POSSIBILITIES OF USING CHATBOTS WITH ARTIFICIAL INTELLIGENCE FOR TOBACCO CONTROL

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Abstract

Aim of the study. To evaluate the quality of answers given by ChatGPT to the questions about tobacco control, to assess the safety of this information, and its accessibility for those who intend to quit smoking.

Materials and methods. To evaluate ChatGPT's capabilities, we put 14 questions about the impact of tobacco use on the body, ways to quit, harm from alternative types of nicotine use, etc. Each of these questions was submitted for analysis by ChatGPT version 3.5 separately from a personal computer (PC) and a smartphone. The answers were analyzed by a panel of 7 pulmonology experts using a Likert scale. The following criteria were used to evaluate each answer: completeness of the answer; quality of information; accessibility/comprehensibility of information; safety for the patient; importance for successful tobacco control. To assess the validity of the answers, we calculated the content validity ratio (CVR).

Results. The overall average score of the answers was (4.1 ± 0.4) points out of a maximum of 5 points. The answers obtained when using a PC were higher rated by the experts than when using a smartphone, but without a statistical difference. The results obtained using a PC were also better than those obtained using a smartphone for all analysis criteria (but without a statistical difference): completeness of the answer $((4.15\pm0.4)$ vs. (3.84 ± 0.5) points), some information $((4.04\pm0.4)$ vs. (3.87 ± 0.4) points), accessibility $((4.29\pm0.3)$ vs. (4.10 ± 0.4) points), safety $((4.19\pm0.3)$ vs. (4.10 ± 0.4) points), importance for tobacco control $((4.25\pm0.4)$ vs. (4.16 ± 0.4) points). According to the results of the content validity coefficient calculation, only one valid answer was found.

Conclusions. Despite the generally positive responses, a significant drawback was that only one answer received a sufficient level of validity. This evidences that artificial intelligence chatbots have great potential for use in the fight against tobacco smoking. But at the moment, an application such as ChatGPT should not be recommended to patients as an effective, safe, and efficient method of combating this deadly habit, and preference should be given to consultations with relevant medical professionals.

Key words: ChatGPT, smoking.

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