

Measuring the level of acceptance of the Electronic Health Record

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Abstract

There is a need to measure the acceptance of the electronic health record (EHR). The purpose of this study is to gain insight in the relation between level of adoption, computer use, and acceptance of the EHR. This is a Quantitative non-experimental research in two pilot units in an academic hospital. Results: Employees with the same degree of adoption of the EHR score significantly the same on the acceptance of the EHR and the computer in general. There is no significant difference between the degree of acceptance of the computer in general and the degree of acceptance of the EHR between the units. The conclusion is that the questionnaires for acceptance of computers and the acceptance of EHR and the questions on adoption are found to be valid en reliable and can be used for further research.

Keywords:

Electronic health records, Acceptance, Nursing informatics.

Introduction

Fast changes in healthcare, growing need in comparable data and the emerging of for example standardized nursing care plans and clinical pathways have led to an increasing need for accurate and fast available patient care information (Dick and Steen, 1997). Still, healthcare has been remarkable slow in the adoption of Information Technology (IT) for the management of patient information (Wager et al, 2000). One section of the IT-strategy in healthcare is the implementation of an Electronic Health Record (EHR). Users' acceptance can be seen as an adequate indication to check if an information system indeed supports the users in their clinical work processes, documentation and exchange of data. If this support is the purpose of the information system, then users' acceptance can be seen as an adequate indicator for the success of the whole system (Ammenwerth et al, 2003).

Methods

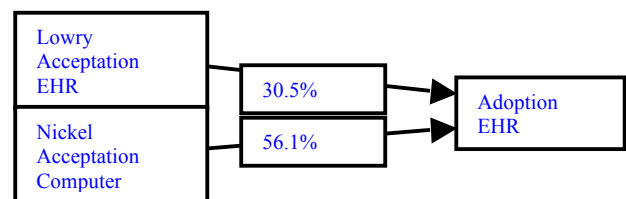
The goal of this research is to obtain a valid assessment scale to measure the acceptance of the EHR. The research question is: Is the adoption of the EHR related to the acceptance of the EHR and the acceptance of the computer in general?

To obtain the answers to the research questions three assessment scales have been chosen: 1] acceptance of computers in general (Nickel), 2] acceptance of the EHR (Lowry), and 3] adoption of the EHR. The study was conducted in two nursing

wards in an Academic Hospital. The total response of this research was 68%, 34 returned the three assessment scales.

Results

Employees with the same degree of adoption do score significantly the same on the acceptance of the EHR. However, the explained variance of 30.5% is not as high as expected, considering the relationship between acceptance and adoption. This relatively low variance between acceptance and adoption appears to be caused by other factors that influence adoption.



Between the acceptance of the computer in general and the adoption of the EHR, the explained variance of 56.1% is remarkably large. Employees that have a low score on acceptance of the computer in general obviously have more difficulty in adopting the EHR. This correlation makes the assessment scale on acceptance of the computer a very useful instrument in research on the acceptance of the EHR. The acceptance of the computer seems to have a predictive value concerning the acceptance of the EHR.

Conclusion

The predictive value of the acceptance of the computer in general indicates that it is important to give the employees a basic knowledge of the computer before starting the implementation of the EHR. In particular the positive effect of computer use in daily life can be assumed to have a positive effect on the use of the EHR. The assessment scale "Acceptation of the computer in general" gives insight in the attitude of the units towards computers so that its effect on EHR adoption can be anticipated in an early stage of the implementation process.