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Nurses' information retrieval skills in psychiatric hospitals – Are the requirements for evidence-based practice fulfilled?

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SUMMARY

Nursing professionals have long recognized the importance to practice of research and the value of research evidence. Nurses still do not use research findings in practice. The purpose of this paper was to describe nurses' skills in using literature databases and the Internet in psychiatric hospitals and associations of nurses' gender, age, and job position with their information retrieval skills. The study was carried out in 2004 among nursing staff ($N = 183$) on nine acute psychiatric wards in two psychiatric hospitals in Finland ($n = 180$, response rate 98%). The Finnish version of the European Computer Driving Licence test (ECDL) was used as a data collection instrument. The study showed that there were clear deficits in information retrieval skills among nurses working in psychiatric hospitals. Thus, nurses' competence does not support the realization of evidence-based practice in the hospitals. Therefore, it is important to increase nurses' information retrieval skills by tailoring continuing education modules. It would be also advisable to develop centralized systems for the internal dissemination of research findings for the use of nursing staff.

Introduction

Evidence-based practice (EBP) in nursing is the process by which nurses make clinical decisions using the best available research evidence (Gifford et al., 2007), their clinical expertise (Berg et al., 2005) and patient preferences (Sackett et al., 1996). EBP has been defined as "the conscientious, explicit, and judicious use of current best evidence in making decisions about care of individual patients, and integrating individual clinical expertise with the best available external clinical evidence from systematic research" (Sackett et al., 1996; Dracup and Bryan-Brown, 2006). Nursing professionals have long recognized the importance of research as an essential tool to lay the foundations of practice in health care (Retsas, 2000; Hannes et al., 2007) and they are aware of the value of research evidence to practice (Mott et al., 2005). However, studies still show that health care staff do not always use research findings in practice (Paramonczic, 2005; McSherry et al., 2006; Pravikoff, 2006; Jutel, 2008).

Evidence-based practice (EBP) requires that nurses have skills to assess (Cole and Kelsey, 2004) and critically analyse research and other information (Jutel, 2008). A number of barriers to the use of research evidence in clinical practice have been identified (Rycroft-Malone et al., 2004; French, 2005; Paramonczic, 2005; Dracup and Bryan-Brown, 2006). These include a lack of organisational support for using research in practice (Retsas, 2000), insufficient organisational resources such as financial and staff resources (Parahoo, 2000; Retsas, 2000), or lack of access to research findings (Retsas, 2000). Also there are no tools for information retrieval available to nurses in hospitals (Hannes et al., 2007). Finally, the implementation of evidence-based knowledge for practice requires nurses to be computer literate (Garg and Turtle, 2003) and to have information retrieval skills (Cole and Kelsey, 2004), which entails that nurses have capacities to use information technology, especially literature databases and the Internet (Garg and Turtle, 2003; Bond, 2004; Cole and Kelsey, 2004).

While nurses' computer skills still vary (Chastain, 2002; Webster et al., 2003; Wilbright et al., 2006) the ability to locate relevant information in electronic databases and the Internet is crucial to modern nursing practice (Hannes et al., 2007). Many health care professionals encounter problems in their information search techniques (Bond, 2004; Hannes et al., 2007). A further problem is that nurses do not have sufficient skills to evaluate the relevance of information (Parahoo, 2000). In a systematic review Garg and Turtle (2003) found that training with databases had a positive impact on health professionals' information retrieval skills. Systematic education on locating information for support nurses' daily work might be beneficial.

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There are areas in health care where nurses' poor computer skills requires special attention. These areas include primary health care (Alpay and Russell, 2002) and working in operating rooms and psychiatric nursing. In psychiatric nursing in particular nurses have poor computer competence, because they are not used to using computers (Staggers and Kobus, 2000; Koivunen et al., 2008). One reason may be that utilization of information technology applications does not have a very significant role in this health care sector (Puskar et al., 2004; Austen and McGrath, 2006). Although in psychiatric nursing awareness has been increased regarding the concept of EBP, there are still many nurses with no access to the literature and the reported use of literature in practice is scarce (Bahtsevani et al., 2005). However, psychiatric nursing performances should be based on research evidence (Drake et al., 2003) as in any other field of nursing.

