

R. de la Vega, E. Castarlenas, R. Roset, E. Sánchez-Rodríguez, E. Solé, C. Tomé- Pires, J. Miró.

Unit for the Study and Treatment of Pain - ALGOS, Research Center for Behavior Assessment (CRAMC),

Department of Psychology and Institut d'Investigació Sanitària Pere Virgili. Universitat Rovira i Virgili, Tarragona (Spain)

1.- INTRODUCTION AND AIMS

The so-called electronic and information technologies (EITs) are increasingly being used to assess pain. *Painometer* is a smartphone app that helps users to assess momentary pain intensity. It includes four well-known, valid and reliable, pain intensity scales: the Faces Pain Scale-Revised, the Numerical Rating Scale-11, the Coloured Analogue Scale and the Visual Analogue Scale.

The objective of this work was to report on the *Painometer's* second usability cycle when used by healthcare professionals and non-professionals. Usability was assessed in terms of user performance and satisfaction.

2.- METHODS

The sample was composed by two groups: (1) healthcare professionals (n=15, mean age=36.8 years, SD=12.8), and (2) non-professionals (n=16; mean age=16.6 years, SD=4.9). See Figure 1.

A qualitative usability testing approach with a semi-structured interview was conducted. Standardized instructions on the use of *Painometer* were given to participants. Healthcare professionals were asked to use *Painometer* as if they were using it with a patient. Non-professionals were requested to report the intensity of their own pain at that moment and the maximum pain they experienced in the last three months. They were all asked to "think aloud" while using the app.

Health professionals and non-professionals were asked about the ease of use, the efficiency, and their satisfaction using *Painometer* with a series of open-ended questions. Mistakes made by both groups were also recorded. They also filled in a questionnaire about their previous use of technology.

Finally, we conducted simple content analyses and descriptive statistics.

3.- RESULTS

Use of technology. Participants in this study had an average experience of 10 years in the use of computers. 81% had been using Smartphones for one year at least.

Most popular characteristics. *Painometer* was rated as "easy to use", practical, attractive, useful, funny and mobile-integrated. What patients liked the most was that they could interact with the app by touching the screen.

Suggested changes. Allowing to record and to show graphics of the collected data.

Additional usability results are shown in Figure 2.

