

Developing Health Technology in Mental Health: Searching for Evidence Based Practice

Välimäki M, *Department of Nursing Science, FIN-33014 University of Tampere, Finland*

Introduction

Mental disorders are among the most serious health problems in Finland and one of the most common reasons for unemployment pensions (Kansaeläkelaitos 1999, Valtiokonttori 2001). About 34,000 psychiatric patients are admitted to specialized hospitals yearly (Stakes 2000). Mental disorders impair the individual's daily functional capacity, quality of life, and independent life management. It has been predicted that the rate of occurrence for mental disorders will increase in the coming decades resulting in serious social and economic problems (WHO 1999). The cost of rehabilitation and treatment for mental disorders impose direct costs on society and the cost of medication alone is substantial. Indirect consequences include those related to work absenteeism, loss of productivity and impaired quality of life (Davies & Drummond 1994, Knapp 1997).

An essential component in the care of mental disorders is support for the patient's everyday coping abilities and it is important for patients to receive information about themselves and their care. For example, patients should be aware of the content and progress of care, actions and side-effects of medication, follow-up care, social support, and symptom identification (McGilloway & Donnelly 1998). Understanding of one's own illness is important because it is associated with commitment to care, social functioning and the ability to avoid relapse (Kemp et al. 1998, Korkeila 1998). Lack of information about one's own affairs may result even further in non-compliance and impaired commitment to care.

Increased rates of complex mental disorders, shortened treatment times and emphasis on out-patient care have added to the challenges for patients' access to information. As patients are being discharged from hospital at an increasingly early stage the importance of individualized information becomes greater. On the other hand, the amount of information has increased and information has become more difficult to manage. As health awareness is expanding in people's lives in general (Sosiaali- ja terveystieteiden ministeriö 1999) new methods of communication and health counselling are needed.

Patient education is an efficient method of increasing the level of knowledge among patients (Merinder 2000) and significant others in psychiatric care. However, research evidence shows that people with mental disorders lack sufficient information about their own illness and its treatment (Hansson et al. 1999, Välimäki 1998, Gibbons et al. 1999). On the other hand, the patient's illness as such may also affect his or her cognitive functioning and impair his or her faculty of reason. Therefore there is no clear evidence of how individualized, patient-oriented information affects patients with severe mental disorder (Henderson & Laugharne 2001).

Information technology may be the answer to mental health patients' difficulties in accessing individualized information (Gustafson et al. 1998). The strategy of the Finnish Ministry of Social Affairs and Health (2001) indicates that network services will increase rapidly in the next decades and that new technology applications will expand in social welfare and healthcare. There are dangers, however, in the widespread use of information technologies such as the Internet. One of the concerns is e-exclusion. If people have limited access to the Internet because of poverty, limited capacity to use technology or low education level, inequality among citizens may increase.

So far, information technology has rarely been used as part of mental health patients' daily care (e.g. Gustafson et al. 1998, Stein & Milne 1999), although a number of related projects are currently ongoing in different parts of Finland. In general, information technology has developed rapidly in many EU countries. Finland together with the USA and Canada is perhaps one of the leading countries in developing high technology in healthcare. Previous studies have shown that giving patient instructions using computer-assisted methods boosts comprehension and satisfaction and provides patients with better access to information than traditional methods (Shaw et al. 2001). It has also been found that multimedia software containing visual presentations have more powerful short-term effects on patients' capacity to assimilate information than does written patient information (Morss et al. 1993). A wide range of telemedicine applications have also been introduced to the field of mental health services (Doze et al. 1999, Mielonen et al. 1998).

If we want to ensure people with mental problems benefit from information technology and avoid social exclusion, we need more data on the effects of information technology on patient wellbeing. Unfortunately, projects related to health information technology have not been systematically evaluated in Finland. There is also little evidence of the costs-effectiveness of these technologies in everyday practice.

Methods

The purpose of this ongoing project is to develop the new Interactive Patient Support System (IPSS) and to evaluate its impact on psychiatric patients' mental health and treatment costs. It aims to support patient wellbeing and is a multi-service computer system for professionals to be used together with clients in healthcare organisations.

- It can manage information offered to clients so that the information is convenient, timely, under the user's control, and flexible enough to adapt to different coping styles.
- It can support multiple learning styles by using text, pictures, colour, voice, and videos.
- It includes methods where clients' mental health and perceptions of their circumstances and treatment can be systematically evaluated.
- It offers communication channels via the Internet between clients and professionals and easy access to social and health services.

Phases

The project will be divided into two phases. In *Phase I*, the Interactive Patient Support System (IPSS) will be designed and introduced into clinical practice. In *Phase II*, the impact of health technology on mental health and health costs will be evaluated using cost-consequence analysis. This will be done by quasi-experimental design with three fingers:-

1. Experimental group (intervention and staff education)
2. Control group (staff education only)
3. Comparison group ("do-not-nothing")

Impacts

The project will :-

- develop and implement health technology in the field of mental health
- Offer evidence-based information about the impact of health technology on patients' mental health, quality of life, knowledge of illness and its treatment, satisfaction, compliance, and independent living in the community
- Provide evidence of the costs of health technology in the field of mental health
- Describe the utility and impact of health technology on healthcare and social services to be used by policy makers and health service administrators.

Discussion

Technology use does not of itself guarantee high quality care or human interaction. There is still little research based knowledge of the costs and effects of new technology applications in mental health work. We lack sufficient knowledge of the effects of the use of information technology on mental symptoms and mental health in general. Therefore, the effects on patient wellbeing need to be evaluated and documented carefully and

ethical problems need to be considered in advance. It should also be noted that the introduction of information technology requires staff members to learn new technical skills and that changes are made in their duties in terms of content, function and structure (see Kinnunen 1999). From this perspective it is essential to determine the effects and costs of information technology use before making major new investments in the organization.

Conclusion

Mental disorders are among the most common health problems. Access to information is an essential component in supporting the patient's everyday coping abilities. Current methods fail to give a convincing impression of a clear patient information system. The written information distributed to patients in psychiatric hospitals is diverse in terms of content and quality. In the future, an effort should be made to ensure that patients and relatives receive information, that the information is clear and understandable, and that attention is given to the network of significant others and relatives. Information technology may be helpful in everyday mental health work but its usefulness has to be carefully assessed. Therefore, we have a huge gap in knowledge, and the journey towards evidence-based practice in relation to health technology and mental health will be long.

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