

## ABSTRAK

**Latar Belakang :** Kaliper geser adalah alat ukur yang umum digunakan dalam mengukur luka kulit. Akan tetapi, pengukuran ini memiliki risiko bias dari pengukur. Seiring berkembangnya teknologi, pengukuran dapat dilakukan menggunakan foto 2 dimensi *smartphone* yang dianggap dapat memberikan lebih banyak keuntungan seperti meningkatkan tingkat akurasi hasil pengukuran, tidak memberikan rasa sakit saat pengukuran, dan tidak membuat luka rusak.

**Tujuan :** Tujuan penelitian ini untuk mengetahui akurasi pengukuran foto 2 dimensi *smartphone* dibandingkan dengan kaliper geser.

**Metode Penelitian :** Penelitian ini merupakan penelitian analitik observasional dengan desain *cross sectional*. Penelitian ini menggunakan kamera 2 dimensi *smartphone* dan kaliper geser dalam pengukuran objek. Hasil dari kamera 2 dimensi *smartphone* akan dianalisis menggunakan *software digimizer image analysis*.

**Hasil :** Pengukuran luka dilakukan pada 37 sampel luka kulit. Pada analisis ICC (koefisien korelasi *intraclass*) intraobserver didapatkan hasil nilai koefisien ICC (koefisien korelasi *intraclass*) 1. Memiliki interpretasi hasil pengukuran yang konsisten meskipun dilakukan di waktu yang berbeda. Pada hasil analisis ICC (koefisien korelasi *intraclass*) interobserver didapatkan nilai ICC (koefisien korelasi *intraclass*) panjang luka 0.979 dan ICC (koefisien korelasi *intraclass*) lebar luka 0.998. Dari data tersebut memiliki interpretasi meskipun dilakukan di waktu yang berbeda dan pengukur yang berbeda hasil pengukuran luka tetap konsisten. Hasil uji hipotesis pada luka didapatkan nilai signifikansi sebesar 0.841 pada panjang luka dan 0.541 pada lebar luka. Pada hasil uji hipotesis tersebut menunjukkan bahwa tidak ada perbedaan hasil pengukuran luka menggunakan kaliper geser dan foto 2 dimensi *smartphone*.

**Kesimpulan :** Tidak ada perbedaan hasil pengukuran luka kulit menggunakan kaliper geser dan foto 2 dimensi *smartphone*. Hasil korelasi koefisien ICC (koefisien korelasi *intraclass*) yang sangat baik dengan pengukuran luka kulit intraobserver dan interobserver menggunakan metode foto 2 dimensi *smartphone*.

**Kata Kunci :** Luka kulit; kaliper geser; foto 2 dimensi *smartphone*; akurasi

## ABSTRACT

**Background:** Sliding calipers are a common measuring tool used to measure skin wounds. However, this measurement has a risk of bias from the measurer. As technology advances, measurements can be made using 2-dimensional smartphone photos which are considered to provide more advantages such as increasing the level of accuracy of measurement results, not causing pain during measurement, and not damaging wounds.

**Objective:** The purpose of this study was to determine the accuracy of 2-dimensional smartphone photo measurements compared to sliding calipers.

**Methods:** This study is an observational analytical study with a cross-sectional design. This study uses a 2-dimensional smartphone camera and sliding calipers in measuring objects. The results of the 2-dimensional smartphone camera will be analyzed using digimizer image analysis software.

**Results:** Wound measurements were carried out on 37 skin wound samples. In the intraobserver ICC (intraclass correlation coefficient) analysis, the results of the ICC (intraclass correlation coefficient) coefficient value were 1. Having a consistent interpretation of measurement results even though they were carried out at different times. In the results of the interobserver ICC (intraclass correlation coefficient) analysis, the ICC (intraclass correlation coefficient) value for the length of the wound was 0.979 and the ICC for the width of the wound was 0.998. From the data, it has an interpretation even though it was done at different times and with different measuring instruments, the wound measurement results remain consistent. The results of the hypothesis test on the wound obtained a significance value of 0.841 for the length of the wound and 0.541 for the width of the wound. The results of the hypothesis test showed that there was no difference in the results of wound measurements using sliding calipers and 2-dimensional smartphone photos.

**Conclusion:** There is no difference in the results of skin wound measurements using sliding calipers and 2D smartphone photos. The results of the ICC coefficient correlation (intraclass correlation coefficient) are very good with intraobserver and interobserver skin wound measurements using the 2D smartphone photo method.

**Keywords:** Skin wounds; sliding calipers; 2-dimensional smartphone photos; accuracy