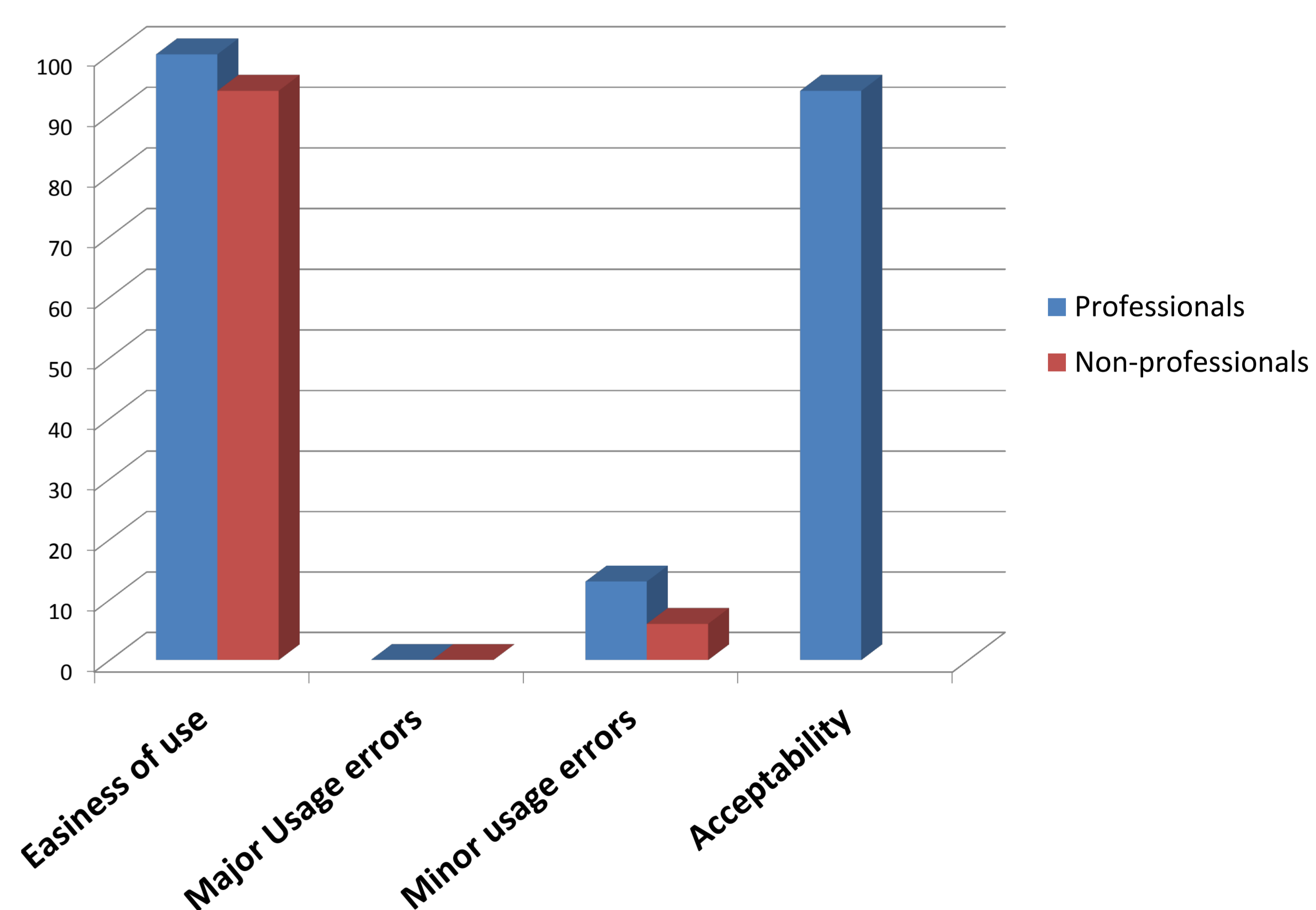


Figure 2. Main usability results

4.- DISCUSSION AND CONCLUSIONS

After the second usability cycle no problems were found so the app is ready to use. Suggestions about (1) keeping a record of the data collected; (2) adding a graphic representation of pain intensity records have been taken into account for future developments.

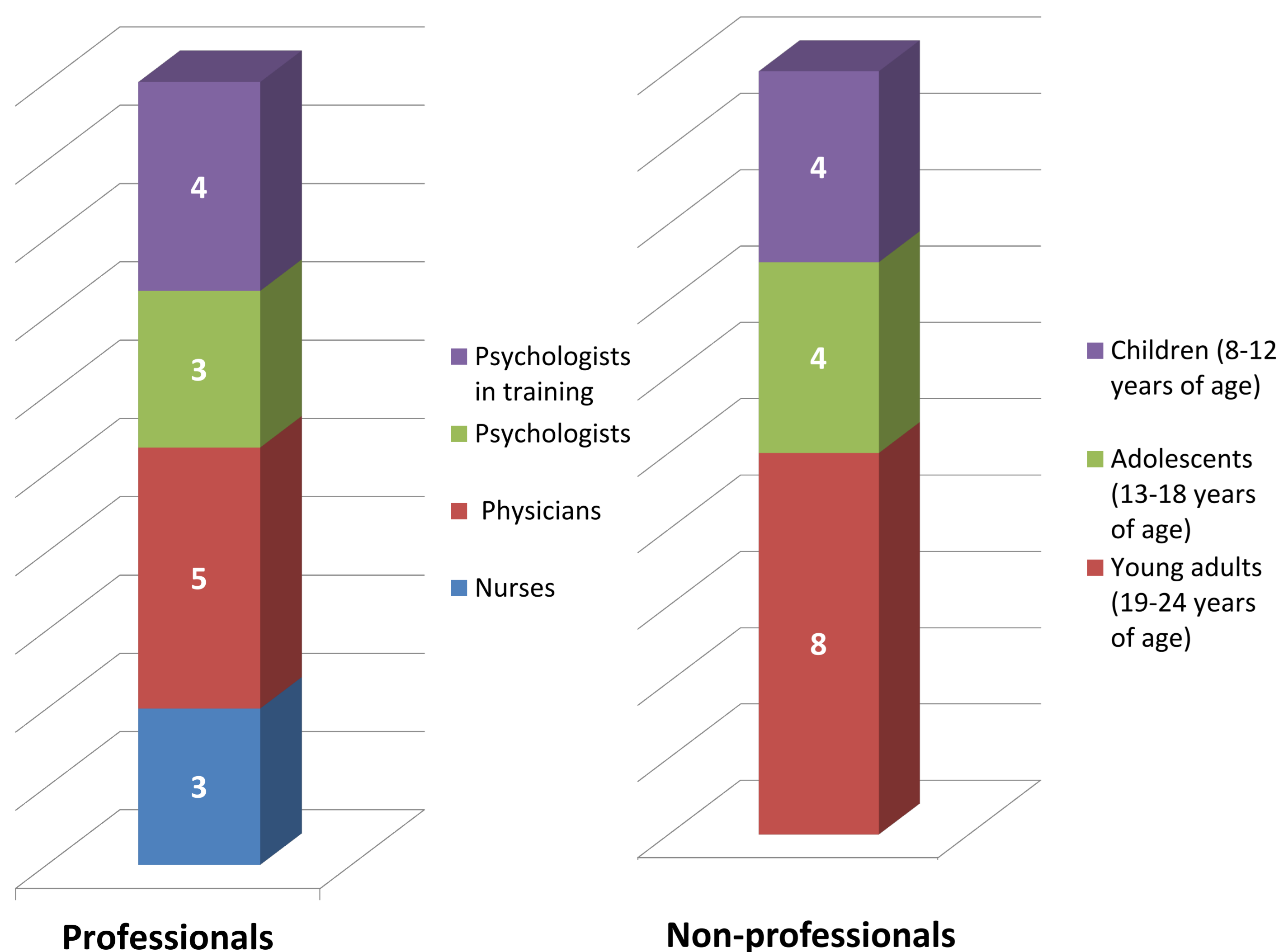


Figure 1. Sample composition

ACKNOWLEDGEMENTS: Work partly funded by MICINN, Fundació La Marató de TV3, AGAUR, and RecerCaixa.



Download *Painometer* at:
<http://algos-dpsico.urv.cat/apps/painometerv2>