There is a lack of knowledge about the skills of nurses working in psychiatric hospitals in using databases and the Internet for information retrieval. It may be that nurses have sufficient skills to engage in EBP in psychiatric nursing. We therefore constructed a survey to assess nurses competences to use databases and the Internet in psychiatric hospitals. The current study reported here is a part of a larger project in which an interactive Internet portal application for systematic patient education in psychiatric nursing was developed, and nurses' computer skills were evaluated in detail (Mieli.Net Project, 2004–2007; Välimäki et al., 2008).

Purpose of the study

The purposes of the study were to describe

(1) nurses' skills in literature searches of databases and the Internet in psychiatric hospitals and
(2) differences in nurses' information retrieval skills between different groups according to nurses' gender, age, or job position.

Methods

Population and data collection

The study was carried out in 2004 in two psychiatric hospitals in Finland. Nursing staff ($N = 183$) (nursing managers on the wards, registered nurses, practical nurses) working on nine acute psychiatric wards were recruited for the study. A survey was conducted to measure nurses' information retrieval competence using the Finnish version of the European Computer Driving Licence test (ECDL) version 2.0. The ECDL test measures individuals' competence in six specific areas of computer use. In this study two modules of the test were used; Database (22 items), and the Internet (21 items). Respondents answer on two-point response scales (yes/no). Interpretation yields results by which it is possible to evaluate the skill level of users into six categories (0 = no skills to 5 = expert) (Finnish Information Processing Association, 2004; ECDL Finland Oy, 2008). Background information on the nurses responding to the questionnaire included gender, age, and job position.

Questionnaires were distributed to all eligible nurses on the wards, accompanied by an introductory letter including information about the purpose of the study, and assurance of anonymity and confidentiality. The response time allowed was three weeks. The completed questionnaires were returned in sealed envelopes to a contact persons working on each ward, who then forwarded them to the researcher.

Data analysis

Data from the survey was coded, entered and checked by the researcher (MK) using SPSS for Windows version 14.0. The data was analysed with descriptive statistics; frequencies and percentage values (Burns and Grove, 2005; Trochim, 2006).

Participants were divided into two groups: those under 40 years old, and those 40 years or older. Chi-square tests were used to determine the associations of background characteristics with the levels of information retrieval competence (Burns and Grove, 2005; Trochim, 2006).

Ethical considerations

In the study ethical decisions followed general ethical guidelines and legislation on health care research. The basic principles of research ethics were followed at every stage of the study. The ethical guidelines emphasize research utility, feasibility, propriety, and accuracy (ETENE, 2001; World Medical Association Declaration of Helsinki, 2004; European Commission, 2007). Ethical considerations in research start with the selection of research topic and continue to the publication of research findings (Burns and Grove, 2005). The participation of nursing staff was voluntary and anonymous and the data were treated in confidence. Approval for the study was obtained from the nursing directors and medical directors of the two organisations. According to the Finnish ethical protocol, no statement of ethical commission was needed because the study did not focus on patients (Medical Research Act, 1999; ETENE, 2001). Approval for utilization of the ECDL test was obtained from Finnish Information Processing Association.

Findings

Sample

Out of 183 eligible participants 180 returned a completed questionnaire before the deadline (total response rate 98%). Out of 180 participants 64% were females and 36% males, 42% were under 40 years old and 58% were 40 years or older. Job positions divided as follows: nursing managers 10%, registered nurses 44% and practical nurses 46%.

Nurses' skills in using literature databases and the Internet in psychiatric hospitals

Nurses' skills in searching literature databases and the Internet in psychiatric hospitals were categorised according to the ECDL test into five groups: (0) no skills, (1) novice, (2) advanced, (3) skilful, (4) proficient, and (5) expert. Table 1 presents the categories described.

None of the participants were categorised as experts while only one nurse reached a proficient level in skills with databases. Moreover, 84% of the participants had not used databases.

Table 1
Nurses' database and Internet competence levels.

Module	ECDL level					
	0 No skills *n* (%)	1 Novice *n* (%)	2 Advanced *n* (%)	3 Skillful *n* (%)	4 Proficient *n* (%)	5 Expert *n* (%)
$N = 180$						
Database	151 (84)	18 (10)	10 (6)	0	1 (1)	0
Internet	60 (33)	57 (32)	16 (9)	14 (8)	13 (7)	20 (11)