INTERRUPTING OCCUPATIONAL SITTING TIME AMONG OFFICE WORKERS USING SMARTPHONE INTERVENTION

BACKGROUND

Sedentary behavior, such as prolonged occupational sitting , is now recognized as a significant health risk, regardless of how much physical activity someone engages in outside of work. There is no available data on how much Malaysia office workers particularly in the government sector sit during working hours. This project aligns with the principles of behavioural insights, which apply the DDDIE framework to design interventions that nudge individuals toward healthier habits. The project was carried out in several phases:

PHASE 1

Surveyed via online among 1,338 office workers from 24 Malaysian ministries, average participants sat for about 5.96 hours per day, with nearly 10% sitting for over 7 hours.



PHASE 2

Conducted five focus group discussions in several ministries to explore workers' perceptions and knowledge about sitting time at work. The findings suggested that both individual and environmental factors, such as job type and office layout, contributed to prolonged sitting, fitting within a socio-ecological model of behavior.

PHASE 3

A 12-week randomized control trial was carried out in two government offices. Participants received 10 behavior-changing messages via WhatsApp over six weeks. Average daily sitting breaks for the intervention group compared to the control group increased by 2.75 breaks (95% CI 1.75 – 3.76). The difference in change from baseline between the intervention group and control group was 3.27 breaks ($F=1,41=47.64$, $p < 0.001$).

A total of 18 messages based on behaviour change techniques were sent to participant in intervention group. Result showed an increased in daily sitting breaks by 2.75 times. After 6 weeks, the intervention group's average sitting time decreased by 14.4 minutes compared to the control. Significant effects were observed at Week 12 ($p < 0.005$).

CONCLUSION

Tailored messaging sent via smartphone effectively encourage more frequent breaks and reduce sitting time among office worker. Currently, study findings being analyze by the Ministry of Health Malaysia to improve the existing X-Break (short mobility break during office hours) policy, requiring sitting breaks to reduce occupational sitting time.

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