APPLICATION FOR MONITORING THE INFLUENCE OF PAIN IN THE LIFE OF PATIENTS WITH CHRONIC PAIN AND THE EFFICACY OF ITS TREATMENT

DESCRIPTION OF THE TECHNOLOGY

Monitor de Dolor (Pain Monitor) is a computer application for smartphones and tablets that assesses and monitors chronic pain in patients. The tool allows relevant information to be gathered about how each person suffering from chronic pain experiences their pain and the influence that environmental and social conditions have on that experience.

The application makes it possible to improve the clinical evaluation and treatment of these patients, and is also useful in the development of drugs for combatting pain, as it allows their efficacy to be measured.

Over a period of 30 days, once in the morning and again in the evening, *Monitor de Dolor* asks the patient a series of short questions about their pain. It only takes the user two minutes to answer them, the user's anonymity being guaranteed at all times. The questionnaire includes questions about:

- The socio-demographic variables of the patient: marital status, employment situation, level of education.
- Information about their pain: type of pain, location, duration, current treatment, comorbidity of depression and anxiety.
- Moods and general perception of health.
- Consequences of pain in their daily life: interference with sleep, fear/avoidance of work, alarmism, willingness to carry out physical activity, acceptance.
- Use of rescue medication, perceived efficacy and side effects that are noted.

Furthermore, the tool makes it possible to monitor how the patient feels when he or she is experiencing an acute attack of pain. When this happens, the user can log into the application and register the attack, giving details of the intensity of the pain, the rescue medication taken, the fatigue felt and his or her mood. Thus, health professionals can know the frequency with which those acute attacks of pain take place and their emotional consequences.

The content of the app has been designed in compliance with the recommendations of the Initiative on Methods, Measurement and Pain Assessment in Clinical Trials, IMMPACT) and following a biopsychosocial approach to pain.

Together with the answers to the questions, data about the contextual variables are also stored (calls made, calls received, missed calls, text messages sent and received since the last batch of questions were answered) as well as meteorological information about the place where the user is located (town/city, temperature, pressure, humidity, wind and description of the weather at the time of answering the questions).

Monitor de dolor is the result of a collaboration between researchers from Universitat Jaume I, Universitat de Barcelona, and CIBERobn Instituto de Salud Carlos III.

SECTORS FOR COMMERCIAL APPLICATION

The technology is useful for the following sectors:

- Pharmaceutical industry and the development of more effective painkillers.
- Hospitals and centres devoted to caring for patients with chronic pain.
- Clinical trials and research in clinical psychology.

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TECHNICAL ADVANTAGES AND COMMERCIAL BENEFITS

Use of the application can have benefits for both the patient and public health. More specifically, it can help achieve faster detection of cases in which the painkilling medication is not being very effective. Moreover, it makes it possible to avoid the unnecessary side effects of a treatment that is not being efficacious, resulting in a better quality of life for patients. The main advantages of the tool are:

- It allows a comprehensive and personalised profile of the experience of pain to be obtained for those patients with chronic pain, as well as data on how it influences their daily life. It combines the collection of information by means of a questionnaire and contextual or environmental information.
- It gathers relevant information by doing so while the pain is being experienced, thereby avoiding the biases typically encountered in delayed data collection methods, which depend on the patient's memory.
- Ubiquity. Since it is an application for smartphones, data collection is made easy because patients usually have their phone close at hand.
- It also allows chronic pain patients to record how they feel when they have an acute attack of pain.

STAGE OF DEVELOPMENT OF THE TECHNOLOGY

The computer application is fully developed and ready for installation and use in Android-based devices. The tool has been validated by means of empirical studies.

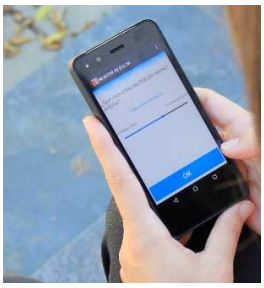
INDUSTRIAL AND INTELLECTUAL PROPERTY RIGHTS

Registered software.

COLLABORATION SOUGHT

Licensing agreement.

RELATED IMAGES



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