

VALIDITAS RELATIF ANTARA METODE PENIMBANGAN MAKANAN DAN PENGGUNAAN WEB-APP INAFIT DALAM PENILAIAN KONSUMSI BUAH DAN SAYUR

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INTISARI

Latar Belakang: Hasil Riskesdas 2018 menunjukkan bahwa sebanyak 93,5% - 95,5% penduduk Indonesia berusia >5 tahun kurang mengonsumsi sayur dan buah. Penilaian konsumsi buah dan sayur pada masyarakat penting dilakukan karena data terkait konsumsi buah dan sayur dapat digunakan untuk mendeteksi adanya risiko penyakit dan memonitor pola konsumsi pada masyarakat. Perkembangan teknologi saat ini memungkinkan pengembangan metode penilaian konsumsi pangan berbasis aplikasi digital. Perlu dilakukan uji validitas sebelum aplikasi digital tersebut digunakan dalam penelitian terkait penilaian konsumsi pangan.

Tujuan: Mengetahui validitas *Web-App Inafit* dalam menilai konsumsi buah dan sayur dibandingkan dengan *weighing food record*.

Metode: Sampel berjumlah 30 orang yang diperoleh dari metode *purposive sampling*. Pengujian validitas relatif dilakukan dengan uji *Wilcoxon Signed-rank Test*, uji korelasi *Spearman*, dan *Bland-Altman Plot*.

Hasil: Analisis validitas menunjukkan bahwa *Web-App Inafit* melakukan *over* estimasi sebesar 6,84% terhadap *Weighing Food Record* dalam penilaian konsumsi buah, dan melakukan *under* estimasi sebesar 6,36% terhadap *Weighing Food Record* dalam penilaian konsumsi sayur. Tidak terdapat perbedaan yang signifikan antara kedua metode ($P=0,098-0,125$, $P<0,05$). Terdapat korelasi yang sangat kuat antara kedua metode ($P=0,926-0,932$, $P<0,05$). Analisis Bland-Altman menunjukkan sebanyak 93,33% partisipan berada pada batas *LOA* dengan batas *LOA* untuk buah adalah -60,39 s.d 86,89 gram dan batas *LOA* untuk sayur -60,81 s.d 43,66 gram. Regresi pada plot Bland-Altman untuk buah menunjukkan bahwa terdapat bias sistematis pada *Web-App Inafit* dalam menilai konsumsi buah.

Kesimpulan: Berdasarkan berbagai hasil analisis yang telah dilakukan, dapat disimpulkan bahwa *Web-App Inafit* valid terhadap metode *Weighing Food Record*, namun terdapat bias sistematis yang perlu dipertimbangkan bagi pengembang aplikasi dan penelitian selanjutnya.

Kata Kunci: validitas penilaian konsumsi pangan berbasis digital, penilaian konsumsi buah dan sayur, *mHealth*, *weighing food record*

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RELATIVE VALIDITY OF *INAFIT* MOBILE WEB-APPLICATION IN ASSESSING FRUIT AND VEGETABLES CONSUMPTION COMPARED TO WEIGHING FOOD RECORD

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ABSTRACT

Background: The 2018 Indonesian National Health Survey shows that as many as 93.5% - 95.5% of Indonesia's population aged >5 years consumes less vegetables and fruit. Assessment of fruit and vegetable consumption in the population is important because data related to fruit and vegetable consumption can be used to detect disease risks and to monitor consumption patterns in the population. Current technological developments allow the development of digital application-based food consumption assessment methods. It is necessary to test the digital application's validity before it is used in researches related to the assessment of food consumption.

Objective: To test the validity of the *Inafit* Web-App in assessing fruit and vegetable consumption compared to weighing food records.

Methods: The sample of this study was 30 people obtained from the purposive sampling method. Relative validity testing was carried out using the Wilcoxon signed-rank test, Spearman correlation test, and Bland-Altman Plot.

Results: The validity analysis showed that the *Inafit* Web-App overestimated *Weighing Food Record* by 6.84% in assessing fruit consumption, and underestimated *Weighing Food Record* by 6.36% in assessing vegetable consumption. There was no significant difference between the two methods in assessing fruit and vegetable consumption ($P=0.098-0.125$, $P<0.05$). There was a very strong correlation between the two methods ($P=0.926-0.932$, $P<0.05$). The Bland-Altman analysis showed that 93.33% of the participants were at the LOA with the LOA for fruit being -60.39 to 86.89 grams and the LOA for vegetables being -60.81 to 43.66 grams. Regression on the Bland-Altman plot for fruit showed that there was a systematic bias in *Inafit* Web-App in assessing fruit consumption.

Conclusion: Based on the results of various analyzes that have been carried out to examine the relative validity of the *Inafit* Web-App against the *Weighing Food Record* method, it can be concluded that the *Inafit* Web-App is valid against the *Weighing Food Record* method, but there is a systematic bias that needs to be considered for application developers and further research.

Keyword: validity of digital-based food consumption assessment, fruit and vegetable consumption assessment, mHealth, weighing food record

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