

INTISARI

Di era digital saat ini, penggunaan komputer telah menjadi bagian penting di kehidupan sehari-hari, baik di tempat kerja maupun dalam aktivitas pribadi. Pengguna komputer sering lupa untuk memperhatikan durasi duduk mereka saat bekerja, padahal duduk terlalu lama dapat menyebabkan beberapa gangguan kesehatan. Berbagai intervensi telah dilakukan, salah satunya adalah *reminder* berbasis *smartwatch*. *Smartwatch* memiliki banyak tipe modalitas, hal ini membuat pengguna kesulitan dalam memilih tipe modalitas yang tepat sebagai *active reminder*. Tujuan dari penelitian ini adalah melihat pengaruh beberapa tipe modalitas berdasarkan variabel dependen diantaranya *response times*, *response rates*, *compliance levels*, *compliance times*, preferensi pengguna dan melihat korelasi antar variabel dependen.

Penelitian ini melibatkan 20 orang subjek (10 orang laki-laki dan 10 orang perempuan) yang menggunakan *smartwatch* sehari-hari. Pada saat pengambilan data, setiap subjek akan diberikan waktu 2 jam untuk melakukan pengolahan data sederhana. Selama pengerjaan, terdapat *reminder* untuk berdiri pada *smartwatch* dalam berbentuk auditori visual taktil (AVT), visual taktil (VT), auditori visual (AV), dan visual (V). *Reminder* untuk berdiri akan muncul setiap 7-10 menit. Peneliti melakukan evaluasi dengan beberapa variabel terikat seperti *response times*, *response rates*, *compliance levels*, *compliance times*. Setelah waktu yang diberikan telah habis, subjek akan diberikan kuesioner preferensi dengan 3 aspek yaitu *confirmation*, *device annoyance*, *continuance intention*. Untuk melihat hasil berbagai tipe modalitas berdasarkan variabel terikat yang diuji, data yang terkumpul akan diolah menggunakan uji statistik *friedman test*, *conover's post hoc comparison* dan uji *Spearman's rho* tingkat signifikansi 0,05.

Hasil penelitian menunjukkan adanya perbedaan peringkat median tipe modalitas terhadap *response times* ($p < 0,05$), perbedaan tersebut ditemukan antara modalitas AVT-V ($p < 0,05$), dan VT-V ($p < 0,05$). Selanjutnya, perbedaan peringkat nilai median pada *response rates*, *compliance rates* dan kuesioner preferensi aspek *confirmation* akibat perbedaan tipe modalitas yang ditemukan antara modalitas AV-V, AVT-V, V-VT ($p < 0,001$). Namun, perbedaan modalitas tidak memberikan pengaruh signifikan pada *compliance times* ($p = 0,513$) dan *device annoyance* ($p = 0,069$). Pada aspek *continuance intention*, ditemukan perbedaan peringkat nilai median ditemukan pada seluruh perbandingan tipe modalitas kecuali pada AVT-AV ($p = 0,841$). Selain itu, hasil penelitian menunjukkan terdapat beberapa variabel yang memiliki korelasi signifikan ($p < 0,001$) yaitu *compliance levels* dengan *response rates*, preferensi subjek aspek *confirmation* dengan *response rates*, preferensi aspek *confirmation* dengan *compliance levels*, preferensi aspek *continuance intention* dengan *response rates*, preferensi aspek *continuance intention* dengan *compliance levels*, preferensi aspek *continuance intention* dengan preferensi aspek *confirmation*, *compliance times* dengan *response times* ($p < 0,05$).

Kata kunci: *smartwatch*, *reminder*, modalitas, *responses*, *compliances*, preferensi

ABSTRACT

In the digital era, computer use has become an integral part of everyday work and personal life. Computer users often need to pay attention to how long they sit while working, even though prolonged sitting can cause several health problems. Various interventions have been implemented, one of which is smartwatch-based reminder. Smartwatches offer many modalities, making it challenging for users to choose the correct modality as an active reminder. The purpose of this study is to examine the influence of several types of modalities based on dependent variables, including response times, response rates, compliance levels, compliance times, and user preferences, and to determine the correlation between dependent variables.

This study involved 20 subjects (10 men and 10 women) who used smartwatches daily. During data collection, each subject was given 2 hours to perform simple data processing tasks. Throughout this period, the smartwatch provided reminder to stand in the form of auditory visual-tactile (AVT), visual-tactile (VT), auditory-visual (AV), and visual (V), appearing every 7-10 minutes. Researchers evaluated several dependent variables, including response times, response rates, compliance levels, and compliance times. After the allotted time expired, subjects completed a preference questionnaire with three aspects: confirmation, device annoyance, and continuance intention. The collected data were processed using the friedman test, conover's post hoc comparison and Spearman's rho test at a significance level of 0.05 to analyze the results of the various modalities based on the dependent variables and the correlations between variables.

The results showed significant differences in the median rankings of modality types on response time ($p < 0.05$), specifically between the AVT-V modality ($p < 0.05$) and VT-V ($p < 0.05$). Significant differences were found in the median rankings of response rates, compliance rates, and questionnaire preferences for the confirmation aspect due to differences in modality types, particularly between the AV-V, AVT-V, and V-VT modalities ($p < 0.001$). However, modality differences did not significantly affect compliance time ($p = 0.513$) or device interference ($p = 0.069$). Regarding continuance intention, differences in median rankings were observed across all comparisons of modality types except for AVT-AV ($p = 0.841$). Furthermore, the study revealed significant correlations ($p < 0.001$) between several variables: compliance level with response rate, subject's preference for the confirmation aspect with response rate, preference for the confirmation aspect with compliance level, preference for the intention aspect to continue with response rate, preference for the intention aspect to continue with compliance level, preference for the intention aspect to continue with the confirmation aspect, and compliance time with response time ($p < 0.05$).

Keywords: smartwatch, reminder, modalities, responses, compliance, preferences