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## **Analysis of the efficacy of clinical data collection in orthopedic patients using online questionnaires**

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### **ABSTRACT**

**Introduction:** Clinical data collection is an essential stage in the development of any scientific research study. The recruitment of patients to research centers for data collection may be considerably difficult in some situations. There are few studies examining the use of distance evaluations conducted with digital and online tools. The use of information technology and the Internet to collect clinical data for scientific studies in orthopedics in Brazil remains somewhat limited; nonetheless, such approaches may provide several benefits to and facilitate data collection for Brazilian researchers.

**Methods:** We performed a descriptive, observational study with printed or online (using an electronic device, such as computer, tablet or cell phone) self-administered questionnaires. Data from 40 patients (22 women; 18 men) with a mean age of 36.9 years (min: 15 years; max: 65 years) who were undergoing orthopedic follow-up for acute ankle sprain were collected using the Foot Function Index (FFI), Physical Function, Cumberland Ankle Instability Tool (CAIT), and visual analog scale (VAS) questionnaires. The questionnaires were administered at 4 different times: at the initial evaluation and at 3 weeks, 6 weeks and 12 weeks.

**Results:** A comparative group analysis (digital, online data collection vs physical data collection) showed a higher level of collection of all data for each patient when the online questionnaires were used (87.5% vs 45%  $p < 0.005$ ), along with a higher accuracy of data collection (standard deviation (SD): 1.26; 2.3318; 1.6393 vs SD: 2.948; 3.807; 8.1189  $p < 0.005$ ).

**Conclusion:** Data collection using a remote approach through digital online forms (Internet) was highly effective in increasing the rate of response to long-term orthopedic follow-up questionnaires and showed improved data quality (decreased variability in collection dates), thus rendering online data more reliable for intergroup comparison.

**Keywords:** Sprain; Strain; Ankle; Joint instability; Internet.

