on the two substantial validity indices obtained from both content and face validation, and supported by reliability analysis showing Cronbach's alpha values within the acceptable range, it can be concluded that the CAT-LC Scale is a valid and reliable instrument. © Malaysian Association of Education in Medicine and Health Sciences and Penerbit Universiti Sains Malaysia. 2025 This work is licensed under the terms of the Creative Commons Attribution (CC BY) (<http://creativecommons.org/licenses/by/4.0/>).

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CAT-LC; Content validation; COVID-19 pandemic; Face validation; Orthodontics; Pilot study; Validation study

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Abstract

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