

2 Acceptance of the Electronic Venipuncture Automate

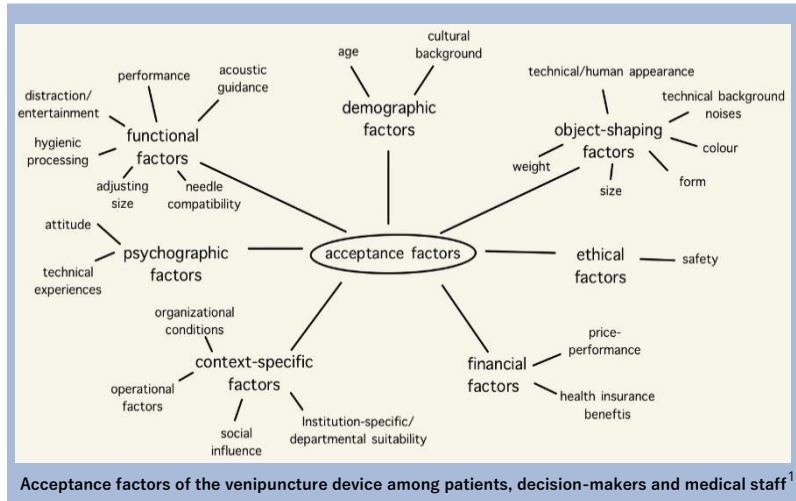
Acceptance among patients, medical staff and financial decision-makers

The idea of relieving the medical market through efficient, high-quality venipuncture gives a promising impression. However, the integration of the electronic venipuncture device into clinical routine is not only based on the technical quality of the device, but in particular on the tolerance of patients, medical staff and financial decision-makers. In order to be able to optimally adapt the device to their needs, the first step is to understand the factors that influence the acceptance of the device among these people.

Results

As part of a scientific paper, factors were derived from the literature, checked for their relevance in a qualitative study and further product-specific aspects were recorded. The evaluation of the interviews of two patients, decision-makers and medical staff revealed the following:

While the *"demographic factors"* included the cultural and age-related backgrounds of the interviewees, the *"psychographic factors"* showed that people who frequently used technical applications were optimistic about the device.



Acceptance factors of the venipuncture device among patients, decision-makers and medical staff¹

Likewise, the building of trust towards the device is an important influencing factor. Within the *"object-shaping factors"*, a small, lightweight, modern and rather machine-looking device with a light grey colour was preferred. An important aspect in the main category *"functional factors"* included the performance- and use-oriented advantages, such as the improved success rate of punctures, the shortened treatment duration, the optimized safety aspect and better time management. On the other hand, in addition to simple disinfection and a possibility to adjust the size of the device, a function for distraction and acoustic guidance through the treatment could also have a positive effect on acceptance. Within the *"financial factors"* it was found that patients usually refuse an additional payment and that the availability of financial funds of the medical institution plays a role in the purchase of the device.

While within the *"ethical factors"*, concerns were expressed about the possible occurrence of medical malpractice as well as the question of liability, within the *"context-specific factors"* the opinions of the social environment that could influence the respondents' use of the device should be considered. In addition, on the one hand, the adaptation of the previous workflow, as well as various procurement facilitations of the device were identified as acceptance-relevant elements. Operational aspects were consulted to determine the seriousness of the company, whereby the expertise of the manufacturer is an important element in building trust of the potential customer. There was also a need to further research medical practices and clinical departments with regard to their puncture error rates as well as individual demands on the device.

[1] Dobler, N.: "Akzeptanz eines automatisierten Venenpunktionsergatnisses unter Patienten, medizinischem Personal und Entscheidungstragern – Eine Analyse moglicher Einflussfaktoren", Hamburg, 2022 (translated into english)