

5 Abstract

Background: Writing Skill can be argued as the most important skill in medicine in the light of academics and clinical medicine. However, poor writing has always been a problem in medicine

Objectives: To design, develop and evaluate writing skills development software for postgraduate students in medicine.

Methods: The study was a single-blinded, passive-controlled, parallel-group study with balanced, simple random sampling (1:1) done in Sri Lanka (single site). 48 postgraduate trainees of MSc Biomedical Informatics in Postgraduate Institute of Medicine (PGIM), Colombo were randomly allocated to the intervention group ($n = 24$) and passive control group ($n = 24$). The intervention group received an online software-based writing skills training programmed delivered as six rounds of 4 exercises (each exercise 5 minutes duration) throughout a period of 6 weeks during May and June 2018. The usability of the training program was evaluated based on the System Usability Scale. Two subjects from the control group dropped out of the study and the final analysis comprised 24 in the intervention group and 22 in the control group.

Results: The score was normally distributed as assessed by the Shapiro Wilks Test ($p > 0.05$) and normal Q-Q plots. There was a significant difference in the score in intervention ($M = 14.35$, $SD = 4.50$) and control ($M = 10.06$, $SD = 7.15$) conditions; ($t(32) = 2.10$, $p = 0.044$) among the participants who scored 0-30 in the Baseline Assessment. However, such significant difference was not demonstrated in the whole study population, with intervention ($M = 9.83$, $SD = 8.423$) and control ($M = 5.64$, $SD = 11.595$) conditions; ($t(44) = 1.413$, $p = 0.165$) or among the participants that scored more than 30 in the Baseline Assessment - the intervention ($M = -1.14$, $SD = 4.413$) and control ($M = -9.40$, $SD = 11.632$) conditions; ($t(4.83) = 1.512$, $p = 0.193$). The SUS score for the system was 55.6.

Conclusion: The subjects scored less than 30 in the Baseline Assessment demonstrated a significant improvement in score compared to the control condition, whereas such significant difference was not demonstrated within the entire population or >30 scorers. The intervention program was marginally acceptable according to SUS Score