

INTISARI

Pandemi Covid-19 memicu terjadinya transformasi *digital* secara *massive* yang berdampak pada peningkatan frekuensi dan durasi penggunaan komputer atau laptop ketika bekerja. Hal tersebut dapat memicu terjadinya *musculoskeletal disorders* (MSDs) seperti *carpal tunnel syndrom* dan *back pain*. Salah satu upaya yang dapat dilakukan untuk mengurangnya adalah memastikan stasiun kerja komputer yang ergonomis. *Computer Workstation Ergonomics: Self-Assessment Checklist* tersedia untuk membantu pekerja mengevaluasi apakah stasiun kerja komputer yang digunakan sudah ergonomis. Namun, *checklist* tersebut didiseminasi dalam Bahasa Inggris. Hal tersebut dapat berdampak pada keakuratan instrumen mengingat tidak semua pekerja Indonesia dapat memahami dokumen berbahasa Inggris dengan baik dan benar. Oleh karena itu, penelitian ini dilakukan untuk menghasilkan *checklist* tersebut versi Bahasa Indonesia. Selain itu, pengujian reliabilitas akan dilakukan pada *checklist* versi Bahasa Indonesia yang dihasilkan dari proses adaptasi.

Adaptasi yang dilakukan terdiri dari enam tahapan. Tahap ke-1 yaitu *translation* merupakan penerjemahan *checklist* dari Bahasa Inggris ke Bahasa Indonesia. Selanjutnya, *synthesis of translation* dilakukan untuk mendapatkan konsensus hasil penerjemahan dari dua *translators* yang terlibat sebelumnya. Tahap ke-3 yaitu *back translation* untuk menerjemahkan kembali hasil sintesis ke dalam Bahasa Inggris. Setelah itu, *expert committee review* diperlukan untuk menghasilkan *prefinal version* dari instrumen yang diadaptasi. *Prefinal version* tersebut selanjutnya diujikan dengan melibatkan 10 partisipan dalam tahap *pretesting*. Adapun tahap *submission of documentation* merupakan tahapan penyerahan kembali *final version* yang diadaptasi kepada *National Institute of Health* (NIH). *Final version* yang diadaptasi, diuji reliabilitasnya dengan melibatkan 20 partisipan. Partisipan menjalani dua sesi pengambilan data dengan interval waktu 7 hari. Beberapa parameter reliabilitas yang dikaji diantaranya adalah *intra-rater reliability*, *inter-rater reliability*, dan *internal consistency* dari *final version*.

Tahapan adaptasi menghasilkan sebuah versi Bahasa Indonesia dari *Computer Workstation Ergonomics: Self-Assessment Checklist*. Pada tahapan *translation*, ditemukan 76 perbedaan penerjemahaan. Hasil tersebut selanjutnya disintesis dalam 17 konsensus oleh *translators* sebelumnya. Selanjutnya, dengan tahap *expert committee* mengusulkan 44 perbaikan tanpa merubah makna versi asli dari penilaian yang dikaji. Tahapan *pretesting* yang dilakukan menemukan 14 masalah seperti bentuk kalimat dan fungsi alat. Masalah tersebut dijadikan bahan acuan perbaikan untuk mencapai *final version*. Selanjutnya, hasil pengujian reliabilitas menunjukkan *intra-rater reliability* memiliki $\alpha = 0,70$; 95% CI 0,31 – 0,94 dengan *percent of agreement* sebesar 80%, *inter-rater reliability* memiliki $\alpha = 0,56$; 95% CI 0,27 – 0,83 dengan *percent of agreement* sebesar 80% dan *internal consistency* memiliki $\alpha = 0,73$; 95% CI 0,49 – 0,87. Dengan demikian, didapatkan bahwa *Computer Workstation Ergonomics: Self-Assessment Checklist* versi Bahasa Indonesia yang telah dicapai secara umum dapat dikatakan *reliable*.

Kata kunci: adaptasi, *checklist*, ergonomika, computer workstation, dan Bahasa Indonesia.

ABSTRACT

The Covid-19 pandemic triggered a massive digital transformation, which increased the computer usage frequency and duration of the workers. On the other hand, the increase could raise musculoskeletal disorders, particularly carpal tunnel syndrome and back pain. To minimize the adverse health effects caused, workers should establish an ergonomic computer working station. In helping them develop a such intervention, Computer Workstation Ergonomics: Self-Assessment Checklist could be utilized as the guidelines. However, the checklist was developed and disseminated in English, which is different from the daily speaking language of Indonesian workers. Hence, this study was conducted to establish the Indonesian version of the checklist through a standardized adaptation approach. Also, reliability assessments were undergone to see how consistent the instrument when repeated measurements were conducted as well as when different raters utilized it.

The adaptation consists of six stages. First, translations to Bahasa Indonesia were performed by involving two translators. Following this stage, the translation results were synthesized by asking the translators to develop a consensus. The third stage was back translation. This is followed by an expert committee review that evaluates all documents resulting. The prefinal version determined by the expert committee was tested by involving 10 participants in pretesting. The final version was determined by revising the instrument based on the feedback gathered in the previous stage. This document was submitted to the National Institute of Health (NIH) of the instrument as the last adaptation stage. The reliability assessment was carried out by involving 20 participants to see the intra-rater reliability, inter-rater reliability, and internal consistency of the adapted instrument.

The Indonesian version of the checklist was established through a series of stages. Seventy-six different items between the two translators were synthesized into 17 consensed items. The expert committee review proposed 44 improvements that did not change the original meaning of the instrument. The pretesting came across 14 problems, such as sentence of words and tool function. The problems were utilized as the basis of the refinement to establish the final version. Moreover, the reliability assessment indicated that the inter-rater reliability of the adapted instrument has $\alpha = 0,70$; 95% CI 0,31 – 0,94 with 80% percent of agreement, the intra-rater reliability of the instrument has $\alpha = 0,56$; 95% CI 0,27 – 0,83; with 80% percent of agreement as well and the internal consistency of the instrument has $\alpha = 0,73$; 95% CI 0,49 – 0,87. Based on the reliability assessment results, it can be inferred that the Indonesian version of the Computer Workstation Ergonomics: Self-Assessment checklist was generally reliable.

Keywords: *cross-cultural adaptation, paper-based methods, ergonomics methods, dan ergonomics checklist.*